



Fundação  
para a Ciência  
e a Tecnologia

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# Atlas of Research Units

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2022

## **PORTUGUESE ATLAS OF RESEARCH UNITS, 2022**

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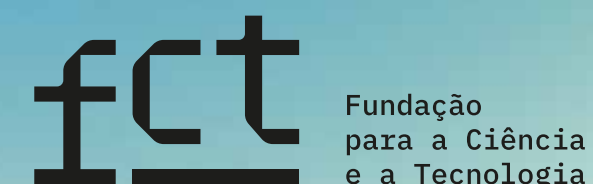
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## 50 Natural Sciences

- 52** ALGORITMI Research Center  
**53** Biosystems and Integrative Sciences Institute  
**54** Center for Nuclear Sciences and Technologies  
**55** Center for Mathematical Analysis, Geometry and Dynamical Systems  
**56** Centre of Molecular and Environmental Biology  
**57** Algarve Centre for Marine Sciences  
**58** Centre for Ecology, Evolution and Environmental Changes  
**59** Center for Functional Analysis, Linear Structures and Applications  
**60** Centre of Statistics and its Applications  
**61** Center of Physics and Engineering of Advanced Materials  
**62** Centre of Physics and Technological Research  
**63** Center for Computational and Stochastic Mathematics  
**64** Center for Astrophysics and Gravitation  
**65** Centre for Environmental and Marine Studies  
**66** Centre for Functional Ecology - Science for People & the Planet  
**67** Center for Physics of the University of Coimbra  
**68** Center for Theoretical and Computational Physics  
**69** Center for Theoretical Particle Physics  
**70** Physics Center of Minho and Porto Universities  
**71** Geosciences Center  
**72** Center for Innovative Biomedicine and Biotechnology  
**73** Centre for Research in Geospace Science  
**74** Center for Research and Development in Mathematics and Applications  
**75** Research Center in Informatics and Communications  
**76** Interdisciplinary Centre of Marine and Environmental Research  
**77** Research Centre for Mathematics and Applications  
**78** Centre for Marine and Environmental Research  
**79** Chemistry Research Unit of University of Porto  
**82** Centre for Informatics and Systems of the University of Coimbra  
**83** Centre for Earth and Space Research of the University of Coimbra  
**84** Center for Mathematics and Applications  
**85** Center for Mathematics, Fundamental Applications and Operations Research  
**86** Center of Mathematics of the University of Minho  
**87** Center of Mathematics and Applications of University of Beira Interior  
**88** Center for Mathematics, University of Coimbra  
**89** Centre of Mathematics of the University of Porto  
**90** Coimbra Chemistry Center  
**91** Structural Chemistry Center  
**92** Madeira Chemistry Research Centre  
**93** Chemistry Center - University of Minho  
**94** Chemistry Center - Vila Real  
**95** GeoBioSciences GeoTechnologies and GeoEngineering  
**96** Group of Mathematical Physics of the University of Lisbon  
**97** Games, Interaction & Learning Technologies  
**98** Cultural Heritage, Studies and Safeguard  
**99** Institute of Astrophysics and Space Sciences  
**100** Institute of Biophysics and Biomedical Engineering  
**101** Institute of Earth Sciences  
**102** Institute Dom Luiz  
**103** Institute of Physics for Advanced Materials, Nanotechnology and Photonics - University of Porto  
**104** Research Network in Biodiversity and Evolutionary Biology  
**105** Institute for Plasmas and Nuclear Fusion  
**106** Research Institute for Volcanology and Risks Assessment  
**107** Laboratory for Instrumentation, Biomedical Engineering and Radiation Physics  
**108** Laboratory of Instrumentation and Experimental Particle Physics  
**109** Information Management Research Center  
**110** Marine and Environmental Sciences Centre  
**111** Molecular, Structural and Cellular Microbiology - ITQB  
**112** NOVA Laboratory for Computer Science and Informatics  
**113** UAc - Okeanos R&D Centre - University of the Azores  
**114** Molecular Physical-Chemistry R&D Unit  
**115** Associated Laboratory for Green Chemistry - Clean Technologies and Processes  
**116** Applied Molecular Biosciences Unit

## 118 Engineering and Technology Sciences

- 120** Applied Artificial Intelligence Laboratory  
**121** Centre for Textile Science and Technology  
**122** Smart Cities Research Center  
**123** Centre for Rapid and Sustainable Product Development  
**124** Centre of Biological Engineering of the University of Minho  
**125** Research Centre in Digitalization and Intelligent Robotics  
**126** Transport Phenomena Research Center  
**127** Centre for Mechanical Engineering, Materials and Processes  
**128** Center for Environmental and Sustainability Research  
**129** Centre for Marine Technology and Ocean Engineering  
**130** Centre Bio: Biorefineries, Bioindustries and Bioproducts  
**131** Center for Electronics, Optoelectronics and Telecommunications  
**132** Center for Natural Resources and Environment  
**133** Civil Engineering Research and Innovation for Sustainability  
**134** Aveiro Institute of Materials  
**135** Chemical Process Engineering and Forest Products Research Centre  
**136** Center for Innovation in Industrial Engineering and Technology  
**137** Electromechatronic Systems Research Centre  
**138** Research Centre in Real-Time and Embedded Computing Systems  
**139** Centre of Materials and Building Technologies  
**140** Centre for Mechanical and Aerospace Science and Technologies  
**141** Microelectromechanical Systems Research Unit  
**142** Institute of R&D in Structures and Construction  
**143** Cognitive and People-centric Computing R&D Unit  
**144** Centre for Territory, Environment and Construction  
**145** Centre of Technology and Systems

- 146** Fiber Materials and Environmental Technologies  
**147** Research Group on Intelligent Engineering and Computing for Advanced Innovation and Development  
**148** Institute of Nanostructures, Nanomodelling and Nanofabrication  
**149** Institute for Bioengineering and Biosciences  
**152** LA - ICVS/3B's Associate Laboratory  
**153** Institute of Electronics and Informatics Engineering of Aveiro  
**154** Institute for Systems Engineering and Computers at Coimbra  
**155** INESC Microsystems and Nanotechnologies  
**156** Institute for Systems and Computer Engineering, Technology and Science  
**157** Institute for Systems and Computer engineering, Research and Development  
**158** Institute for Polymers and Composites  
**159** Institute for Sustainability and Innovation in Structural Engineering  
**160** Institute of Systems and robotics ISR - Coimbra  
**161** Information Sciences, Technologies and Architecture Research Center  
**162** Institute for Telecommunications  
**163** Associate Laboratory of Energy, Transports and Aeronautics  
**164** Laboratory of Robotics and Engineering Systems  
**165** Extreme Computing  
**166** Laboratory for Process Engineering, Environment, Biotechnology and Energy  
**167** Artificial Intelligence and Computer Science Laboratory  
**168** Laboratory of Separation and Reaction Engineering Laboratory of Catalysis and Materials  
**169** Mechanical Engineering and Resource Sustainability Center  
**170** Research Unit in Materials, Energy and Environment for Sustainability  
**171** Risks and Sustainability in Construction  
**172** Research Center for Systems and Technologies  
**173** Centre for Mechanical Technology and Automation  
**174** Research and Development Unit for Mechanical and Industrial Engineering  
**175** Research Center for Endogenous Resource Valorization

## 176 Medical and Health Sciences

- 178** Research Center for Biosciences & Health Technologies  
**179** Cardiovascular Centre at the University of Lisbon  
**180** Comprehensive Health Research Center - Research, Education, Training and Innovation in Clinical research and Public Health  
**181** Research Center in Physical Activity, Health and Leisure  
**182** Coimbra Institute for Biomedical Imaging and Translational Research  
**183** Health Sciences Research Centre  
**184** Research Unit for Sport and Physical Activity  
**185** Research Center in Sports Sciences, Health and Human Development  
**186** Center of Research, Education, Innovation and Intervention in Sport  
**187** Egas Moniz Interdisciplinary Research Center  
**188** IPO Porto Research Center  
**189** Center for Interdisciplinary Research in Health  
**190** Center for Health Technology and Services Research  
**191** Interdisciplinary Center for the Study of Human Performance  
**194** Research for Rehabilitation Center  
**195** Center for Innovative Care and Health Technology  
**196** Champalimaud Research Programme  
**197** Epidemiology Research Unit Institute of Public Health, University of Porto  
**198** Global Health and Tropical Medicine  
**199** Health and Technology Research Center  
**200** Institute for Research and Innovation in Health  
**201** Aveiro Institute of Biomedicine  
**202** Gulbenkian Science  
**203** Research Institute for Medicines  
**204** Institute of Molecular Medicine  
**205** iNOVA4Health Programme in Translational Medicine  
**206** Environmental Health Institute  
**207** Center for Drug Discovery and Innovative Medicines  
**208** Centre for Toxicogenomics and Human Health  
**209** Health Sciences Research Unit: Nursing  
**210** Unit for Multidisciplinary Research in Biomedicine  
**211** Cardiovascular Research and Development Center

## 212 Agricultural Sciences

- 214** Biotechnology Centre of Azores  
**215** Centre of Biotechnology and Fine Chemistry  
**216** Center for the Study of Animal Science  
**217** Veterinary and Animal Science Research Centre  
**218** Forest Research Centre  
**219** Research Center in Natural Resources, Environment and Society  
**220** Centre for Interdisciplinary Research in Animal Health  
**221** Mountain Research Center  
**224** Center for Research and Development in Agrifood Systems and Sustainability  
**225** Centre for the Research and Technology of Agro-Environmental and Biological Sciences  
**226** Bioresources for Sustainability  
**227** Research Center in Sustainable Agri-food Production  
**228** Institute of Agricultural and Environmental Research and Technology  
**229** Linking Landscape, Environment, Agriculture and Food  
**230** Mediterranean Institute for Agriculture, Environment and Development



## 232 Social Sciences

**234** Applied Psychology Research Centre Capabilities & Inclusion  
**235** Centre for Public Administration and Public Policies  
**236** Centre of Applied Research in Management and Economics  
**237** Research Centre on Adult Education and Community Intervention  
**238** Centre for Business and Economics Research - University of Coimbra  
**239** Communication and Society Research Centre  
**240** Research Centre for Human Development  
**241** CEDISLaw and Society Research Center  
**242** Center of Applied Economic Studies of the Atlantic  
**243** Center for Economics and Finance at the University of Porto  
**244** Center for Advanced Studies in Management and Economics  
**245** Centre of Geographical Studies  
**246** Research Center in Management and Economics  
**247** Centre for Management Studies of Instituto Superior Técnico  
**248** Centre of Studies in Geography and Territorial Planning  
**249** Católica Research Centre for the Future of Law  
**250** Interdisciplinary Research Centre for Education and Development  
**251** Center for International Studies  
**252** Centre for Legal, Economics and Environmental Studies  
**253** Center of Organizational and Social Studies of Polytechnic of Porto  
**254** Centre for Social Studies  
**255** Centre for Transdisciplinary Development Studies  
**256** Centre for Studies in Education and Innovation  
**257** Research Centre for Anthropology and Health  
**258** Centre for Research in Applied Communication, Culture and New Technologies  
**259** Research Centre on Accounting and Taxation  
**260** Research Center in Political Science  
**261** Research Center for Psychological Science  
**262** Interdisciplinary Centre of Social Sciences  
**263** Centre for Research in European, Economic, Financial and Tax Law  
**266** Lisbon Centre for Research in Public Law  
**267** Research Centre for Criminal Law and Criminal Sciences  
**268** Research Centre Didactics and Technology in the Education of Trainers  
**269** Center for Research in Education  
**270** Research Center in Basic Education  
**271** Research Centre on Child Studies  
**272** Research Centre on Education  
**273** Interdisciplinary Centre for Gender Studies  
**274** Centre for Educational Research  
**275** Research Centre of the Institute for Political Studies  
**276** Centre for Research in Education and Psychology, University of Évora  
**277** Life Quality Research Centre  
**278** Centre for Research and Studies in Sociology  
**279** Center for Research and Innovation in Business Sciences and Infor-

mation Systems  
**280** Centre for Research and Intervention in Education - University of Porto  
**281** Centre for Legal and Economic Research  
**282** Center for Research in Neuropsychology and Cognitive and Behavioural Intervention  
**283** Research Centre for Tourism, Sustainability and Well-being  
**284** Psychology Research Center  
**285** The Psychology of Positive Development Research Center  
**286** Center for Research in Higher Education Policies  
**287** Psychology Research Centre  
**288** Centre for Research in Digital Services  
**289** Centre for Psychological Research and Social Intervention  
**290** Centre for Tourism Research, Development and Innovation  
**291** Lusíada Research Center on Social Work and Social Intervention  
**292** Research Centre in Organizations, Markets and Industrial Management  
**293** Center for Psychology at University of Porto  
**294** Centre for Research in Anthropology  
**295** Research in Social Sciences and Management  
**296** Católica Lisbon Research Unit in Business and Economics  
**297** Digital Media and Interaction Research Center  
**298** Centre for Socioeconomic and Territorial Studies  
**299** Research Unit on Governance, Competitiveness and Public Policy  
**300** Digital HumanEnvironment and Interactions Labs  
**301** NOVA Institute of Communication  
**302** Police Research Center  
**303** Institute of Social Sciences, University of Lisbon  
**304** University of Coimbra Institute for Legal Research  
**305** Portucalense Institute for Legal Research  
**306** Centre for Research and Innovation in Education  
**307** Orient Institute  
**308** Portuguese Institute of International Relations - NOVA University of Lisbon  
**309** Institute of Sociology of the University of Porto  
**310** Research Centre for Justice and Governance  
**311** LABCOM - Communication and Arts  
**312** Distance Education and Elearning Laboratory  
**313** Research Unit in Business Sciences  
**314** Centre for Research in Economics and Management  
**315** Nova School of Business and Economics  
**316** Research in Economics and Mathematics  
**317** Research on Economics, Management and Information Technologies  
**318** Education and Training Research and Development Unit  
**319** Applied Management Research Unit  
**320** Business Research Unit - BRU-IUL  
**321** William James Center for Research

## 322 Humanities

**324** ARTIS - Institute of Art History, School of Arts and Humanities, University of Lisbon  
**325** Arnaldo Araújo Research Center  
**326** Center for Studies in Archeology, Arts and Heritage  
**327** Centre for Studies in Architecture and Urbanism  
**328** University of Lisbon Centre for English Studies  
**329** Centre of African Studies of the University of Porto  
**330** Centre for Comparative Studies  
**331** Research Centre for Communication and Culture  
**332** Centre for Classical Studies  
**333** Center for Classical and Humanistic Studies of the Faculty of Letters of Coimbra University  
**334** Centre for Philosophical and Humanistic Studies  
**335** Research Centre for Humanities  
**336** Centre of 20th Century Interdisciplinary Studies  
**337** Center for the Studies in Letters  
**338** Research Centre for General and Applied Linguistics  
**339** Centre for Ethics, Politics and Society  
**340** Centre for the Study of the Sociology and Aesthetics of Music  
**341** Centre for Theatre Studies  
**342** Centre for English, Translation, and Anglo-Portuguese Studies  
**343** Center for Philosophy of Sciences of the University of Lisbon  
**344** Centre of Philosophy, University of Lisbon  
**345** Centre for Art History and Artistic Research  
**346** Centre for the Humanities  
**347** Center for the History of Society and Culture  
**348** Centre for History of the University of Lisbon  
**349** Research Centre for Arts and Communication  
**350** Research Centre for Architecture, Urban Planning and Design  
**351** Interdisciplinary Centre for History, Culture(s) and Society  
**352** Artistic Studies Research Center  
**353** Interuniversity Centre for Camonian Studies

**354** Planning of Territory, Architecture and Design Research Centre  
**355** Research Center for Science and Technology of the Arts  
**358** Transdisciplinary Research Centre «Culture, Space and Memory»  
**359** Research Centre for Territory, Transports and Environment  
**360** Centre for Innovation in Territory, Urbanism and Architecture  
**361** Interuniversity Center for the History of Science and Technology  
**362** Centre for Lusophone and European Literatures and Cultures  
**363** Centre for Languages, Literatures and Cultures  
**364** Centre of Portuguese Literature  
**365** Center of Linguistics of the University of Lisbon  
**366** Centre of Linguistics of NOVA University of Lisbon  
**367** Centre of Linguistics of the University of Porto  
**368** Esad idea, Research in Design and Art  
**369** Research Institute in Art, Design and Society  
**370** Interdisciplinary Center for Archaeology and Evolution of Human Behavior  
**371** Research Institute for Design, Media and Culture  
**372** Institute for Philosophical Studies  
**373** Institute for the Study of Literature and Tradition  
**374** Institute of Medieval Studies  
**375** Institute of Philosophy  
**376** NOVA Institute of Philosophy  
**377** Art History Institute  
**378** Institute of Contemporary History  
**379** Institute for Comparative Literature  
**380** Ethnomusicology Institute - Center for Studies in Music and Dance  
**381** Landscapes, Heritage and Territory Laboratory  
**382** Arts and Design Research Lab  
**383** PRAXISCentre for Philosophy, Politics and Culture  
**384** Technology, Restoration and Arts Enhancement Center  
**385** Centre for Archaeology University of Lisbon  
**386** Research Unit in Design and Communication  
**387** Glass and Ceramic for the Arts

# Executive Summary

## 01

## Research Units at a Glance

The last two decades were a period of outstanding development for the Portuguese research and innovation system. The sheer growth of scientific output was supported by the large expansion of the number of researchers, R&D institutions and indicators such as % GDP devoted to science, number of PhD awards, number of internationally referred publications. From 2001 to 2020, total R&D expenditure increased from 0.76% to 1.62%, and the number of FTE researchers from 17,725 to 53,174. R&D in the corporate sector expanded even faster, rising from 31.8% to 56.9% of the total R&D expenditure between 2001 and 2020.

The Fundação para a Ciência e a Tecnologia (FCT) plays a central leverage role as the national agency for the public funding of science. Since its foundation in 1997, 25 years ago, FCT supports the research performing entities, researchers, PhD scholarships, R&D projects, participation in international organizations, communication and advanced computing. In 2020, FCT funding totaled 520 M€, supporting R&D structures (21.7% of the total), scientific employment contracts (24.2%), scholarships (17.5%), projects (20.8%), international cooperation (10.0%) and other focused activities (5.8%).

**R&D Units** are central to the Portuguese scientific and technological system. They are the hubs where most of the non-corporate research and innovation is carried out, assembling a critical capacity and promoting a work environment fostering scientific creativity, talent attraction, scientific careers and advanced formation in all scientific domains. R&D Units' statute and funding are given by FCT after a competitive call and evaluation, every 4 years. The periodic evaluation of the R&D Units is the moment when their statute is validated by FCT through the funding of the units classified as excellent, very good or good based on the assessment of their pluriannual activity reports and strategic plans. The last evaluation process was launched by FCT in 2017/2018, and

completed in 2019, leading to the funding of 312 R&D Units, integrating approximately 19000 researchers, for the period 2020-2023, with over 531 M Euros, including 425 M Euros of direct base and programmatic funding and 106 M Euros for Ph.D. scholarships. Of the total, 17 R&D Units are legal autonomous entities established as non-for-profit private associations or public institutions (5,4 %) and 295 R&D Units are under the authority of legally established public or private Higher Education Institutes and R&D institutions of the national science and technology system (94,6%).

*“ The Fundação para a Ciência e a Tecnologia (FCT) plays a central leverage role as the national agency for the public funding of science.*

The distribution by scientific domain shows that the highest number of R&D units are in Social Sciences (86 units, 27.6% of the total) and the lowest in Agricultural Sciences (15 units, 4.8%). The average dimension is 62.2 researchers per Unit, ranging from 46.4 researchers in Social Sciences to 78.4 researchers in Medical and Health Sciences. R&D Units are spread throughout the national territory, although the regions of Lisbon, Centre and North host 92% of the R&D Units, and 94.8% of researchers.

This Atlas of the Research Units in Portugal presents a summary of each of the 312 R&D Units, organized by scientific domain including the strategic aims, description, activities, and impact.



# Foreword

# Manuel Heitor

# 02

## About the Atlas of R&D units, 2022

**Manuel Heitor**  
Minister for Science,  
Technology and Higher Education

The publication of this “Atlas of R&D units, 2022” by the time of the 25th anniversary of the Foundation for Science and Technology, FCT (1997-2022), acknowledges all of those that have made possible science in Portugal.

The 312 R&D units listed in the Atlas resulted from the 6th national assessment exercise conducted in 2017-2018, based on international peer reviews and following a practice established since the creation of the Portuguese Ministry for Science and Technology, in 1995, by José Mariano Gago. The national assessment exercises occur every four years and are today well established as the founding principle for the institutional landscape of research in Portugal, following the best international practices.

The analysis of the evolution of our R&D units and their dynamic nature clearly shows that the co-evolution of human capital formation and the capacity for research and innovation in its various forms (academic, translational and applied) are a critical step in the maturity of any modern democratic society, which should always be further developed and promoted. Today, we already know that we have Science and that scientific production allows us to accumulate enough knowledge that enables us to export products and services with greater economic value, as well as preventing, treating and rehabilitating diseases based on the science we have learned and on that which we produce ourselves. We also know that, on the other hand, economic and social activities with greater added value raise new scientific questions and stimulate new frontiers of knowledge. We therefore need to continue to evolve in reinforcing collaborative agendas with more science and more economy, to ensure a sustainable future for the next generations. It requires continuing the recent

path of increasing spending on R&D, reaching an overall investment in R&D of 3% of GDP by 2030.

Above all, the 312 R&D units listed in the Atlas have accomplished a progress that should make us all proud, but also encourage us to continue to do more and better. Total expenditure on R&D in Portugal has reached a new historic value in 2020, representing 1.62% of GDP (rising from 1.2% in 2015, and 1.5% in 2010, but only about 0.3% in the 1980’s), being particularly significant in the business sector, which is now representing 57% of total expenditure on R&D (it was 46% in 2015 and less than 20% in the 1980’s).

**“ Above all, the 312 R&D units listed in the Atlas have accomplished a progress that should make us all proud, but also encourage us to continue to do more and better.**

This evolution has been accompanied by the reinforcement of the tax incentives system for companies for R&D activities and the national capacity to attract competitive European funds of centralized management (i.e., through the European Framework Programmes for Research and Innovation, including H2020 for 2014-2020 and Horizon Europe since 2021), in addition to decentralised structural funds (namely FEDER and ESF). At the same time, the total number of researchers, when measured in “Full-Time Equivalent - FTE”, reached 10.2 researchers per thousand active in 2020 (while it was 7.4% in 2015), surpassing the



European average and including about 40% of researchers in business firms.

Beyond these and other statistical information, I argue that the value of this Atlas and the description of the 312 R&D units fully captures the “intrinsic” value of the institutional organization of science and technology in Portugal. It shows a diversified set of institutional arrangements, as well as of skills throughout all areas of knowledge, supported by research careers and an institutional setting very much associated with higher education institutions, as well as research infrastructures. Their critical role at the national level must be understood as the necessary institutional background of an increasingly complex, diversified and densified institutional landscape for research and innovation, where the 312 R&D units interact with their related academic settings, as well as with 7 State Laboratories, 40 large Associate Laboratories, 35 Collaborative Laboratories and about 30 Technology and Innovation centers, beyond an increasingly diversified and fragmented network of innovative business firms, including science-driven startups.

It is under this context that this Atlas clearly calls our attention to seven main critical issues, as follows:

- i) the critical relevance of periodic research assessment practices following international peer-reviews, which should keep calling for our attention in order to guarantee the continuous use of best practices worldwide;
- ii) the unique opportunity open to young research students through their integration in R&D units and ongoing research activities, including the preparation of their thesis and related academic work;
- iii) the need to move forward with more dynamic and diversified scientific career developments at the level of research and academic institutions, which are critical to further develop science, advance knowledge and guarantee the capacity to train future generations;

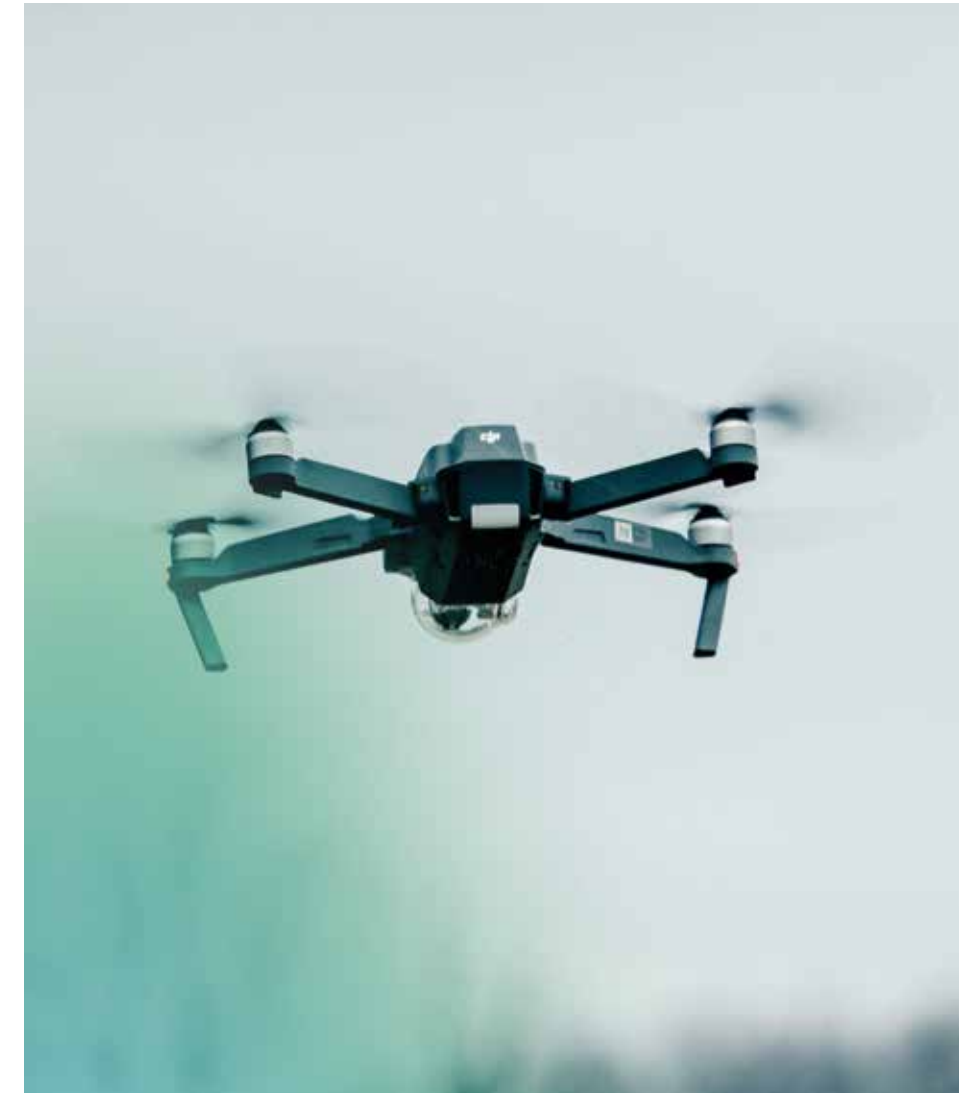
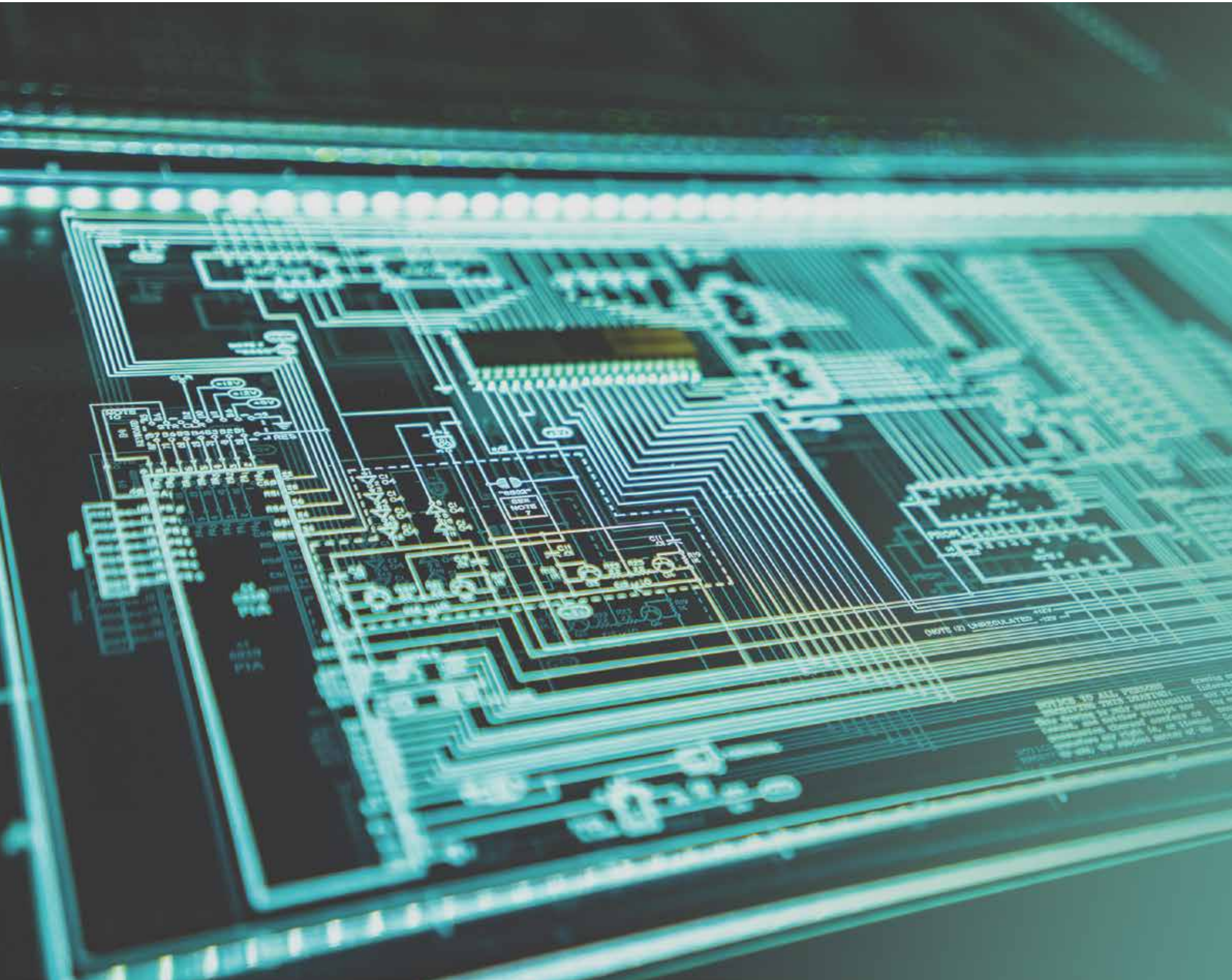
- iv) the critical relevance of pursuing fundamental research towards the advancement of knowledge, preferably in close articulation with disruptive science-driven startups to foster innovative solutions;
- v) the recognition of the critical role of the collaboration of R&D units with institutional intermediaries, such as Collaborative Laboratories and Technology and Innovation centers, to help diversify research and education and promote institutional diversification and related risk-sharing mechanisms to foster skilled job creation in close association with R&D activities;
- vi) the importance of the internationalization of our R&D units and related migratory flows of highly skilled human resources, which calls for a collective action at large, namely for keeping attracting new talents for Portugal, including refugees, students and scholars who belong to communities and/or countries at risk in need of humanitarian assistance; and
- vii) the need to better characterize and promote participatory processes of R&D agenda setting to help engaging civil society with scientific structures in our national and European contexts.

Overall, I would like to strongly emphasize the role that FCT plays in advancing our knowledge and understanding the foundations of R&D Units towards an “evidence-based Science, Technology and Innovation policy” in the European context.



Minister Manuel Heitor







# Foreword Helena Pereira 03

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## About the Atlas of R&D Units in Portugal, 2022

**Helena Pereira**

President of Fundação para a Ciência  
e a Tecnologia

An institutional framework for researchers is fundamental to develop activities in research, technological development and innovation in a coordinated manner, and to pursue targeted strategic goals, thereby allowing the creation of knowledge and its integration into the international scientific community and its valorization and use by society. The institutional framework is also determining to allow scientific and qualified employment, including the development of research careers, as well as to provide an environment for advanced training and studies, namely regarding doctoral education.

In Portugal, the science ecosystem has been defined as the National Science and Technology System (SNCT, Sistema Nacional de Ciência e Tecnologia) by a recent decree law, commonly named as “the Law of Science” (Decree-law 63/2019, May 16th). Among the research performing institutions, the following are listed: R&D Units, Associate Laboratories and State Laboratories. Included in the system are also interface institutions and clusters such as Research Infrastructures, Collaborative Laboratories, Technology and Innovation Centres, and Networks and Consortia.

R&D units are the main backbone of the R&D performing institutions and constitute the organizational base for the Portuguese science. They integrate most of the researchers working in Portugal. Their statute is now given by FCT after a competitive call for an external, independent and international evaluation that analyses their 5-year activity report and 5-year strategic program, and is repeated every 4 years. The institutional funding given by FCT for the functioning of R&D Units has a 4-year timeframe and depends on the unit’s dimension and the classification obtained in the evaluation process. The first

multiannual funding of R&D Units started in 1993, with the adoption of the periodic evaluation model since 1996 and continuing with some changes and adaptations to the present day. The last evaluation exercise was carried out in 2017-2018.

Today Portugal has 312 R&D Units covering all the scientific domains and spreading over the Portuguese territory. This Atlas lists and briefly describes the scope of each one. It is a much-needed synthesis that will contribute, as we hopefully expect, to a better understanding of the country’s science system and help establish R&D synergies, both nationally and internationally, also linking to cooperation with the productive system and public administration. The R&D Units in Portugal have a history and some specific characteristics that confer them a uniqueness and out single them from other countries’ research systems.

**“ It is a much-needed synthesis that will contribute, as we hopefully expect, to a better understanding of the country’s science system and help establish R&D synergies, both nationally and internationally**

A grounding principle is that the creation of a R&D Unit is a voluntary act from a group of researchers that wish to work together on a single subject or have a multidisciplinary approach. At foundation, most researchers integrating one

Unit were permanent staff of universities and polytechnics, who disposed rather freely of their non-teaching time to research activities. Although this evolved with time, namely over the last decade, the connection between the R&D Units and the Higher Education institutions is still overwhelming.

The rules that FCT applies to acknowledge the R&D Unit statute are, and have been, minimal, mostly related to the requirement for a scientific council, an external advisory commission, and the overall adoption of a democratic and ethical approach to the R&D practice. The present days have brought new challenges to the R&D Units namely derived from Portuguese and European directives such as the adoption of open science, including, for instance, the open access publication and an open data system.

The R&D Units have a large diversity at different levels, regarding institutional integration, organizational approaches, researchers profile, and scientific scope and strategies:

- R&D Units may be legal entities either of private or public nature, or may configure as centres without a legal entity that therefore need an overarching management institution with the legal capacity to contracting.
- The balance between the number of researchers that are permanent staff of universities, polytechnics or state laboratories and the number of researchers that are directly contracted into the Unit also varies to a large extent.
- Dimension ranges from small sized units of less than 30 researchers to large units of over 300 researchers.
- The research scope may encompass more fundamental oriented research as well as targeted research also covering knowledge valorization.
- Funding is also diversified by multiple sources, either

of competitive nature or by contract, with FCT funding representing a small share for some Units or rather being the determining factor for the functioning of many Units.

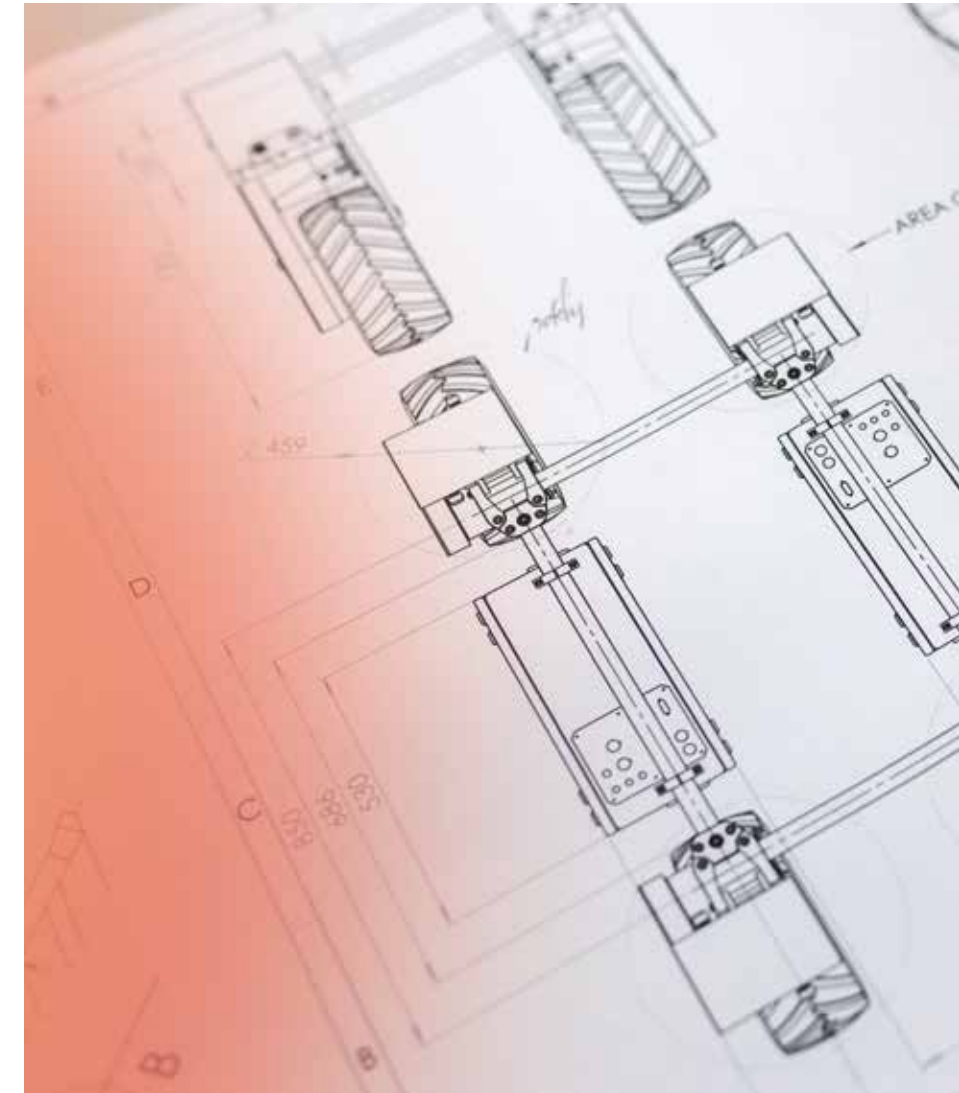
This Atlas begins with a brief overview of the science system in Portugal, of the role of FCT in funding and evaluation, and of the overall R&D Units landscape. The full 312 R&D Units are followingly introduced, grouped by the six broad scientific domains of Agricultural Sciences, Natural Sciences, Medical and Health Sciences, Engineering and Technology Sciences, Social Sciences and Humanities.

FCT wishes that this Atlas may foster critical reflection on Portuguese science, the architecture of R&D Units and their linkage to the other parts of the science system, as well as to Higher Education institutions, public administration and the economic sector.



President Helena Pereira





# Introductory Context



## 4.1 The institutional research landscape in Portugal

The last two decades have been a period of outstanding development for the Portuguese research and innovation system, with a dynamic institutional diversification in all scientific domains. The research and innovation system was legally defined and structured in 2019 by the so-called “Law of Science” [Decree-law nr. 63/2019, May 16th, adjusted by the Decree-law 126-B/2021 (Dec. 31st)]. The system encompasses different institutions with specific roles including funders, R&D performers and interface entities, along with scientific culture organizations of both public and private nature. The key principles underlying the system and their institutions are the following: freedom of research, responsibility, integrity, cooperation, scientific capacitation of society, promotion of scientific employment, open science, promotion of science culture, promotion of Portuguese as a science language, internationalization and interaction of knowledge and innovation. A schematic and indicative diagram of the science system is given in Figure 1, showing the participant organizations and entities as well as their links and relationships. The main players in the system are briefly listed and described below.

**Fundação para a Ciência e a Tecnologia (FCT)** is the national funding agency for science supporting most R&D activities, including the research performing entities (R&D units, associate laboratories, research infrastructures and collaborative laboratories), researchers, PhD scholarships, R&D projects, participation in international organizations (e.g., CERN, ESA, ESO, EMBL among others), communication and advanced computing. FCT is also partner and funder of other agencies, such as Agência de Inovação - ANI (the National Innovation Agency), Agência de Investigação Clínica e Inovação Biomédica - AICIB (Agency for Clinical Research and Biomedical Innovation), Ciência Viva and Portugal Space, and of international R&D organizations such as Laboratório Internacional de Nanotecnologia - INL (International Iberian Nanotechnology Laboratory) and the AIR Center (Atlantic International Research Center). The funding of FCT to the scientific community is based on competitive calls, always with external

and independent evaluations. FCT has a central role in the development of the national science system.

**R&D Units** are the core of the scientific and technological system. They are organized structures of public or private nature that include human resources, equipment and technical infrastructures that are active in R&D, advanced education and science dissemination, working in all scientific domains and spreading over the national territory. Their statute, and funding, is given by FCT after a competitive call and evaluation for a period of 4 years. At present, there are 312 R&D Units integrating approximately 19000 researchers.

**State Laboratories** are public institutions that pursue the State defined objectives of scientific and technological policy by carrying out R&D and technical activities, with responsibilities in the support of the productive sector, also including normalization, certification, metrology and regulation, among others. State Laboratories are consulted by the Government for the definition of programs and instruments for national scientific and technological policies. There are seven State Laboratories: Instituto Hidrográfico – IH (Hydrographic Institute); Instituto Nacional de Investigação Agrária e Veterinária - INIAV (National Institute of Agrarian and Veterinary Research); Instituto Nacional de Medicina Legal e Ciências Forenses - INMLCF (National Institute of Legal Medicine and Forensic Sciences); Instituto Nacional de Saúde Doutor Ricardo Jorge - INSA (National Health Institute Doctor Ricardo Jorge); Instituto Português do Mar e da Atmosfera - IPMA (Portuguese Institute for Sea and Atmosphere) ; Laboratório Nacional de Energia e Geologia – LNEG (National Laboratory of Energy and Geology); and Laboratório Nacional de Engenharia Civil -LNEC (National Laboratory for Civil Engineering).

**Associate Laboratories** is a title awarded by FCT to R&D Units or consortia of R&D Units committed to contribute to public policies of science and technology and the fostering of scientific employment. The title is granted after a competitive call and external independent evaluation, for

a period of 10 years, with a 5-year mid-term evaluation. At present, there are 40 Associate Laboratories in different scientific domains.

**Collaborative Laboratories (CoLAB)** are legal entities formed by a consortium that includes R&D units, interface entities, companies, and other users of knowledge-based results to pursue common agendas for short and medium-term research and innovation targeted to create knowledge based economic and social value as well as qualified employment. The CoLAB title is awarded by FCT for 5 years, after an independent international evaluation. At present, 35 CoLABs are working in different areas and addressing various goals.

**Science and technology infrastructures** are platforms, resources and associated services to be used by R&D institutions and others. They were first created in 2014, following a competitive call launched in 2013, and are subject to evaluation and maturity assessment conducted by FCT. They serve the scientific community through large scale or specific equipment and tools, collections, archives and scientific data, computing and software systems, and communication networks targeted to the crea-

tion and diffusion of knowledge, including participation in internationally established R&D infrastructures. A total of 56 infrastructures integrate the National Roadmap of Research Infrastructures of Strategic Interest of which 66% are linked to the European Strategy Forum on Research Infrastructures Roadmap. They pertain to different areas of activity (Energy, Environment, Health and Nutrition, Physical and Engineering Sciences, Social and Cultural Innovation, Digital).

**Technology and Innovation Centres** produce and disseminate knowledge targeted to business enterprises and to creation of economic value in the framework of specialization priorities at national and regional levels. Their main objective is to contribute to increase specialization in the economy and the added value of national supply, and to promote competitiveness of enterprises, namely of SMEs. The statute is given by ANI for a 6-year period after an application process and evaluation (Decree-Law 126-B/2021, Dec. 31st).

**Networks and Consortia of Science and Technology** are informal or formal organizations joining R&D entities and entities of other nature, with common agendas for re-

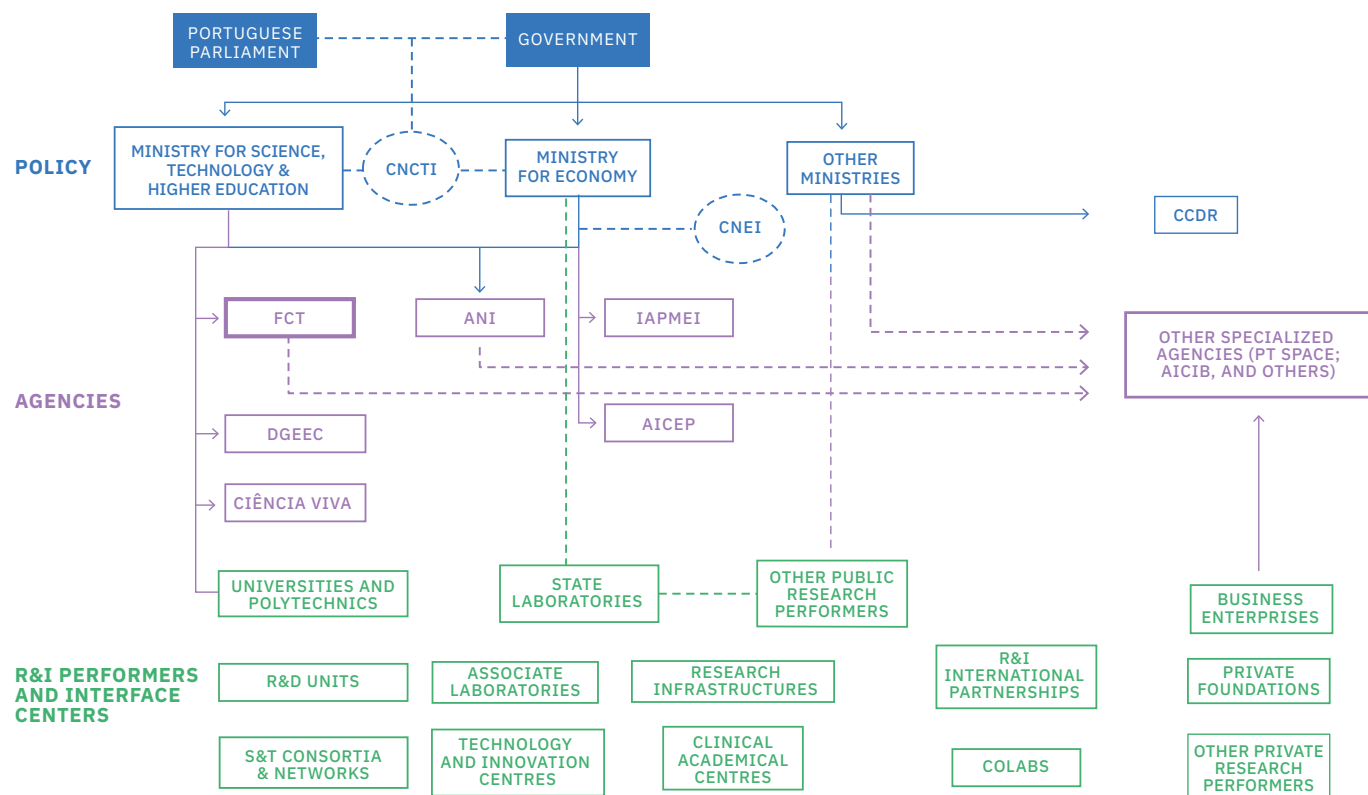


Figure 1. Schematic organizational chart of the National Science and Technology System

search and innovation, including the structured use of scientific and technological infrastructures of common interest and the participation in internationalization processes.

The national science and technology system is followed by Direção Geral de Estatísticas da Educação e Ciência - DGEEC (Directorate General for Statistics in Education and Science), responsible for the gathering, analysis and reporting of statistical data on education and science, with delegated competencies from the Instituto Nacional de Estatística - INE (Statistics Portugal). DGEEC promotes the regular survey of the national science and technology system providing the figures for R&D expenditure and number of researchers: Inquérito ao Potencial Científico e Tecnológico Nacional - IPCTN (Survey on the National Scientific and Technological Potential). The IPCTN has been annual since 2007, and biennial before that, with the last survey being held in 2020.

The scientific system has grown significantly in Portugal especially in the last 20 years. This is clearly shown by the total expenditure in R&D that amounted to 1,038 M€ in 2001, 2,758 M€. in 2010 and 3,236 M € in 2020 (Figure 2) and by the number of researchers that totaled 17,725 FTE

researchers in 2001, 41,523 FTE researchers in 2010 and 53,174 FTE researchers in 2020 (Figure 3).

A change in the type and nature of the R&D performers also occurred along time. While in 2001 most R&D was performed in public institutions (State Laboratories and R&D Units integrated in the Higher Education institutions) and in the non-for-profit private R&D Institutions (also included as R&D Units) with less R&D in the corporate sector (corresponding to 31.8% of the total R&D expenditure and 15.4% of the FTE researchers), after 20 years, in 2020, the corporate R&D represented the largest share of R&D expenditure with 56.9% of the total, and also a significant proportion of researchers of 41.3% of the total FTE researchers.

The research carried out under the framework of Universities and Polytechnics, integrating the work done by their embedded R&D Units, has an overwhelming relevance for the national science system. In 2001, R&D expenditure and number of researchers classified as pertaining to the Higher Education system were, respectively, 381 M€ and 8,942 FTE researchers, rising to 1,016 M€ and 23,859 FTE researchers in 2010, and to 1,165 M€ and 28,7340 FTE

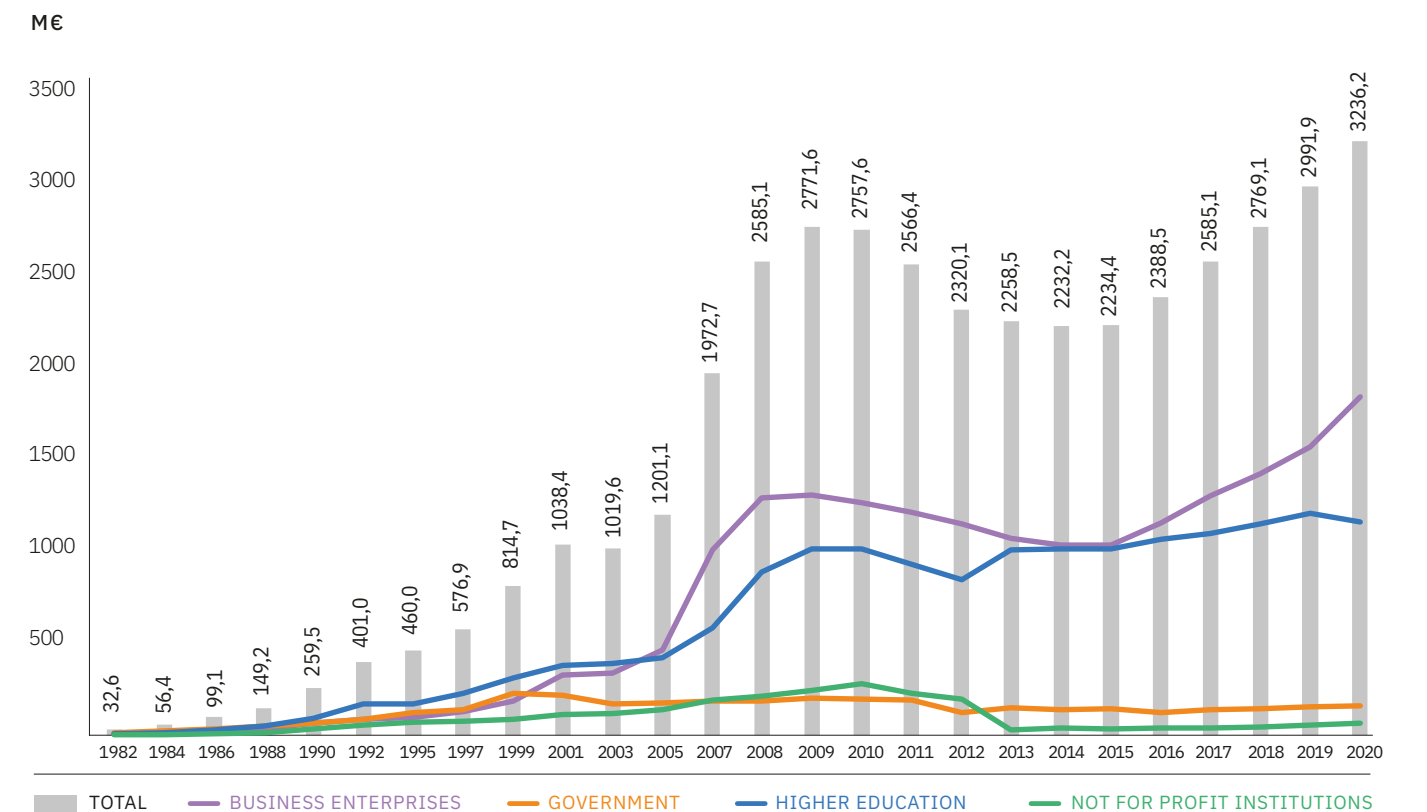


Figure 2. Total R&D expenditure (in M€) by sector of performance, from 1982 to 2020; Source: DGEEC.IPCTN

researchers in 2020. Within the Higher Education system, comprising 39 universities and 77 polytechnic institutes, most R&D is performed by the public institutions, as shown in Figure 4: in 2020, the public sector carried out 93% of the total R&D expenditure of 1,165 M€, mostly through universities with 90%, and included 93% of the total 28.7 thousand FTE researchers, also mostly in universities (Figure 4).

FTE RESEARCHERS

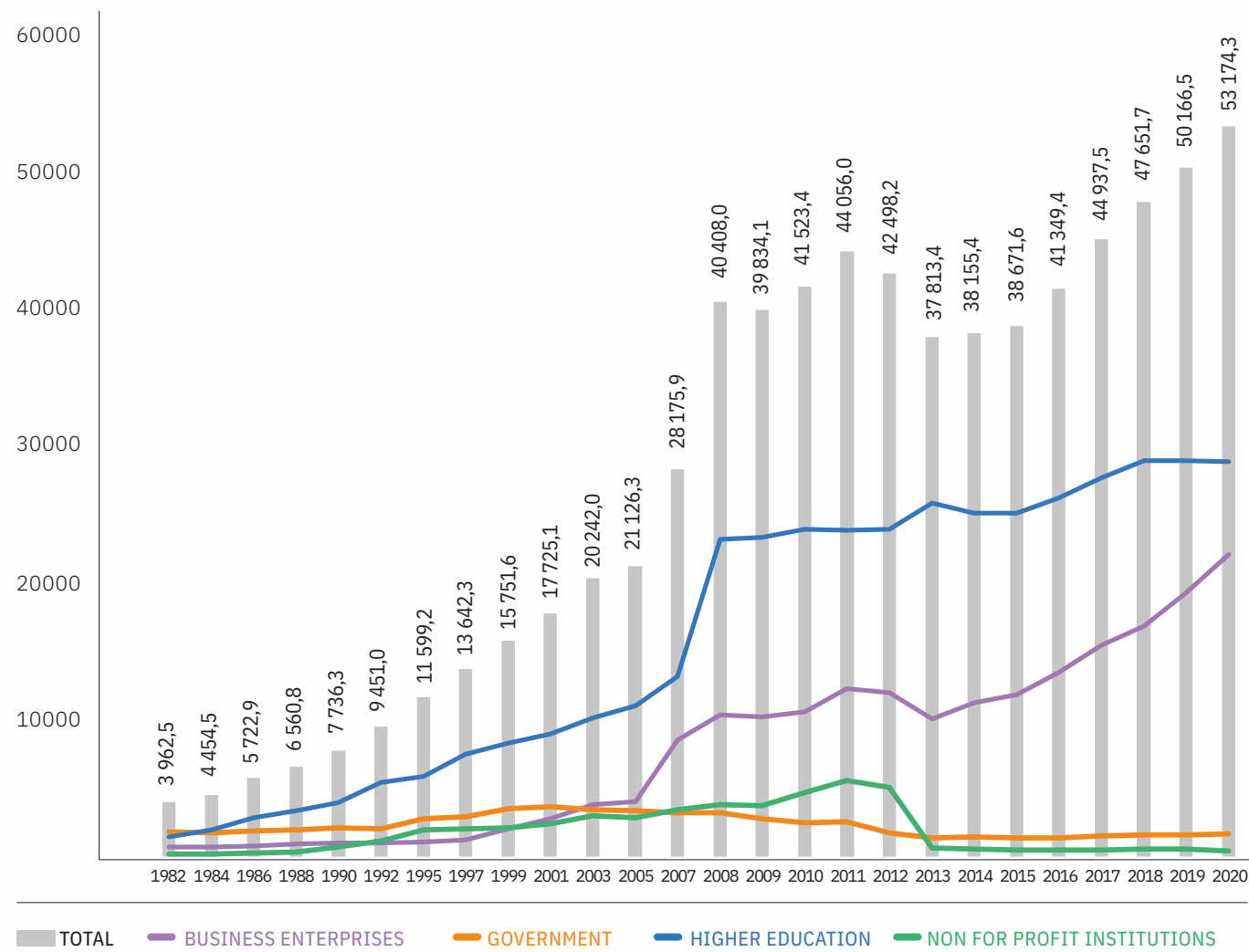
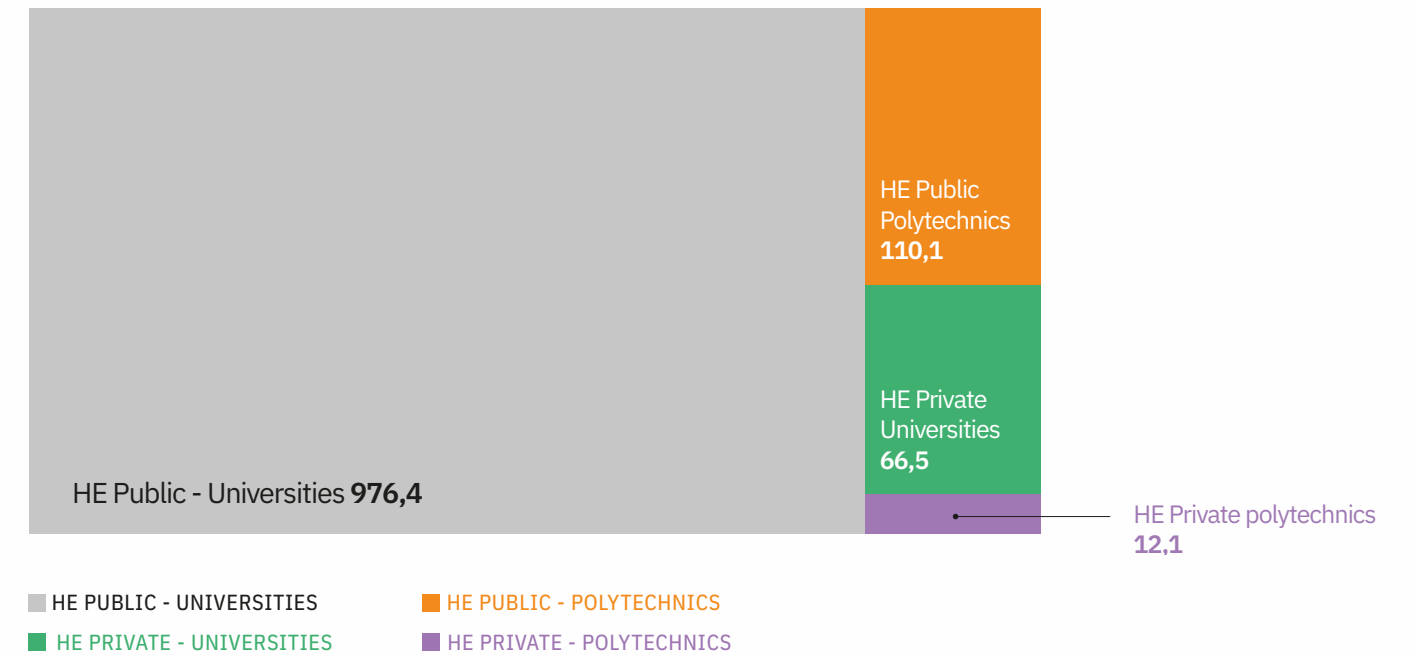


Figure 3. Total Researchers (in FTE) by sector of performance, from 1982 to 2020; Source: DGEEC.IPCTN

R&D EXPENDITURE IN HIGHER EDUCATION - MILLION EUROS



RESEARCHERS IN HIGHER EDUCATION - FTE

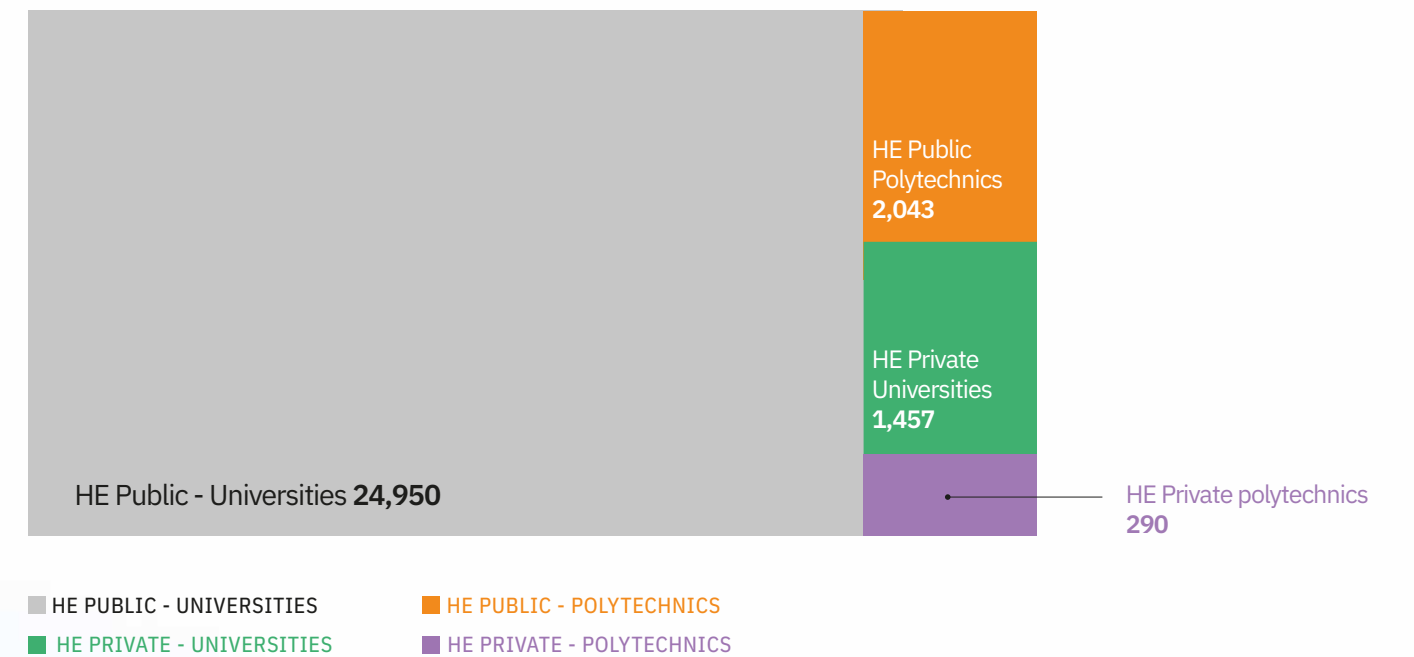


Figure 4. R&D expenditure (in M€) and researchers (in FTE), in the Higher Education (HE) sector in 2020; DGEEC. IPCTN



## 4.2 FCT in R&D funding and evaluation

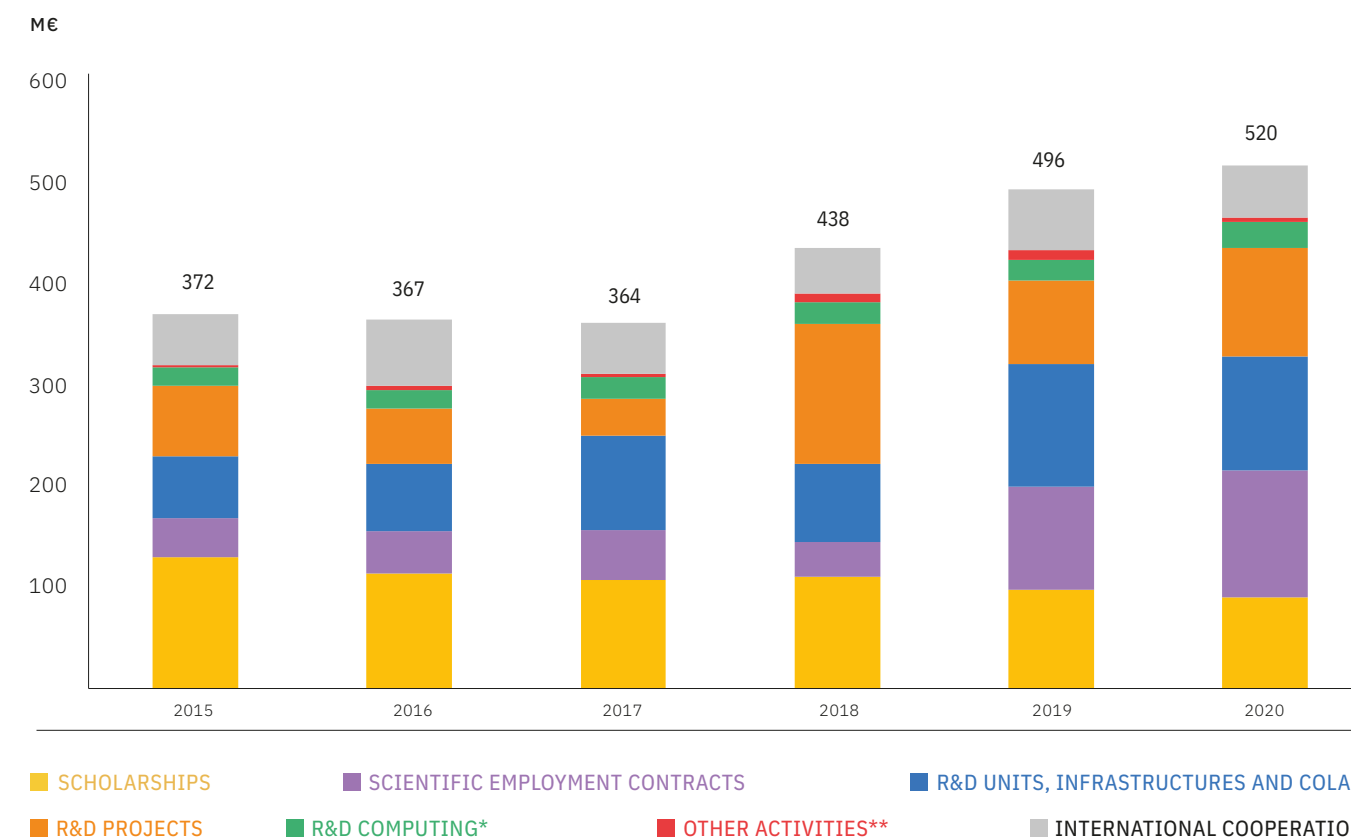
FCT was founded in 1997, following the creation of the Ministry of Science and Technology, in 1995, and succeeding to the former Junta Nacional de Investigação Científica e Tecnológica - JNICT (National Board for Research and Technological Research), a science and technology funding agency operating since 1967 under successive ministries in the areas of culture and science, and planning. The mission of FCT is to promote, fund and evaluate institutions, networks, infrastructures, equipment, programs and projects, and human resources in all domains of science and technology, also including international cooperation. In 2013, the Fundação para a Computação Científica Nacional - FCCN (Foundation for National Scientific Computation) was integrated in FCT as an organic structure, keeping its functions, competencies and staff to carry the development of national scientific computation and digital communication, among others.

FCT is central to the national system of science and technology, and significantly contributed to its growth, consolidation and complexification along the last two decades, pursuing high quality standards and competitiveness in all scientific domains, stimulating scientific outputs and their valorization by society and the productive sector.

The funding of FCT in science covers the direct support of R&D in structures (R&D Units, Associate Laboratories, Infrastructures and CoLABs), human resources (contracts for researchers and PhD scholarships), ideas (R&D projects), international cooperation (with participation in international organizations) and in cross-cutting support of the scientific community (computing, digital communication, access to scientific information).

FCT funding is granted in the framework of competitive processes following the launch of public calls with clearly defined evaluation criteria and process guidelines. The evaluation principles are based on peer-review by external independent experts, mostly international, to avoid conflicts of interest, and preserve confidentiality. In some calls with a smaller number of applications, a public presentation is assessed by the panel, as was the case with CoLABs and Associate Laboratories. The assessment results are made public in FCT's website.

In 2020, FCT funding of science totaled 520 M€, a steady increase during the last three-year period (Figure 5). The funding is distributed by the R&D structures (21.7% of the total), scientific employment contracts (24.2%), scholarships (17.5%), projects (20.8%), international cooperation (10.0%) and cross-cutting and other activities (5.8%). A structural reform in scholarship awards took place as the researcher contracts replaced post-doc scholarships, which were the main tool to support researchers before 2016. Since then FCT only awards doctoral targeted scholarships and thereby only the remaining post-doc scholarships are in execution nowadays.



\* RCTS – the Science, Technology and Society Network, RCTS100, Advanced Computation, and the subscription of B-on – The Online Knowledge Library

\*\*Other activities: Includes FACC - the Scientific Community Support Fund and Ciência Viva - the National Agency for Scientific and Technological Culture.

Figure 5. FCT Investment (in M€) by areas of activity, from 2015 to 2020; Source: FCT

## 4.3 The Research Units

R&D Units are the central components in the national science and technology system and have significantly contributed to the reinforcement of the R&D institutional framework and to the increase of all science indicators since the 90's.

Except for the State Laboratories, the structured research experience started with 100 Research Centers launched by the universities, acknowledged, and funded by the Instituto Nacional de Investigação Científica - INIC (National Institute for Scientific Research), created in 1976. In parallel, JNICT was created in 1967 under the Presidency of the Council of Ministers mainly for proposals and coordination of national science policy and planning activities, and for monitoring R&D indicators. Across time, JNICT started funding R&D projects, some of which were carried out in INIC's Research Centers. The number of INIC's Research Centers increased to 151 until 1992, when INIC was extinguished, and the centers were allocated to universities.

In 1993, JNICT started the Program for the Pluriannual Funding of Research Units (Programa de Financiamento Plurianual de Unidades de Investigação) to provide a stable support to the research units (Unidades de Investigação), overcoming fluctuations in projects and scholarships funding. This policy has been in place up to now and was supported by the definition of a model for the organization and evaluation-based funding of the R&D Units.

This model, first established by JNICT in 1996, has endured some adaptations. The main principles underlying the organization, evaluation and funding of R&D Units are the following:

- The process is open to R&D Units in all scientific domains;
- The process is based on the freedom and voluntary decision of researchers to integrate a R&D Unit;
- Researchers are integrated in a R&D Unit without a salary commitment to its structure;
- The researchers integrated in one R&D Unit may be contractually affiliated to different institutions;
- Although researchers may collaborate with more than one R&D Unit, they can only be considered for funding as integrated researchers in one R&D Unit;
- Each R&D Unit is based on a team developing research in one scientific or technological domain, or in multidisciplinary areas sharing one or more common goal;
- A minimal critical mass is required, as given by a team of researchers with relevant experience, and the leadership is assured by a scientific coordinator.

This bottom-up and flexible approach was paramount to yield a consistent research activity in different fields and to boost scientific outputs, as well as to allow a considerable diversity in organization, nature, dimension and strategic goals. This approach facilitated the adaptation and structural reorganization of the R&D Units while encompassing the evolution of their research strategies and goals. The periodic evaluation has been an efficient tool for the improvement of R&D units and the strengthening of the scientific system.

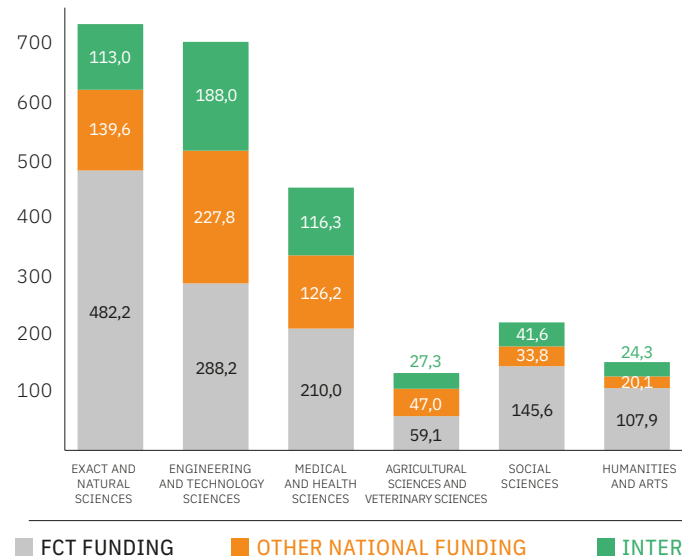
The open call for the evaluation and subsequent funding of the R&D Units has been carried out in 1996, 1999, 2003, 2007, 2013 and 2017/18. Although with some adaptations, the funding has contemplated two components: a base funding based on the number of integrated researchers and the classification obtained by the R&D Unit and a strategic funding related to the potential for high quality and international research outputs, proposed by the evaluation panel. Table 1 makes a short time-line overview of the successive evaluation exercises.

The evaluation of R&D Units is a peer-based process conducted by external, independent and international experts, organized in evaluation panels. The last evaluation process of 2017/18 involved 33 panels and a total of 235 evaluators. The process required the assessment of the submitted 5-year activity report, the 5-year strategic program and of the listed research team, followed by a site visit. The evaluation results were made public in FCT's site. The funding to the R&D Units substantially increased in relation to the former funding cycles to a total 425 M€ for 4 years, with an additional 105.6 M€ for 1610 Ph.D. scholarships to be selected directly by the R&D Units.

Recent evaluations have emphasized the financial sustainability of the R&D activities. This considers the share of FCT funding in the total funding of the R&D Unit, thereby addressing the capacity to attract international, namely European, funding and the access to other funding sources. In the 2017-18 evaluation, R&D Units were asked to report on funding sources for the 2013-17 period. [Figure 6](#) shows R&D Units' share of FCT in total funding and the share of international funding. It is striking that 60% of the R&D Units depend on more than 50% of their budget on FCT funding ([Figure 7](#)). The funding distribution by sources differs among scientific domains, with R&D Units in Agricultural Sciences, Medical and Health Sciences, and Engineering and Technological Sciences less dependent on FCT funding.

**R&D Units are the central components in the national science and technology system and have significantly contributed to the reinforcement of the R&D institutional framework and to the increase of all science indicators since the 90's.**

FUNDING COMPONENTS (M€) (2013-2017)



FUNDING COMPONENTS (%)

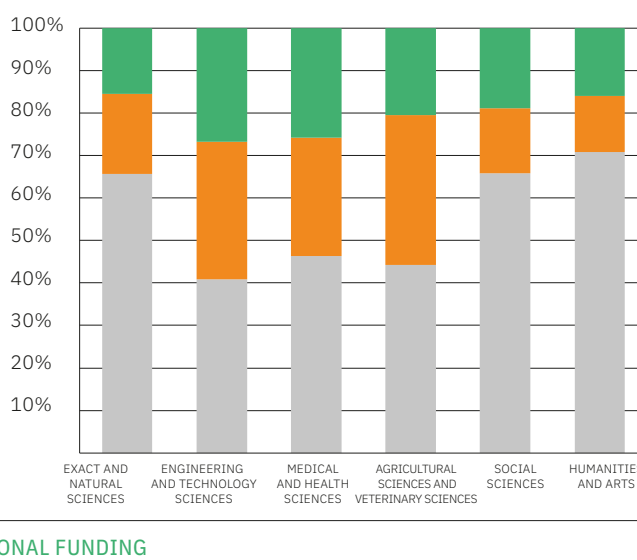


Figure 6. Share of international funding and FCT funding in the total budget for the period 2013-2017, as declared by the proponents in the 2017–18 evaluation application; Source: FCT. Evaluation of 2017-2018 applications.

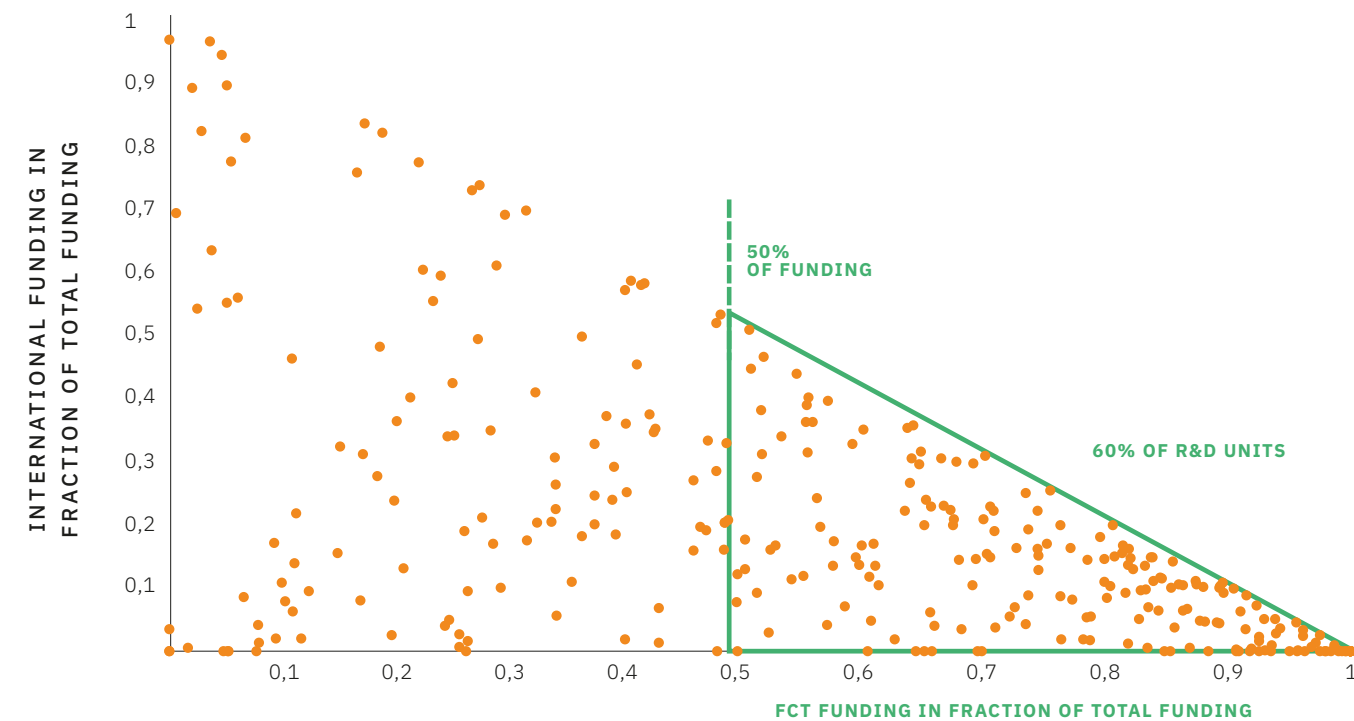


Figure 7. R&D Units funding distributed by funding source (international, FCT, other national) for the period 2013-2017, as declared by the proponents in the 2017–18 evaluation application; Source: FCT. Evaluation of 2017-2018 applications;

Table 1. Timeline and overview of the successive evaluation exercises carried out for R&D Units and Associate Laboratories prior to their pluriannual funding by FCT

| YEAR      | MILESTONES   |
|-----------|--|
| 1993-1994 | <ul style="list-style-type: none"> <li>Start of the Pluriannual Funding Program for R&amp;D Units</li> </ul>   |
| 1996      | <ul style="list-style-type: none"> <li>Definition of the evaluation and funding model for the R&amp;D Units, and implementation of the first evaluation</li> <li>Opening to all scientific domains</li> <li>Two funding components: base and programmatic</li> <li>Peer evaluation, process transparency, involvement of international evaluators</li> </ul>   |
| 1997      | <ul style="list-style-type: none"> <li>Evaluation of new R&amp;D Units</li> <li>Two funding components: base and programmatic</li> </ul>   |
| 1999      | <ul style="list-style-type: none"> <li>Evaluation of R&amp;D Units assessed in 1996, and those resulting from the partition or merger of R&amp;D Units evaluated in 1996</li> <li>Interdisciplinary R&amp;D Units were visited by more than one panel</li> <li>Two funding components: base and programmatic</li> </ul>  |
| 2000-2002 | <ul style="list-style-type: none"> <li>15 Associate Laboratories were established each integrating one or more R&amp;D Units and signed contracts with FCT</li> </ul>  |
| 2003      | <ul style="list-style-type: none"> <li>Evaluation of all the 1999 evaluated and funded R&amp;D Units, including those resulting from their partition or merger and of new R&amp;D Units submitted in 2001-2002</li> <li>R&amp;D Units integrated in Associate Laboratories before 2002 were not included in this evaluation</li> <li>Two funding components: base and programmatic</li> </ul>  |
| 2007      | <ul style="list-style-type: none"> <li>Evaluation of all the 2003 evaluated and funded R&amp;D Units, including those resulting from their partition or merger in and of new R&amp;D Units</li> <li>Associate Laboratories were not included in this evaluation, neither their R&amp;D Units</li> <li>Exclusively international panels</li> <li>Reinforcement of the critical mass by fusion of previous small Units into larger R&amp;D Units</li> <li>Two funding components: base and programmatic</li> </ul> |
| 2008-2010 | <ul style="list-style-type: none"> <li>First evaluation of the Associate Laboratories created since 2000</li> <li>26 Associate Laboratories signed a 10-year contract with FCT between 2000 and 2011</li> </ul>  |
| 2013      | <ul style="list-style-type: none"> <li>Evaluation of R&amp;D Units, including those integrating an Associate Laboratory (in a two phase process with a selective 2nd phase)</li> <li>Site visits only for R&amp;D Units in the 2nd phase</li> <li>Funding based on the budgets proposed by the R&amp;D Units in the evaluation</li> </ul>  |
| 2017-2018 | <ul style="list-style-type: none"> <li>Evaluation of existing and new R&amp;D Units</li> <li>Increase in evaluation domains and number of evaluation panels</li> <li>Two funding components: base and programmatic</li> <li>Additional funding of Ph.D. scholarships to be selected by the R&amp;D Units</li> </ul>  |







# The Research Units, from 2020 on

# OS

## 5.1 Overall characterization

### INTRODUCTION

**R&D Units** are central to the Portuguese scientific and technological system. They are the hubs where most of the non-corporate research and innovation is carried out, assembling a critical capacity and promoting a work environment that fosters scientific creativity, talent attraction, scientific careers and advanced formation. The research carried out in the R&D Units encompasses all scientific domains: natural sciences, engineering and technology sciences, agricultural sciences, medical and health sciences, social sciences, and humanities.

The statute of R&D Units is validated by FCT through periodic evaluation, based on their pluriannual activity reports and strategic plans. The classification as excellent, very good and good - determines the funding of each unit. The last evaluation process was launched in 2017-2018, and completed in 2019, leading to the funding of 312 R&D Units, integrating approximately 19000 researchers, for the period 2020-2023, with over 531 M€, including 425 M€ of direct base and programmatic funding and 106 M€ for Ph.D. scholarships.

R&D Units have led to a considerable diversity in organizational statute, size and strategic orientation which has been valued by FCT. Of the total, 17 R&D Units are legal autonomous entities established as non-for-profit private associations or public institution (5.4%) and 295 R&D Units are under the authority of legally established public or private Higher Education Institutes and R&D institutions of the national science and technology system (94.6%).

The distribution of the R&D units by scientific domain (Table 2) shows the highest number in Social Sciences (86 units, 27.6% of the total) and the lowest in Agricultural Sciences (15 units, 4.8%). Natural sciences, that encompass the exact sciences, include 63 R&D Units (20.2%), Humanities 62 (19.9%), Engineering and Technology Sciences 54 (17.3%), and Medical and Health Sciences 32 units (10.3%). The 18,523 researchers reported as integrated in the R&D Units are found mostly in Natural Sciences (4,612 researchers, 24.9% of the total), followed by Social Sciences (3990 researchers, 21.5%), Humanities (3,313 researchers, 17.9%), Engineering and Tech-

nology Sciences (3,147 researchers, 17.0%), Medical and Health Sciences (2,509 researchers, 13.5%) and Agricultural Sciences (952 researchers, 5.1%).

The average dimension of the 312 R&D units is 62.2 researchers, with some variations between scientific domains: smaller average dimension in the Social Sciences (46.4 researchers) and Humanities (53.4 researchers), larger average dimension in the Medical and Health Sciences (78.4 researchers) and Natural Sciences (73.2 researchers). Engineering and Technology sciences has an average dimension of 58.3 researchers while Agricultural sciences has 63.5 researchers. There is a considerable dimensional variation among the individual R&D Units, ranging from the smallest unit with 10 researchers and the largest one with 431 researchers. [Figure 8](#) shows the dimensional spread for the R&D Units as well as of their direct FCT 2020-2023 funding.

R&D Units are spread throughout the national territory ([Table 3](#)). The regions of Lisbon, Centre and North concentrate 92% of the R&D Units, and almost 95% of researchers. 17 R&D Units are located in the south of Portugal (Alentejo and Algarve), integrating 840 researchers. while Azores has 5 R&D Units and Madeira 2 R&D Units. The regional distribution of the scientific domains of R&D Units ([Figure 9](#)) shows a rather homogeneous distribution with some variations.

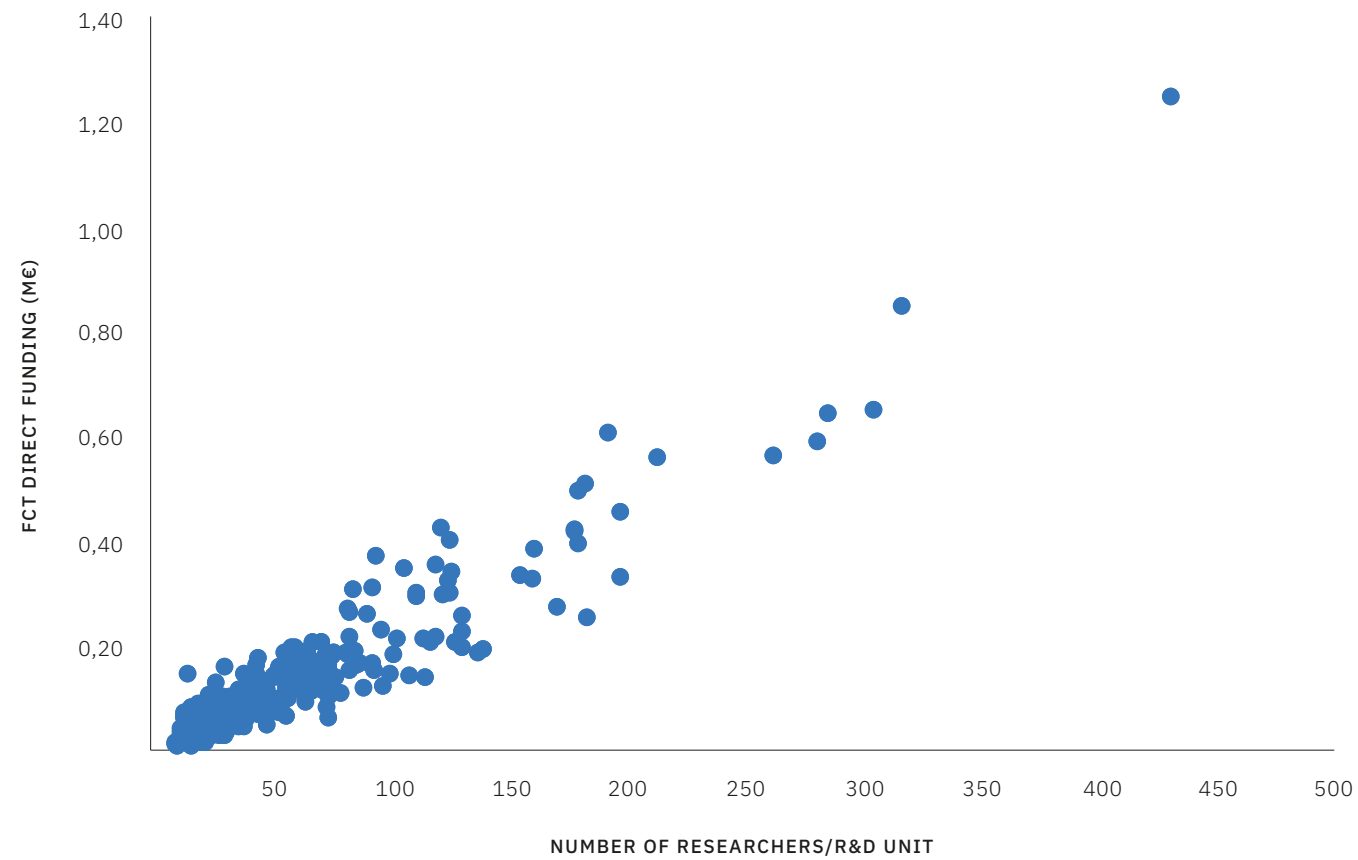


Figure 8. Variation in R&D Units dimension (No. of researchers) and direct FCT funding for 2020-2023. Source: FCT. Evaluation of 2017-2018 applications;

Table 2. Number and share of R&D Units, integrated researchers and FCT funding by scientific domains. FCT. Evaluation of 2017-2018 applications;

| SCIENTIFIC DOMAIN                   | R&D UNITS |      | RESEARCHERS |      | FUNDING FCT 2020-2023 |      |
|-------------------------------------|-----------|------|-------------|------|-----------------------|------|
|                                     | Number    | %    | Number      | %    | M€                    | %    |
| Natural sciences                    | 63        | 20.2 | 4 612       | 24.9 | 116                   | 27.4 |
| Engineering and Technology sciences | 54        | 17.3 | 3 147       | 17.0 | 79                    | 18.6 |
| Medical and Health sciences         | 32        | 10.3 | 2 509       | 13.5 | 61                    | 14.4 |
| Agricultural sciences               | 15        | 4.8  | 952         | 5.1  | 22                    | 5.2  |
| Social sciences                     | 86        | 27.6 | 3 990       | 21.5 | 79                    | 18.7 |
| Humanities                          | 62        | 19.9 | 3 313       | 17.9 | 67                    | 15.8 |
| Total                               | 312       | 100  | 18 523      | 100  | 425                   | 100  |

Table 3. Number and proportion of R&D Units, integrated researchers and FCT funding by regions in Portugal.

| REGION                       | R&D UNITS |      | RESEARCHERS |      | FUNDING FCT 2020-2023 |      |
|------------------------------|-----------|------|-------------|------|-----------------------|------|
|                              | Number    | %    | Number      | %    | M€                    | %    |
| North                        | 97        | 31.1 | 5659        | 30.6 | 135                   | 31.7 |
| Centre                       | 69        | 22.1 | 4236        | 22.9 | 92                    | 21.7 |
| Lisbon Metropolitan Area     | 122       | 39.1 | 7643        | 41.3 | 172                   | 40.5 |
| Alentejo                     | 10        | 3.2  | 561         | 3.0  | 12                    | 2.8  |
| Algarve                      | 7         | 2.2  | 279         | 1.5  | 9                     | 2.0  |
| Autonomous Region of Madeira | 2         | 0.6  | 40          | 0.2  | 1                     | 0.3  |
| Autonomous Region of Azores  | 5         | 1.6  | 105         | 0.6  | 4                     | 1.0  |

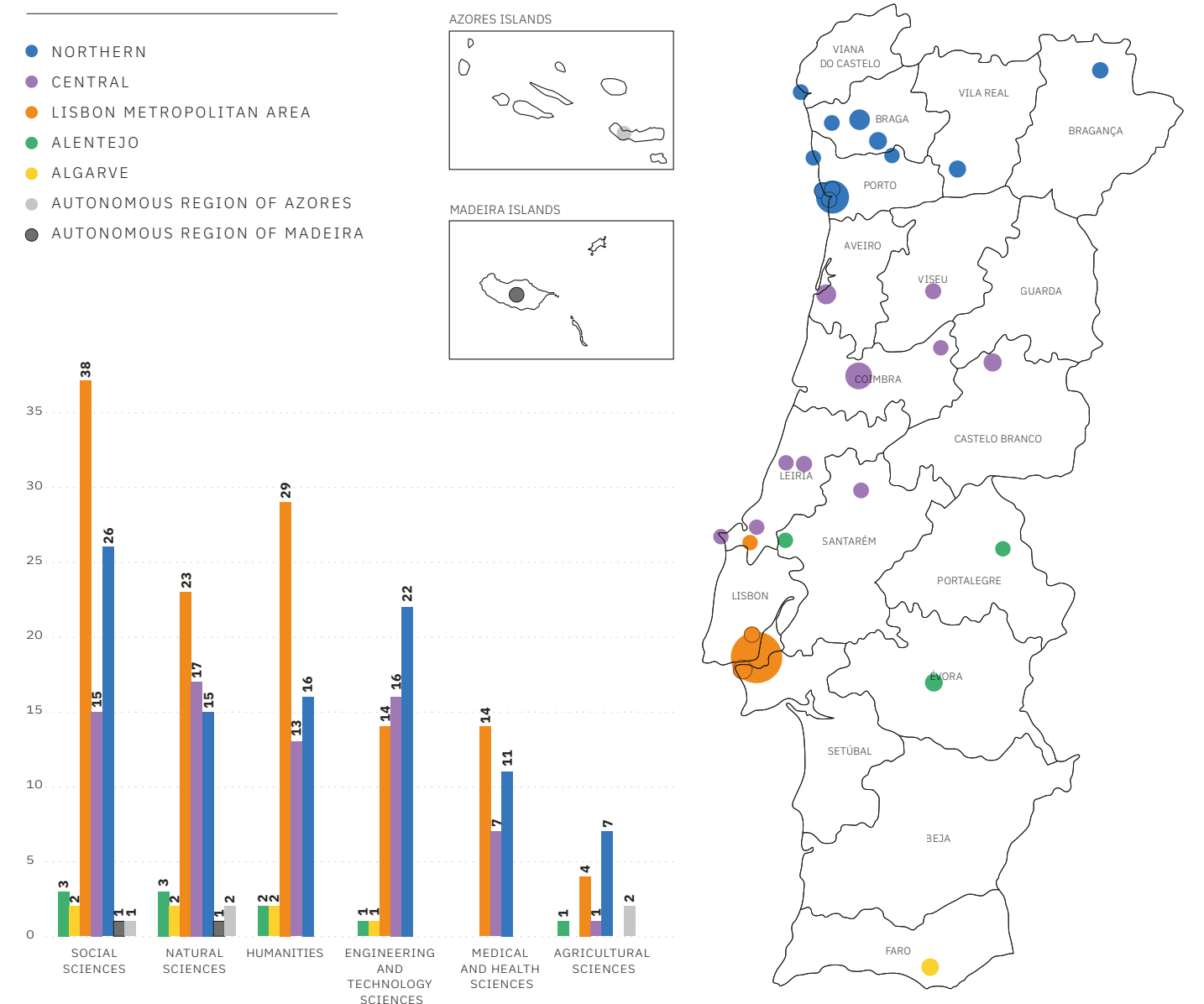


Figure 9. Distribution of the R&D Units across Portugal. FCT. Evaluation of 2017-2018 applications;

**This Atlas of the R&D Units in Portugal provides a brief description of the 312 R&D Units, organized by scientific domain, regarding strategic aims, description, activities, and impact.**

**As the core of the National Science and Technology System, R&D Units are key players to promote excellence, knowledge transfer and internationalization of Portuguese research, in a framework of open science, therefore contributing to a knowledge-based and innovative society.**





# Research Units

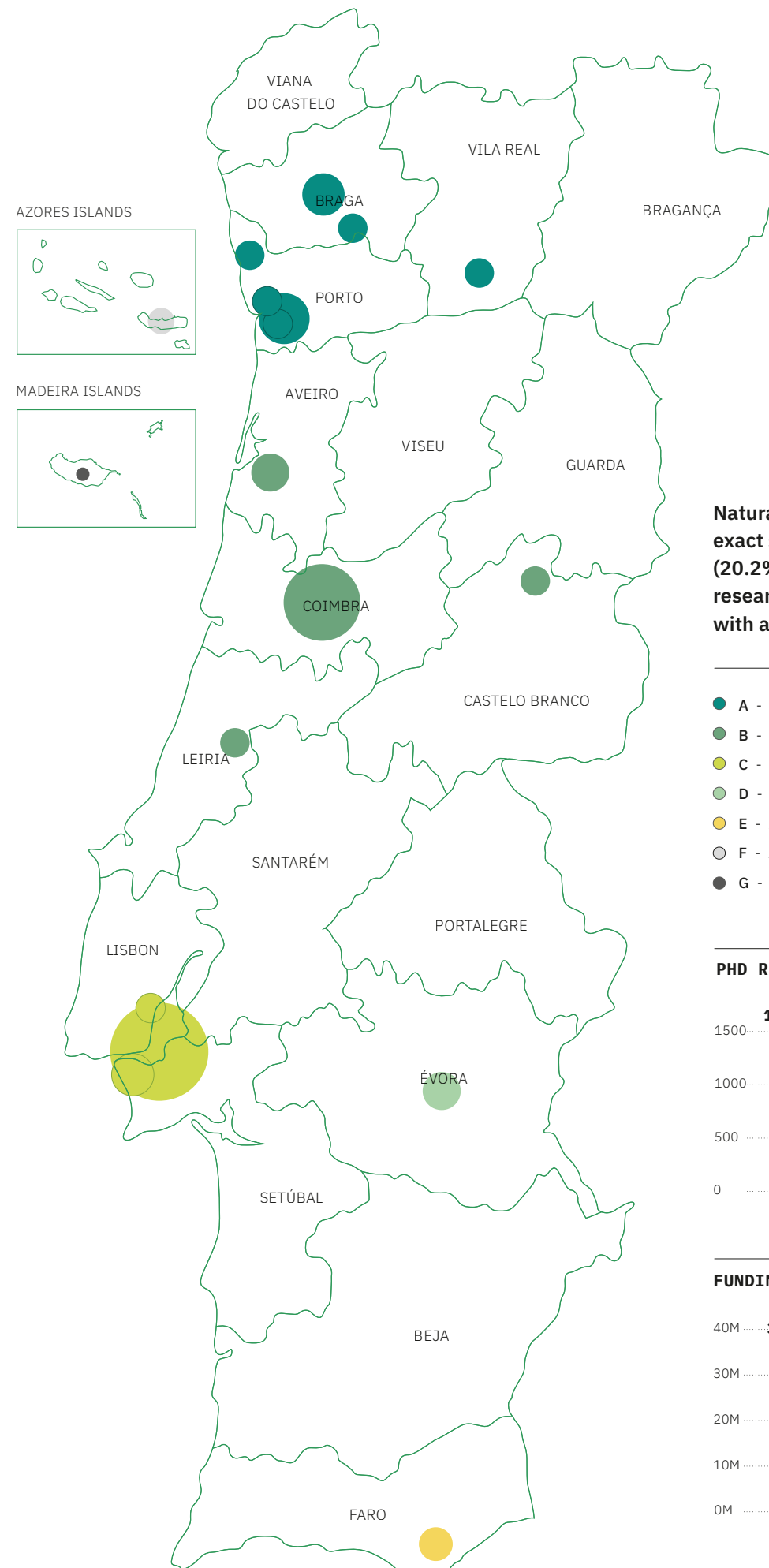
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# 5.2

# Natural Sciences

# S.2.1

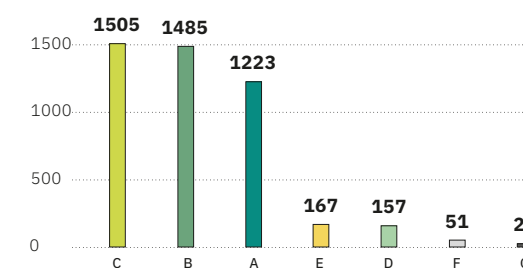
- |           |             |           |                |
|-----------|-------------|-----------|----------------|
| ALGORITMI | CFTP        | CMUC      | IPFN           |
| BIOISI    | CF-UM-UP    | CMUP      | IVAR           |
| C2TN      | CGEO        | CQC       | LIBPHYS        |
| CAMGSD    | CIBB        | CQE       | LIP            |
| CBMA      | CICGE       | CQM       | MAGIC          |
| CCMAR     | CIDMA       | CQ-UM     | MARE           |
| CE3C      | CIIC        | CQVR      | MOSTMICRO-ITQB |
| CEAFEL    | CIIMAR      | GEOBIOTEC | NOVA LINCS     |
| CEAUL     | CIMA        | GFMUL     | OKEANOS        |
| CEFEMA    | CIMA UALG   | GILT      | QFM-UC         |
| CEFITEC   | CIQUP       | HERCULES  | REQUIMTE       |
| CEMAT     | CISUC       | IA        | UCIBIO         |
| CENTRA    | CITEUC      | IBEB      |                |
| CESAM     | CMA/FCT/UNL | ICT       |                |
| CFE       | CMAFCIO     | IDL       |                |
| CFISUC    | CMAT        | IFIMUP    |                |
| CFTC      | CMA-UBI     | INBIO     |                |



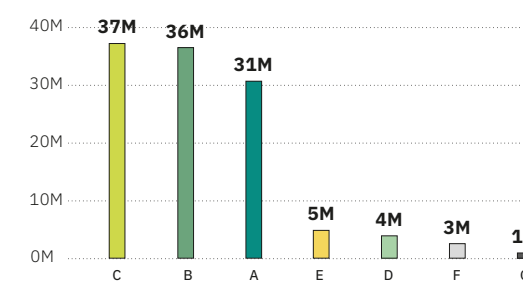
Natural sciences, that encompass the exact sciences, include 63 R&D Units (20.2% of the total) integrating 4612 researchers (24.9% of the total) and with a funding of 116 M€ (2020-2023).

- A - NORTHERN
- B - CENTRAL
- C - LISBON METROPOLITAN AREA
- D - ALENTEJO
- E - ALGARVE
- F - AUTONOMOUS REGION OF AZORES
- G - AUTONOMOUS REGION OF MADEIRA

PHD RESEARCHERS



FUNDING (M€)





## ALGORITMI Research Center

ALGORITMI



|   |  |
|---|--|
| <b>WEBSITE</b><br>http://algoritmi.uminho.pt/ | <b>DATE OF FOUNDATION</b><br>1979/1992 |
| <b>RESEARCHERS</b><br>101                     | <b>FUNDING FCT</b><br>1,49 M Euros     |

### KEYWORDS

- Information Systems, Computing Technologies
- Electronics, Energy, Robotics
- Operational Research, Industrial Eng & Management
- Computer Networks, Pervasive Computing

### STRATEGIC AIMS

ALGORITMI is focused in: supporting researchers applying for funding and project management; increasing its potential for sustainable development through external funding and/or commercialization of its research outputs; adding value to its overall research strategy; contributing to regional and national economic development; increasing its funding track record; enhancing its international publications track record; and enhancing the quality of the post-graduate offer.

### RESEARCH UNIT DESCRIPTION

The ALGORITMI Centre is a research unit that develops R&D activity in Information and Communications Technology and Electronics, spreading into six major fields: 1) Computer Science and Technology; 2) Information Systems and Technology; 3) Computer Communications and Pervasive Media; 4) Industrial Electronics; 5) Industrial Engineering and Management; 6) Systems Engineering and Operational Research. This centre is a multi-disciplinary research unit, with a heterogeneous international activity, maintaining active exchange programs with universities and research centres all around the world.

ALGORITMI Centre focuses its activity on projects that explore a strong link with the community, namely, the industry and the public administration. Located in an in-

dustrialized region with an important expression on textile and footwear industries and an emerging field on ICT services enterprises. The automotive industrial field also gained recently an important share of the regional market. Another external factor that influences our target field of application is the growth of the cities in the region, which introduces several demands for the co-operation of researchers, namely in the field of logistics, communication, e-government, health and resource management. The results of this policy are stated by the number of applied research projects in cooperation with companies at a worldwide level. ALGORITMI is the coordinating unit of the Associated Laboratory for Intelligent Systems (LASI).

## Biosystems and Integrative Sciences Institute

BIOISI



|                                 |                                    |
|---------------------------------|------------------------------------|
| <b>WEBSITE</b><br>www.bioisi.pt | <b>DATE OF FOUNDATION</b><br>2015  |
| <b>RESEARCHERS</b><br>131       | <b>FUNDING FCT</b><br>2,00 M Euros |

### KEYWORDS

- Molecular Systems Biology
- Integrative sciences
- Quantitative biology
- Bioinformatics & computational modelling

### STRATEGIC AIMS

BioISI strategic aims are: taking a lead role in Biosystems/Integrative Sciences research nationally and internationally; driving research and progress through technology development and innovation; training next generation scientific leaders on Biosystems/Integrative Sciences; providing research facilities and services to BioISI researchers and externally; and become a major player in industry partnerships and technology transfer for life sciences.

### RESEARCH UNIT DESCRIPTION

BioISI has the vision of pursuing cutting-edge research on biosystems and integrative sciences to become the leading centre at the forefront of research in this area in Portugal and internationally.

BioISI's goal is to understand and address biological questions using integrative -Systems- approaches at the vanguard of life sciences research. Its researchers benefit from a unique multidisciplinary environment that fosters creative thinking to solve problems through integrative approaches.

To achieve its vision BioISI pursues 5 major missions: 1) Research in BioSystems & Integrative Sciences; 2) Technology & Instrumentation; 3) Facilities & Services; 4) Teaching & Training; 5) Knowledge/Technology Transfer. BioISI's strategic objectives will be implemented along

BioISI's 5 main Thematic Lines: Biomedicine; Biotechnology; Biological Chemistry; Bioinformatics; Biological Physics.

To achieve its strategic 2018-22 goals BioISI proposes: 1) Strengthen BioISI research, technology & innovation by hiring new researchers; 2) Reinforce training of junior and PhD students and young postdoc researchers; 3) Invest in core-facilities to serve internal/external researchers and companies; 4) Stimulate scientific dissemination by organizing conferences, seminars, workshops, courses; 5) Foster scientific/technological culture in society by promoting multiple outreach events; 6) Encourage translation of research results to society by establishing a BioISI-Industry Partnership Programme.

The main contributions obtained by the researchers integrated into BioISI were as follows: 1) Crop & product improvement: grapevine and wine; 2) Systems approaches to Cystic Fibrosis and neurodegeneration; 3) Contributions to Bioeconomy; 4) Enabling technologies: AFM related approaches; and 5) Innovative computational tools: applications for biosystems and bio-inspired approaches.

## Center for Nuclear Sciences and Technologies

C2TN



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://c2tn.tecnico.ulisboa.pt/">http://c2tn.tecnico.ulisboa.pt/</a> | 2013               |
| RESEARCHERS   | FUNDING FCT        |
| 75  | 1,65 M Euros       |

### KEYWORDS

- Nuclear Sciences and Technologies
- Ionizing Radiation
- Radiopharmaceutical Sciences
- Radiation Protection
- Earth Sciences, Environment and Cultural Heritage
- Advanced Materials

### STRATEGIC AIMS

The main goal of Centre for Nuclear Sciences and Technologies (C2TN) is to play a strategic role in basic and applied research, scientific and technological training and dissemination, as well as to provide technical cooperation and specialized services to the community, in the fields of Nuclear Sciences and Technologies.

### RESEARCH UNIT DESCRIPTION

C2TN is an interdisciplinary Research Unit of Instituto Superior Técnico, located at Campus Tecnológico e Nuclear, Bobadela, Loures. C2TN strives to promote Radiation for Science and Society and to effectively address and respond to societal challenges. It groups several tens of researchers (physicists, chemists, biologists, geologists, among others) recognized internationally as the Portuguese experts in matters related to Nuclear Sciences and Technologies and applications of Ionizing Radiation. This stems from the unique combination of C2TN's knowledge, skills and competence with its experimental facilities.

C2TN has specialized scientific equipment, laboratories and infrastructures, some of them unique in Portugal, used as nodes in research networks: Laboratories for Synthesis & Characterization of Materials (licensed to handle radioisotopes) including High-Temperature Crystal Growth and Low Temperature and High Magnetic Fields; facilities

for Synthesis, Characterization & Preclinical Evaluation of Radioactive Tools for Nuclear Molecular Imaging and Therapy; Clean Rooms; Luminescence, Radiocarbon and Tritium Dating; Mössbauer, X-ray fluorescence and Inductively Coupled Plasma Mass Spectroscopy facilities; alpha and gamma spectrometry laboratories; liquid scintillation counters; irradiation facilities for metrological verification of radiation detection equipment; linear electron accelerator; and access to Tandem and Van de Graaff accelerators and a Gamma Irradiation Unit.

C2TN main achievements include: 1) development of nuclear analytical techniques for various scientific domains; 2) study of new materials with unconventional electrical and magnetic properties; 3) radiation protection and safety through studies on dosimetry, radiobiology, environmental radioactivity, radioecology, radioactive waste and metrology; 4) development and application of nuclear tools for molecular imaging and theranostics; and 5) study of environmental processes and cultural heritage by nuclear analytical techniques.

## Center for Mathematical Analysis, Geometry and Dynamical Systems

CAMGSD



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://camgsd.tecnico.ulisboa.pt/index.php/en">https://camgsd.tecnico.ulisboa.pt/index.php/en</a> | 1991               |
| RESEARCHERS   | FUNDING FCT        |
| 65  | 1,85 M Euros       |

### KEYWORDS

- Differential Equations and Dynamical Systems
- Geometry and Topology

### STRATEGIC AIMS

Promote research and graduate training in mathematics, with special emphasis on analysis, dynamical systems, geometry and topology, including string theory and mathematical-physics. The center's activities include a post-doctoral training program; a visitors' program; weekly seminars; workshops; tutorials and summer schools targeted at PhD students and post-doctoral fellows.

### RESEARCH UNIT DESCRIPTION

CAMGSD currently has 60 researchers, 10 postdoctoral fellows and 30 doctoral students. The center develops research and training activities in Mathematics, with emphasis in: dynamical systems and ordinary differential equations; analysis and partial differential equations; operator algebras and Riemann-Hilbert problems; algebraic topology, knot theory, and category theory; algebraic geometry, symplectic and related geometries; quantum field theory, string theory and mathematical relativity.

CAMGSD is one of the largest Mathematics research units in Portugal and has obtained the classification "Excellent" in all its external evaluations. Its research team publishes 100+ journal papers every year and includes 10+ editorials of international peer-reviewed journals. CAMGSD hosts 10+ regularly running seminars and 100+ international visitors and 5+ conferences, workshops and short

courses per year.

The research activities are presently organized along the following areas: 1) Dynamical Systems and Differential Equations. Topics include: qualitative theory of dynamical systems; geometric mechanics and Hamiltonian systems; methods of nonlinear analysis; ergodic theory; stochastic analysis and related topics. 2) Geometry and Topology. Topics include: symplectic and Poisson geometry; algebraic geometry; algebraic topology; differential geometry; discrete geometry. The research also addresses applications to problems motivated from mathematical physics such as general relativity, quantum field theory, string theory and quantum topology.



## Centre of Molecular and Environmental Biology

CBMA



| WEBSITE            | DATE OF FOUNDATION |
|--------------------|--------------------|
| cbma.bio.uminho.pt | 2008               |
| RESEARCHERS        | FUNDING FCT        |
| 48                 | 0,91 M Euros       |

### KEYWORDS

- Biodiversity
- Functional Molecular Biology
- Molecular Biotechnology
- Global Change
- Biomathematics

### STRATEGIC AIMS

CBMA promotes high quality Research and Advanced Training in Biological Sciences for the benefit of the society and contributes to Bio-sustainability, while serving the community via outreach activities that support the development of Science and Technology at the regional, national and international levels.

### RESEARCH UNIT DESCRIPTION

CBMA scientific framework, rooted in 2030 Agenda for Sustainable Development, is centred on three pillars: research, advanced training and society. our mission is the protection of natural life and the environment, promoting human well being and preserving the natural legacy for future generations.

CBMA uses hypothesis-driven approaches and high-throughput technologies to generate new knowledge and address the complexity of biological systems. A cross-disciplinary team enabled us to develop: 1. environmental monitoring and management tools to protect biodiversity and ecosystem services to assess environmental risks under global change; 2. bio-based products and processes to minimize environmental impact, by identifying molecular targets and microbial communities relevant for biotechnology and developing bio-inspired systems.

CBMA collaborates with companies through knowledge

transfer that boost innovation and creation of value. We are committed to aligning scientific excellence with social awareness and bringing concerns of society to research. An advanced training program promotes post-graduation activities in Biology, Ethics and Communication, aiming at providing Society with highly skilled young researchers to face the challenges of the 21st century.

Achievements: 1) bio-monitoring based on next-generation sequencing and computational analysis; 2) evaluation of the impacts of global change on biodiversity and ecosystem functions and services; 3) development of theoretical and computational models for sustainable ecosystems under global change; 4) identification of molecular targets and processes that bring added biotechnological value; and 5) development of bio inspired systems to provide bio-sustainable products and services.

## Algarve Centre for Marine Sciences

CCMAR



| WEBSITE       | DATE OF FOUNDATION |
|---------------|--------------------|
| ccmar.ualg.pt | 1991               |
| RESEARCHERS   | FUNDING FCT        |
| 120           | 3,55 M Euros       |

### KEYWORDS

- Oceanography, global change and fisheries
- Biodiversity, ecosystems and conservation
- Aquaculture, biotechnology and bioproducts
- Biochemistry and Physiology of Marine Organisms

### STRATEGIC AIMS

CCMAR is a multidisciplinary centre with the mission of promoting research and education on the marine environment, with emphasis on biological interactions and the sustainable use of resources. The vision is that marine ecosystems offer a variety of services - climate and carbon cycle regulation, provision of food and raw materials-, as well as cultural, social and recreational benefits and need to be better known, managed and protected.

### RESEARCH UNIT DESCRIPTION

The objective of the CCMAR strategy and plan of activities is excellence and international cooperation and aims to answer the following key questions: 1) What are the causes of and consequences of environmental changes for marine ecosystems? 2) How to conserve and unlock the potential of living marine resources, in light of the expected environmental changes?

The research strategy of CCMAR is based on an interdisciplinary approach to understanding the nature of the challenges facing the marine environment and to benefit society. For this a holistic and integrated approach will be developed between researchers of the thematic lines and international collaborators to study the causes and effects of drivers of global change (climate, fisheries, pollution, invasive species, modification of habitat) on biodiversity

function and structure, from the genetic to the ecosystem level. For 2018-2022, the research strategy is centered on three thematic lines: 1. Drivers, responses and tipping points in changing environments, 2. Management and conservation of marine resources, 3. Unlocking the potential of marine resources. CCMAR will develop indicators, carry out field and laboratory experiments, monitor, model, predict, assess new resources, and provide mitigation, conservation and management advice, thereby contributing to improved management and conservation of marine biological resources, ecosystem health, the blue economy, and bring benefits to society as a whole.

## Centre for Ecology, Evolution and Environmental Changes

CE3C



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ce3c.ciencias.ulisboa.pt/">http://ce3c.ciencias.ulisboa.pt/</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 123   | 3,01 M Euros       |

### KEYWORDS

- Integrative Biodiversity assessments
- Evolution under environmental changes
- Climate and global changes
- Mediterranean, tropical and island ecology
- Species and ecosystem management for conservation
- Science-Society interfaces

### STRATEGIC AIMS

To contribute on sustainability topics, our research is organized on six core thematic lines: 1) Integrative ecological assessment of environmental change impacts on biodiversity; 2) Evolutionary processes that shape biodiversity and adaptation to environmental changes; 3) Sustainable management strategies for high-nature-value farmlands; 4) Green and blue infrastructures for urban sustainability; 5) Human health: linking evolutionary history, environment and physiology; 6) Climate services.

### RESEARCH UNIT DESCRIPTION

cE3c is an Excellent Research Centre with the mission to develop fundamental and applied research in Ecology, Evolution, Environmental Science and related societal issues. We are composed by 13 research groups based at the Universities of Lisbon and Açores. Our research examines and integrates all levels of biological organization, from genes and organisms up to ecosystems, both natural and anthropogenic. We develop and apply tools to assess and monitor impacts of global change on biodiversity, health and human well-being. Our combined expertise and unique databases constitute fundamental repositories of knowledge for Portugal, the Macaronesian Islands, other Portuguese speaking countries in Africa and South America, and the European Union.

cE3c is committed to a sustainable future; for example, our research has been applied by the International Union for Conservation of Nature, the United Nations Convention on Biological Diversity, and contributes to the United Nations Sustainable Development Goals. We also support and inform governmental agencies at regional and international levels and contribute to industry and ecosystem services optimization.

While producing knowledge is a crucial step to sustainable development, using this knowledge to effectively promote change is just as important. Thus, we combine research with education, training, outreach and knowledge transfer to public and private stakeholders.

cE3c main achievements include: 1) development of universal ecology indicators, used by the UN and EU; 2) contribution of knowledge to assess the impacts, manage and halt biological invasions; 3) setting agendas in island biodiversity conservation and research; 4) use of experimental evolution to study and identify adaptation to environmental changes; and 5) provision of climate adaptation services, grounded on natural and social sciences.

## Center for Functional Analysis, Linear Structures and Applications

CEAFEL



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ceafel.tecnico.ulisboa.pt/">http://ceafel.tecnico.ulisboa.pt/</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 29  | 0,32 M Euros       |

### KEYWORDS

- Algebras and Operator Theory
- Algebras and Representations
- Harmonic Analysis and Function Spaces
- Matrices and Linear Systems

### STRATEGIC AIMS

CEAFEL is organized into two areas: Functional Analysis and Linear Algebraic and Combinatorial Structures.

The strategy for the future is the consolidating of the CEAFEL as a Center with two central components, one in Operator Theory and Operator Algebras and another in Matrix Theory and Representation of Groups. The main challenge is to achieve the CEAFEL goal of becoming and international reference Center in Functional Analysis, Representation Theory and Matrix Theory.

### RESEARCH UNIT DESCRIPTION

The Center for Functional Analysis, Linear Structures and Applications, CEAFEL, is a research center devoted to fundamental research in Mathematics. The CEAFEL main objective is developing research in Functional Analysis, Representation Theory and Matrix Theory, as well as exploring relations with other areas of Mathematics and applications to Physics and Engineering.

CEAFEL is a research unit integrated at Instituto Superior Técnico, IST, with a branch at Faculty of Sciences, FC, and has members from different universities. CEAFEL is organized into two Groups. Researchers of the Center maintain an active interaction with international researchers working in the areas of CEAFEL. The Group for Functional Analysis-IST has the strategy of conducting research pri-

marily in: Operator Algebras and Index Theory; Harmonic Analysis and Function Spaces; Riemann-Hilbert problems and Analytic Function Spaces; Convolution type Operators and Singular integral operators with shifts; Application of Operator Theory to Mathematical Physics; Applications to Numerical Analysis and Computational Algorithms. The research of the Group for Linear Algebraic and Combinatorial Structures - FC has been directed for developing research mainly in the areas of Algebras and Representation Theory; Matrix Theory; Control Theory and Linear Systems, and Multilinear Algebra. Other topics are: Graphs and Hypergraphs; Riordan matrices; Combinatorial study of polynomials; Game theory and Combinatorics.

Achievements: 1) variable exponent Holder, Morrey-Campanato spaces, grand spaces and operators of Harmonic Analysis; 2) Non local algebras of singular integral operators, Fredholm theory of operators in these algebras; 3) Riemann-Hilbert problems. Operator Methods in Mathematical Physics particularly in diffraction theory; 4) Representation Theory of Groups. Supercharacter Theories; and 5) Matrix pencil completion problems related with Control Theory. Linearizations of matrix polynomials.

## Centre of Statistics and its Applications

CEAUL



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.ceaul.fc.ul.pt/">http://www.ceaul.fc.ul.pt/</a> | 1975               |
| RESEARCHERS   | FUNDING FCT        |
| 43  | 0, 85 M Euros      |

### KEYWORDS

- Bayesian Analysis
- Biostatistics
- Parametric and Semiparametric Inference
- Statistical Modelling and Data Analysis
- Space Time Models
- Extreme Value Theory

### STRATEGIC AIMS

CEAUL strategic aims are to develop fundamental research extending the frontiers of statistical knowledge and provide statistical tools for experimental sciences; participate actively in society supporting industry, commerce, services and business, to participate in interdisciplinary national and international projects, to develop advanced training activities in PhD programs and organizing advanced courses in emerging areas of statistic and also to encourage young students into research, by involving them in the Centre activities.

### RESEARCH UNIT DESCRIPTION

The Centre of Statistics and its Applications is a research and development (R&D) unit connected to the Department of Statistics and Operational Research (DEIO) at the Faculty of Sciences of the University of Lisbon (FCUL). FCUL provides physical facilities, general computing infrastructures and communications, needed for the prosecution of its activities. The Association for Research and Development of CIÊNCIAS (FCiências.ID), the main host institution, supplies administrative and financial R&D management.

Established in 1975 by Tiago de Oliveira, CEAUL plays a central role in Portugal as the only R&D unit dedicated exclusively to fundamental research in the areas of probability, statistics and stochastic processes. fundamen-

tal research will be carried out, in a diversified range of themes including but not restricted to, statistics of extremes, computational statistics and simulation, resampling methodologies, quality control, bayesian statistics, biostatistics, environmental and ecological statistics, statistics in genomics, immunology and epidemiology, statistics in medicine, longitudinal models and survival analysis, time series analysis, incomplete data analysis, multivariate analysis, temporal and spatial statistics, design of experiments, history and teaching of statistics. Besides fundamental research, CEAUL is also dedicated to interdisciplinary activities in domains as diverse as life, health, natural and environmental sciences and financial risk as for example forensic studies related to the Lisbon Earthquake of 1755 with the Academy of Sciences of Lisbon; in a project aiming to use wastewater as an early warning indicator of SARS-COV2 infection, the development of the segment “Dados Contados” in the program “Europa Minha” for RTP TV channel the project aiming the analysis of fisheries and support scientific advice for its management, for IPMA.

## Center of Physics and Engineering of Advanced Materials

CEFEMA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cefema.tecnico.ulisboa.pt">http://cefema.tecnico.ulisboa.pt</a> | 2014               |
| RESEARCHERS   | FUNDING FCT        |
| 46  | 1,12 M Euros       |

### KEYWORDS

- Physics of Strong Interactions and Correlations
- Condensed Matter
- Nanostructured Materials and Nanotechnology
- Engineering of Advanced Materials and Processes

### STRATEGIC AIMS

CeFEMA (Centre of Physics and Engineering of Advanced Materials) aims at achieving a high-level of transdisciplinarity leading to major advances in Condensed Matter Physics, Materials Science and Engineering. Also, a deep understanding of the underlying physical mechanisms and processes associated with the development of new materials demands for the establishment of models and the integration of theoretical knowledge, ab-initio calculations, and an increasing computation power.

### RESEARCH UNIT DESCRIPTION

CeFEMA research will be focus on Topological Phases of Matter, Nanostructured Fluids and Soft Matter, Non-equilibrium Matter and Processes, Energy Conversion and Storage, Advanced Materials Micro and Nanofabrication, Artificial Organs, and Physics of Information and Quantum Technologies. Major advances in sustainable development require deep understanding of the underlying physical mechanisms associated to complex systems that frequently involve strong correlations between their constituent elements and the design and optimization of new advanced functional materials: the optimization of physical/chemical properties of nanostructured systems and their interaction with fluids is required to increase efficiency of membranes and potential use; the increase

of renewable energy harvesting efficiency and the improvement of energy conversion and storage methods is strongly dependent on the development of new materials with enhanced performance; in information and communication technologies the ever-increasing need for bandwidth, storage capacity and new functionalities requires critical materials advances; the biological environment is extremely complex demanding biomaterials with advanced functional properties. Nanotechnologies, on the other hand, have now become enabling technologies for all the above domains. CeFEMA distinguish itself from other national research centres because it congregates researchers with the broad spectrum of expertise required to approach this challenge.

## Centre of Physics and Technological Research

CEFITEC

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www.cefitec.fct.unl.pt/">https://www.cefitec.fct.unl.pt/</a> | 1994               |
| RESEARCHERS   | FUNDING FCT        |
| 17  | 0,27 M Euros       |

### KEYWORDS

- Applied Atomic and Molecular Physics
- Applied Surface Science
- Experimental and Technological Physics
- Scientific and Technological Instrumentation

### STRATEGIC AIMS

CEFITEC aims to: 1) Advanced and state-of-the art training: students benefit from cross-linked expertise and know-how focused on experimental and engineering physics; 2) To contribute to solve some of the modern societal challenges, generating impact in scientific community, in industry and in society; 3) Technology transfer in engineering physics: research performed indoors should be useful for society; and 4) To cooperate with industry, offering industrial solutions, specialized services and consultancy.

### RESEARCH UNIT DESCRIPTION

CEFITEC brings together 14 researchers devoted to explore activities in Engineering Physics, merging selected topics from Physics to Chemistry, Materials Science and Engineering.

Current CEFITEC expertise focuses on surface science, vacuum technology, atomic and molecular interactions and solar pumped lasers. It is our goal to achieve technological developments based on firm scientific grounds. Therefore, our activity ranges from basic principles to proof of concept, system prototype and, in some cases, deployment in operational environment.

For this purpose, CEFITEC has well equipped laboratories, a multidisciplinary research team with a strong ex-

perimental background and strong international collaborations. Moreover, close collaboration with many national and international groups and with large facilities as CERN and synchrotrons enables CEFITEC to be in the forefront in several fields a par with their partners.

CEFITEC is organized in 3 groups: Group of Atomic and Molecular Collisions which is well-known by their expertise on radiation chemistry and experimental molecular physics; Surface Science and Vacuum Technology Group which has a well established collaboration with CERN in low secondary electron emission coatings; and the Laser Technology Group which holds the world record in the efficiency of solar lasers. Metrovac is an interface laboratory with the industry, offering specialized services in vacuum technology including industrial solutions.

CEFITEC's member was appointed nominator by the Nobel Committee for Physics to the Nobel Prize in Physics 2021. A new high accuracy ultra-high vacuum sensor was developed in a collaboration with CEFITEC.

## Center for Computational and Stochastic Mathematics

CEMAT



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cemat.tecnico.ulisboa.pt">http://cemat.tecnico.ulisboa.pt</a> | 1996               |
| RESEARCHERS   | FUNDING FCT        |
| 35  | 0,87 M Euros       |

### KEYWORDS

- Algebra and Computing
- Applied and Numerical Analysis
- Mathematical Modelling in Biomedicine
- Statistics and Stochastic Processes

### STRATEGIC AIMS

CEMAT is a R&D Unit committed to high quality interdisciplinary research, innovation and advanced education in computational and stochastic mathematics with focus on sciences (including life sciences) and engineering applications, and to active cooperation with industries.

### RESEARCH UNIT DESCRIPTION

In the period 2018-2022, the research activities will be directed to reinforce the areas of algebra and computing, applied and numerical analysis, mathematical modeling in biomedicine, statistics and stochastic processes. More specifically, the objective is to deepen current research themes of identified significance and to extend the knowledge to new emergent interdisciplinary topics.

The general research plan in each of the research areas is the following: algebra and computing: research will be devoted to two major fronts. abstract algebra: focusing on groups, semigroups, finite automata, and formal languages. Computation: the main topics deal with automated reasoning and development of computational tools on algebraic systems. This new computational machinery will be applied to obtain results on different algebras. applied and numerical analysis: Research will focus on theoretical and applied matters, enhancing the cooperation with engineers in developing numerical methods to solve direct and

inverse problems. The training of MSc and PhD students will benefit from existing interactions with industries, to solve new challenging problems. mathematical modeling in biomedicine:

The main goal is the development and analysis of mathematical models and algorithms to simulate clinically relevant problems related with cardiovascular diseases, using personalized data. These activities will reinforce the longstanding collaboration with bioengineers and medical doctors and will contribute to develop new ones. statistics and stochastic processes: Research will be devoted to several topics, including: extreme value theory, multivariate analysis, quality control, robust statistics, stochastic and telecommunication networks, stochastic optimization, and time series. Work will be done in close connection with engineers and economists, and there will be a strong emphasis in producing codes to be implemented in widely used software packages such as the R statistical package.



## Center for Astrophysics and Gravitation

CENTRA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://centra.tecnico.ulisboa.pt/">https://centra.tecnico.ulisboa.pt/</a> | 1994               |
| RESEARCHERS   | FUNDING FCT        |
| 33  | 0,92 M Euros       |

### KEYWORDS

- Astrophysics
- Gravitation

### STRATEGIC AIMS

CENTRA, the Center for Astrophysics and Gravitation, aims to explain the essence of gravitation and its interface with astrophysics.

### RESEARCH UNIT DESCRIPTION

The quest for the ultimate theory of gravitation has revealed new and spectacular links between high-energy physics, astrophysics, cosmology and theoretical physics. Triggered by breakthroughs at the observational, technical and conceptual levels, physics of strong gravitational field is experiencing a Golden Age, making it one of the most active fields of research of the 21st century. The 2017 Nobel Prize in Physics marks the opening of a new era in science: the age of gravitational-wave astronomy. Together with novel techniques to scrutinize stars and supernovae, neutron stars, black holes, and the universe itself, these gravitational wave observations are opening a new window to study the strong gravitational field regime, probing the heart of compact objects, the early universe and general relativity itself. This new window will complement a wealth of information obtained from cosmological and astrometric surveys. In parallel, the recent discoveries at the LHC are confirming the standard model of particle physics to unprecedented levels, shifting a considerable part of the effort to resolve outstanding problems, such as

the nature of dark matter and dark energy, to the realm of gravitation and astrophysics.

As a leading center in astrophysics and gravitation, CENTRA has a major role in this new age of physics. CENTRA has three main scientific areas: Gravitation (GRIT), Cosmos and Stars (COSTAR) and Scientific and Space Instrumentation and Modeling (SIM). CENTRA's main themes of research are: black holes, gravitational waves, the big bang and the accelerating universe, inflationary cosmology, supernovae, solar physics and stars. CENTRA coordinates at a national level the LISA Consortium, the European gravitational-wave mission planned for 2030, the METIS instrument, the Gaia mission, and the GRAVITY VLT instrument.

## Centre for Environmental and Marine Studies

CESAM



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.cesam.ua.pt">http://www.cesam.ua.pt</a> | 2001               |
| RESEARCHERS   | FUNDING FCT        |
| 214   | 5,61 M Euros       |

### KEYWORDS

- Climate change awareness, management & adaptation
- Environmental risk management & strategic planning
- Biodiversity & ecosystem based management
- Environmental biology & health
- Marine ecosystems & resources
- Sustainability, blue growth e circular economy

### STRATEGIC AIMS

CESAM aims to contribute to the national imperative of economic growth and innovation, and the creation of jobs supported by a knowledge-based society. CESAM aims to promote a balanced representation of its broad range of expertise allowing for: i) crosscutting approaches to environmental problems that are complex and transdisciplinary; ii) a more context-specific research that better suits society needs and prepare for jobs; iii) opening the scope for curiosity-driven research and innovation.

### RESEARCH UNIT DESCRIPTION

CESAM is a Research Unit of the University of Aveiro (UAVR) with the status of Associated Laboratory since 2005. CESAM's research is transversal, covering the biosphere, atmosphere, hydrosphere, lithosphere and anthroposphere. CESAM gathers ca. 500 members with knowledge and expertise on a broad range of fields in the natural and social sciences, and trans-disciplinary research.

CESAM's multidisciplinary team includes researchers from 5 Departments of UAVR, from the Faculty of Sciences of the University of Lisbon, from the School of Agriculture of the University of Lisbon, from the National Health Institute Dr Ricardo Jorge, and from the Porto School of Engineering.

The mission of CESAM is to develop leading international

research on environmental sciences and related risks, including extreme weather events and climate change, with emphasis on complex socio-ecological coastal systems and marine areas. Its main objective is to promote a more efficient use of terrestrial and aquatic (from catchment to the deep sea) environmental resources and a more competitive, resilient and sustainable economy, designed to endorse job creation and assure territorial and social cohesion. CESAM aims to develop transdisciplinary research and international collaboration among researchers, innovators and students, and foster the scientific, societal and educational (graduate & postgraduate) impact of its research and innovation.

CESAM integrated risk management via the European Partnership for the Assessment of Risks from Chemicals and have an active participation at the National and EU Strategy for Plastics. CESAM evaluated air quality trends based on data from the monitoring network in the Centro region, and tested & demonstrated the post-fire emergency stabilization measures in pilot sites, also participated in the development of innovative methodologies on the monitoring of morphodynamics of the coastal littoral.

## Centre for Functional Ecology - Science for People & the Planet

CFE

**WEBSITE**

<http://cfe.uc.pt/>

**DATE OF FOUNDATION**

2007

**RESEARCHERS**

88

**FUNDING FCT**

1,68 M Euros

**KEYWORDS**

- Ecology
- Global Change
- Sustainability
- Society

**STRATEGIC AIMS**

CFE's strategy involves consolidating a highly positive scientific trajectory: attracting a growing number of highly qualified researchers with a strong international dimension, increasing the number and quality of published articles and approved projects, expanding the participation of researchers in networks organizations, promote open and socially responsible science, and strengthen knowledge in specific CFE priority areas.

**RESEARCH UNIT DESCRIPTION**

The Centre for Functional Ecology - Science for People & the Planet (CFE) is a R&D unit hosted by the Department of Life Sciences of the Faculty of Sciences and Technology of the University of Coimbra that brings together researchers from all fields of ecology, integrating knowledge from genes to the biome level to disentangle the mechanisms responsible for biodiversity maintenance, and for the composition, structure and functioning of biological communities and ecosystems. CFE holds a strong commitment to knowledge transfer to the general public and to the productive sector, with emphasis on the sustainability of territories and local communities.

Since its creation in 2007, the CFE has experienced a remarkable growth in size, scope and impact. It is organized in 9 strategic research groups: 1 - Terrestrial Ecosystems

and Global Change; 2 - Biodiversity, Conservation and Ecosystem Services; 3 - Marine and Coastal Ecosystems; 4 - Soil and Freshwater Stress Ecology; 5 - Forest Ecology; 6 - Forensic Anthropology and Paleobiology; 7 - Societies and Environmental Sustainability; 8 - History, Territories and Communities; 9 - Bioelectronics and Bioenergy.

In addition, CFE inscribes two cross-cutting thematic lines: The UNESCO Chair on Biodiversity Safeguard for Sustainable Development and the Open Science.

## Center for Physics of the University of Coimbra

CFISUC

**WEBSITE**

<http://cfisuc.fis.uc.pt/>

**RESEARCHERS**

40

**FUNDING FCT**

0,90 M Euros

**KEYWORDS**

- Hadron physics, QCD and phenomenology
- Neutron Stars
- Multifunctional Materials
- Electronic and magnetic structure
- Chemical Physics
- Computational Biological Physics

**STRATEGIC AIMS**

CFisUC's main mission is to perform scientific and technological research in physics and multidisciplinary areas at the interface with physics, pursuing international standards of scientific excellence. Furthermore, its mission includes the promotion of physics education and scientific culture and the provision of R&D services to the community.

**RESEARCH UNIT DESCRIPTION**

CFisUC areas of expertise are: neutron stars and hadron phenomenology, lattice quantum chromodynamics, muon spectroscopy, electrical, optical and magnetic properties of matter (including novel topological materials, multiferroic materials, multifunctional magnetic materials, and dielectric oxides for solar cells), development of photovoltaic cells, hydrogen storage, catalysts for fuel cells in the context of clean energies, and biological physics. CFisUC's toolbox is and will be comprehensive, including theoretical, experimental and computational methods. Synergies created by our multidisciplinary know-how will allow for the development and/or increase of competences in emergent areas such as ab-initio computational materials design.

CFisUC fosters national and international collaborations. It participates in scientific and technological infrastruc-

tures of international relevance and in European networks such as the COST actions. It cooperates with European High-Performance Computing infrastructure projects. CFisUC collaborates with the UC, which is a UNESCO World Heritage site, studying the History of Science in Coimbra and contributing to the rehabilitation of buildings and equipments.

Members of CFisUC are responsible for the school of excellence in Physics "Quark!" for high-school students, for the coordination of the National Physics Olympiad, for the coordination of "Rómulo - Centro de Ciência Viva" of the UC and for the Museum of Science of the UC. We maintain a direct collaboration with industry, being these activities aligned with the strategic priorities of the Research and Innovation Strategies for Smart Specialisations (RIS3) of the Centre of Portugal.

## Center for Theoretical and Computational Physics

CFTC



|                          |                           |
|--------------------------|---------------------------|
| <b>WEBSITE</b>           | <b>DATE OF FOUNDATION</b> |
| http://cftc.cii.fc.ul.pt | 2002                      |
| <b>RESEARCHERS</b>       | <b>FUNDING FCT</b>        |
| 13                       | 0,34 M Euros              |

### KEYWORDS

- Soft Condensed Matter Physics
- Non-Linear Dynamics and Waves
- Particle Physics

### STRATEGIC AIMS

CFTC aims at maintaining a very high level of research, consolidating its international recognition and national leadership in Soft Condensed Matter and Non-linear Dynamics, as well as its position in Particle Physics. Scientifically, we are pursuing 3 main research streams: Collective properties, in particular dynamics of non-equilibrium and out-of-equilibrium soft matter systems; Nonlinear waves in non-Hermitian optics, quantum gases, and microcavities; and Extensions of the Standard Model.

### RESEARCH UNIT DESCRIPTION

The Center for Theoretical and Computational Physics (CFTC) is a research unit focused on theoretical and computational physics, that leads nationally and is recognized internationally in the areas of Soft Condensed Matter and Non-linear Dynamics, with complementary expertise on symmetry classification of dynamical and static field theories. Its research is held at a very high level, both in quantity and quality, contributing significantly to the visibility of Portugal in fundamental science and paving the way for new technologies in materials science and non-linear optics. CFTC is based at ULisboa having excellent logistic support and a first-rate library. CFTC runs its own super-computer with more than 1600 cores, recently upgraded with an InfiniBand network to run highly-efficient parallel

jobs. The attraction of new staff members, national and international projects, and the steady increase in the number of students is an important part of our vision of how to address new research questions of potential high-impact and extend the present network of national and international collaborators. With broad in-house expertise in theoretical and computational physics, our more-ambitious goals require synergies between different team members. CFTC is always looking for complementary expertise, hiring new young researchers and postdocs, and hosting visitors from different institutions.

CFTC mais achievements include: Photonic topological insulator; Photonic moiré lattices; Propagation of motile bacteria on surfaces; Liquid crystals; and in Knowledge transfer: Grant by Nestlé Research, Switzerland.

## Center for Theoretical Particle Physics

CFTP



|                                |                    |
|--------------------------------|--------------------|
| <b>WEBSITE</b>                 | <b>FUNDING FCT</b> |
| http://cftp.tecnico.ulisboa.pt | 0,45 M Euros       |
| <b>RESEARCHERS</b>             |                    |
| 18                             |                    |

### KEYWORDS

- Theoretical Particle Physics
- Theoretical Nuclear Physics
- Fundamental Interactions
- Standard Model of Particle Physics
- Physics Beyond the Standard Model

### STRATEGIC AIMS

CFTP is a research unit committed to research in Theoretical Particle Physics. As the leading Portuguese research unit in this area, it organizes and carries out research in Higgs Physics, Flavour Symmetries, Neutrino Physics, CP violation, and several aspects of Hadron and Nuclear Physics, as meson and baryon structure and spectroscopy.

### RESEARCH UNIT DESCRIPTION

The Centre for Theoretical Particle Physics (CFTP) undertakes research in theoretical particle physics, especially Higgs-boson and neutrino physics, CP violation, flavour symmetries, and hadron physics. There is today a theory, called the Standard Model, that describes with great precision three of the fundamental interactions in Nature: the strong, weak, and electromagnetic interactions. But this theory still leaves many unanswered questions. At CFTP we try to address some of them. An incomplete list includes: 1) Why are we made out of matter? The explanation of how an initial (at the Big Bang) equal amount of matter and anti-matter evolved into the almost absence of anti-matter today has, as a fundamental ingredient, CP violation. But in the Standard Model there is not enough CP violation. It is therefore necessary to look for other sources of CP violation. 2) What is the origin of mass? The physics of the Higgs boson is one of the most important

research topics at CFTP. We want to know how many of these bosons are there, whether there is CP violation in the scalar sector, and what are the symmetries that may explain the mass spectrum of particles. 3) How can we understand the mass of the neutrinos? In the Standard Model neutrinos are massless and do not oscillate. This contradicts experiment (Nobel Prize 2015). Neutrinos are therefore an important probe into the physics beyond the Standard Model. 4) What is dark matter? It is known from experiment that about 25% of the energy of the Universe is made out of dark matter. But there is no explanation for this in the Standard Model, requiring therefore extensions of the model. 5) How do nuclei form? Here the hadron physics of few-body systems plays a crucial role. CFTP is an expert in this topic. 6) Where are theories tested? Physics is an experimental science, therefore all the theories must be confronted with experiment. CFTP collaborates with international laboratories, especially CERN and the Jefferson Laboratory.

# Physics Center of Minho and Porto Universities

CF-UM-UP



| WEBSITE         | DATE OF FOUNDATION |
|-----------------|--------------------|
| www.cf-um-up.pt | 2015               |
| RESEARCHERS     | FUNDING FCT        |
| 86              | 1,92 M Euros       |

#### KEYWORDS

- Condensed Matter Physics
- Materials and Nanostructures
- Functional Surfaces and Coatings
- Molecular Physics and Biophysics
- Optics and Vision Sciences
- High Energy Physics, Gravitation and Cosmology

#### STRATEGIC AIMS

CF-UM-UP is a union of an interdisciplinary research centre mostly devoted to applied studies (CFUM) and a research centre fully dedicated to theoretical physics (CFP). The goal is to reach a higher level of international visibility and scientific impact, providing an equilibrium between fundamental and applied, theoretical and experimental studies. CF-UM-UP is determined to further expand its scientific output and cooperation between the research groups, and increase its internationally recognized impact.

#### RESEARCH UNIT DESCRIPTION

CF-UM-UP is a union of the Centro de Física da Universidade do Minho (CFUM) and Centro de Física do Porto (CFP), two research centres with over 20 years history. These centres were merged in 2015 to reach a new level of international and scientific visibility. CF-UM-UP's scientific activity involves both theoretical and experimental studies as well as development for applications. It concerns Theoretical High Energy Physics and Cosmology, Condensed Matter and Materials Physics, Materials Fabrication and Applications, Optics, Biophysics, Optometry and Vision Sciences. The union of CFUM, an interdisciplinary research centre mostly devoted to applied studies, with CFP fully dedicated to theoretical physics envisages to attain an equilibrium between fundamental and applied, and the-

oretical and experimental studies. The collaboration between the members based in Porto and at Minho has been fruitful, yielding a number of sound joint publications and PhD theses co-supervised by CFUM and CFP members. Additionally, collaborative teaching programs have been developed by the Physics Departments of Minho and Porto Universities (e.g. MAP-Fis, a PhD Program in Physics). CF-UM-UP groups are in line with their principal research lines: 1. Assessment and enhancing visual performance; 2. Physics of quantum materials and bionanostructures; 3. Functional and smart materials and surfaces for advanced applications; 4. Quantum physics and fields in high energy and condensed matter theory.

# Geosciences Center

CGEO



| WEBSITE                        | DATE OF FOUNDATION |
|--------------------------------|--------------------|
| https://www.uc.pt/fctuc/ID/Geo | 1975               |
| RESEARCHERS                    | FUNDING FCT        |
| 39                             | 0,97 M Euros       |

#### KEYWORDS

- Geosciences
- Quaternary
- Resources
- Territory
- Geotechnologies
- Sustainable development

#### STRATEGIC AIMS

The Geosciences Centre of the University of Coimbra aims of reinforcing the presence in the European research space through excellence in research and teaching, the intensification of connections with society and the surrounding environment, and the promotion of rational, responsible and thorough management of resources. It is articulated in 3 research clusters: Fossil Energy and Sustainable Development; Geotechnology; Quaternary, human adaptations and landscape management.

#### RESEARCH UNIT DESCRIPTION

CGEO is a research focused consortium based on the full commitment of its institutional members: the University of Coimbra (UC), the University of Trás-os-Montes e Alto Douro (UTAD), the Polytechnic Institute of Tomar (IPT) and the Earth and Memory Institute (ITM).

All institutional members are continuously searching improvement and enhancement of knowledge, creativity, research and technology, contributing decisively to the progress of science, technology and to the enhancement of knowledge as an essential element of people's lives. The strategic guide lines are: reinforcing the presence in the European research space by developing a research policy centered on the promotion of excellence, investing in quality teaching, intensifying the connections with society

and the surrounding environment, and promoting a proactive, rational, responsible and thorough management of resources, based on criteria of economy, efficacy and efficiency.

CGEO pursues 3 levels of implementation: regional contextual projects (including science and society interaction), specific problem solving addresses (strong link with industry) and fundamental research advances (contributions rooted in the first two).



## Center for Innovative Biomedicine and Biotechnology

CIBB



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.cibb.uc.pt">http://www.cibb.uc.pt</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 305   | 6,54 M Euros       |

### KEYWORDS

- Molecular Mechanisms of Brain Diseases
- Aging and metabolic dysfunction
- Biotechnology
- Cellular and Molecular Advanced Therapies
- Clinical Translation and Innovation
- Synaptic Physiology and Dysfunction

### STRATEGIC AIMS

CIBB is a Research Center of excellence in the domains of Biomedicine and Biotechnology created by merging CNC and iCBR (previously IBILI) institutes. Committed to fundamental and translational research and advanced training in biomedical sciences, CIBB has three strategic research lines: Neuroscience & Disease; Metabolism, Aging & Disease, and Innovative Therapies.

### RESEARCH UNIT DESCRIPTION

With cutting edge equipment and facilities, and the largest critical mass of researchers in the Portugal Centre Region, internationally experienced and linked to the Faculties of Pharmacy, Medicine, Sciences and Technology and Economics, as well as to the Institute of Interdisciplinary Research and CHUC, CIBB has a high-level of scientific production and attracts talent and funding at national and international levels. This multidisciplinary structure, composed of 30 research groups, has a mission to understand how and why diseases develop (particularly age-associated ones) and to transform knowledge into clinical application and technological innovation.

CIBB is organized in 3 lines: Neuroscience and Disease, that aims to decipher brain functioning and dysfunction in neurodegenerative, neuropsychiatric and vision disorders; Metabolism, Aging and Disease, which studies the

cellular and molecular bases of metabolic dysfunction and aging and their impact on the progress of age-associated diseases; and Innovative Therapies that uses stem cells, genes and drugs to implement new therapies for neurodegenerative, cardiovascular, oncological and infectious diseases. In addition to a strong investment in fundamental research, the close link with CHUC and its Clinical Academic Center provides CIBB with privileged conditions to translate basic knowledge into clinical practice, stimulating researchers to transform scientific discoveries into new diagnosis and treatment.

## Centre for Research in Geospace Science

CICGE



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.fc.up.pt/cicge">www.fc.up.pt/cicge</a> | 1975               |
| RESEARCHERS  | FUNDING FCT        |
| 10   | 0,18 M Euros       |

### KEYWORDS

- Heliophysics
- Earth Observation
- Spatial Biology
- Natural Risk Assessment
- Radioastronomy
- Space Situational Awareness

### STRATEGIC AIMS

CICGE works towards the development of national capacities and skills to study the Earth and the near Earth environment through scientific research, innovation, and education of young Portuguese students.

### RESEARCH UNIT DESCRIPTION

CICGE aims at participating and leading national and international programs and projects, securing the participation of Portugal in Space Situational Awareness (SSA) and Earth Observation (EO) programs. Within SSA topics, CICGE actively support the participation of Portugal in the Square Kilometre Telescope through ENGAGE-SKA (ENabling Green E-science for SKA). CICGE will install a solar radiospectrograph at the Pampilhosa da Serra municipality; a 5 meter dish operating from 50 MHz to 1 GHz with a time cadence of 1ms. We are also recovering our 30 inch optical telescope to look for Near Earth Objects, Transients (Novae and Supernovae), and possibly Space debris. Finally, a CICGE researcher is a member of the ASPIICS experiment in the ESA PROBA3 spacecraft. Regarding EO our laboratories look into how human activity endangers ecosystems and increases the potential hazards like forest fires and floods.

The methodology relies on combining in situ measurements from field work with remote sensing observations.

The research is strongly related with the strategic objectives of Portugal Espaço 2030, namely the exploration of remote sensing data in several areas of the environment as well as the promotion of the use of remote sensing data in science and nature conservation. One major area of interest to be exploited by CICGE's Spatial Biology Laboratory are Ecological niche models as main method for environmental studies using remote sensing as main data source in several study cases of spatial ecology. Regarding hazard prevention and mitigation, two of our laboratories deal with scientific research on geo-information extraction from images/LiDAR acquired from UAV and to support research on Soil Erosion, Vegetation Recovery Post-fire, Forest Monitoring and Flood Risk Assessment. Our laboratories have developed and patented a collaborative system for monitoring and real-time detection of fires, regardless of their typification - forest or urban.

## Center for Research and Development in Mathematics and Applications

CIDMA

|                         |                           |
|-------------------------|---------------------------|
| <b>WEBSITE</b>          | <b>DATE OF FOUNDATION</b> |
| http://cidma.mat.ua.pt/ | 2010                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 83                 | 1,84 M Euros       |

### KEYWORDS

- Algebra and Geometry
- Functional Analysis and Hypercomplex Analysis
- Gravitational Geometry and Dynamics
- Optimization, Graph Theory and Combinatorics
- Probability and Statistics
- Systems and Control

### STRATEGIC AIMS

The Center for Research and Development in Mathematics and Applications is a multidisciplinary research team hosted at University of Aveiro. CIDMA was created in 2010, as a fusion of “UIMA - Mathematics and Applications” and “CEOC - Centre for Research on Optimization and Control”. CIDMA main goal is to carry out fundamental and applied research in several domains of Mathematics and spread such findings through scientific publications and meetings of high international level.

### RESEARCH UNIT DESCRIPTION

The CIDMA activities are scientifically organized in the following eight research groups: - Algebra and Geometry - Complex and Hypercomplex Analysis - Functional Analysis and Applications - Gravitational Geometry and Dynamics - History of Mathematics - Optimization, Graph Theory and Combinatorics - Probability and Statistics - Systems and Control.

Additionally, CIDMA has the following six Thematic Lines/ Strands (which act transversally to the research groups): GEOMETRIX; - MATEAS - Mathematics: Teaching and Assessment in Higher Education;- PICS - Inverse Problems and Applications in Health Sciences ; - BIOMATH - Biomathematics ; - TFC - From Theory to Computational Tools and MI - Mathematics for Industry .

CIDMA promotes activities such as: regular talks, courses and seminars; dissemination of the scientific production of its team through the participation in scientific meetings; international cooperation; organization of workshops and congresses; post-graduate and advanced research. In order to increase its contribution to social and economic development, the CIDMA also strives for an active participation in multidisciplinary and transdisciplinary projects in cooperation with other research teams.

## Research Center in Informatics and Communications

CIIC



|                          |                           |
|--------------------------|---------------------------|
| <b>WEBSITE</b>           | <b>DATE OF FOUNDATION</b> |
| http://ciic.iplleiria.pt | 2008                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 20                 | 0,25 M Euros       |

### KEYWORDS

- Telematics and Communications
- Forensics Informatics
- Cybersecurity
- Computational Intelligence and Optimization
- Computer Graphics and Sound
- Internet of Things

### STRATEGIC AIMS

The CIIC's main strategic objectives are: i) the creation of research and innovation with a real impact on society; ii) the generation and transfer of knowledge that impacts regional and global sustainable development; and iii) the consolidation of its network of international research and development partners.

### RESEARCH UNIT DESCRIPTION

The CIIC was created in 2008 as a research unit of the Polytechnic Institute of Leiria. Its mission is to implement, conduct and facilitate high quality research. CIIC aims to create, to promote and to disseminate scientific knowledge and technological development, and benefit society through research integrated with education in the areas of information and communication systems and technologies; namely, multimedia systems and human-machine interfaces, evolutionary and complex systems, software engineering, network and communication services and smart Internet of Things (IoT) ecosystems. CIIC has R&D work in cybersecurity and digital forensics, ambient assisted living and virtual and augmented reality, helping to provide means to access and process information in diverse areas such as industry 4.0, smart farm, healthcare, active living, tourism and cultural heritage. The use of AI and machine learning are crucial for performing data analytics and

keeping in pace with current and modern technology, being present in all lines of research. CIIC research streams are tightly related to the expertise of the Computer Engineering Department of IPLeiria, whose professors and students represent an important source of collaborators. CIIC main achievements include: GAMESLABNET - GAMESLAB Center in Leiria, integrated in a European network, to support the digital transformation of industry, smart farming, health and tourism; LABCIF – Laboratory established to support R&D, training and service provision in the areas of cybersecurity and digital forensics; Distributed architecture for unmanned vehicle services, providing scalable UV-based services, with low technical effort; eServices - elderly support service platform aggregating a service ecosystem developed specially for elderly people; and Large-scale AR system, using the smartphone's camera for visualization of immersive cultural heritage scenarios.

## Interdisciplinary Centre of Marine and Environmental Research

CIIMAR



| WEBSITE          | DATE OF FOUNDATION |
|------------------|--------------------|
| www.ciimar.up.pt | 2000               |
| RESEARCHERS      | FUNDING FCT        |
| 179              | 4,23 M Euros       |

### KEYWORDS

- Bioresources & Blue Biotechnology
- Sustainable Aquaculture & Seafood Safety
- Conservation & Sustainable Management of the Ocean
- Circular Economy & Blue Growth

### STRATEGIC AIMS

CIIMAR contributes to the UN Sustainable Development Goals promoting research and development ensuring healthy life-styles and well-being for all at all ages by fostering: new biotechnological marine products; food security and improved nutrition through aquaculture; conservation and sustainable use of marine resources; actions to comprehend and address global changes; access to affordable, reliable, sustainable and innovative energy sources via marine renewable options; and achieve gender equality.

### RESEARCH UNIT DESCRIPTION

CIIMAR promotes a multi- and interdisciplinary approach towards the Science and Technology of the Ocean area, considering the ocean its coast as a whole system where physical, biological, physiological and chemical processes take place and interact. CIIMAR generates excellent science and innovation, through basic and applied research, supporting graduate and post-graduate training, and promoting technology transfer to relevant stakeholders, increasing the opportunities for job creation and having economic and social impact in the Blue Economy. Scientific outreach is stimulated by an Open Science approach and supports public policies in the ocean and environment areas. This is pursued in an international competitive at-

mosphere (> 30 nationalities) and via a wide web of international collaborations.

CIIMAR is organized into three thematic lines (TL): Marine Biotechnology; Biology, Aquaculture and Seafood Safety; Global Changes and Ecosystem Services; divided into 10 research groups, integrating specialized research teams. The TLs respond to regional, national and international societal and economic challenges. Specific objectives encompass: Discovering novel marine natural products with bioactivity produced by aquatic organisms with biotechnological application in multiple areas including environmental (bioremediation), human and animal health (drugs, cosmetics, nutraceuticals), and industrial (food and feed; paints and coatings); Maximizing the growth potential of current and alternative species for aquaculture; improve disease resistance and animal welfare; develop sustainable aquaculture systems and reduce environmental impacts; provide high quality seafood for human consumption; Developing an integrated, multi-disciplinary understanding of the structure and dynamics of marine ecosystems, and their response to changes at local, regional and global scales; quantify relationships between the human society and the ecosystem services; Bridging the gap between research, innovation, technology transfer and societal needs.

## Research Centre for Mathematics and Applications

CIMA



| WEBSITE                    | DATE OF FOUNDATION |
|----------------------------|--------------------|
| http://www.cima.uevora.pt/ | 1993               |
| RESEARCHERS                | FUNDING FCT        |
| 54                         | 0,74 M Euros       |

### KEYWORDS

- Statistics and Stochastic Processes
- Logic, Algebra, Geometry
- Dynamical Systems
- Differential Equations, Optimization

### STRATEGIC AIMS

CIMA aims to create new mathematical tools, concepts, and theories and to contribute to the development of mathematical knowledge and cultural awareness at different levels (local, regional, national, and worldwide, international). Our mathematical models and results are mainly motivated by applications coming from life sciences, economics and finance, fluid dynamics, materials science, optimal control, and other areas of physics and engineering.

### RESEARCH UNIT DESCRIPTION

The Research Center in Mathematics and Applications (CIMA) comprises three poles (University of Évora, University of Madeira and Instituto Superior de Engenharia de Lisboa). The scientific research carried out is organized into four thematic research groups (Differential Equations and Optimization; Dynamic Systems; Logic, Algebra and Geometry; Statistics, Stochastic Processes and Applications), and two lines of transdisciplinary research (Mathematics and Applications to Technology and Industry (MATI); Mathematical Modelling in Life Sciences and Applications (MMLSA).

In addition to the research component, CIMA develops an intense activity of scientific dissemination, through participation in lectures and meetings, collaboration with the

Department of Mathematics of the University of Évora and the weekly organization of the Scientific Seminar in conjunction with the Doctoral Program in Mathematics at the University of Évora.

Also worthy of note are the Research Initiation Scholarships sponsored by CIMA, aimed at 1st Cycle students, as well as the support provided to doctoral students to participate in congresses where they can present their results and contact the national and international mathematical community. It is intended, in this way, to promote and disseminate Mathematics research and attract young researchers to CIMA. CIMA has developed: sufficient conditions for the solvability of higher order boundary value problems on bounded and unbounded intervals; methods for the analysis of complex motion in biology and robotics, using symbolic dynamics and iterated maps of the interval; systems to prevent environmental risks, data analysis by severity of the road traffic accidents and statistical methods applied to medical sciences; definition and axiomatic characterization of (new) operators of belief change bases; and numerical methods for optimal control and multi-criteria problems with applications to regional challenges.

## Centre for Marine and Environmental Research

CIMA UALG



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| www.cima.ualg.pt   | 1998                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 47                 | 1,26 M Euros              |

### KEYWORDS

- Ocean
- Climate Change
- Environmental quality
- Resources
- Energy
- Biotechnology

### STRATEGIC AIMS

The strategic aims are: to understand the dynamics of the ocean in an interdisciplinary approach and develop tools for its sustainability; develop technologies for the sustainable exploitation of waste, bioprocess engineering, improvement of food quality, assessment of mineral resources and marine energy; assess and propose measures to mitigate global changes and risks; and capitalize on knowledge for a sustainable and resilient society by improving literacy at all levels of society.

### RESEARCH UNIT DESCRIPTION

CIMA is a multidisciplinary centre of excellence of marine and environmental research. CIMA engages with society to implement important decisions about Blue and Green Growth at the national and international level, and thus contribute to the delivery of Sustainable Development Goals. The mission of CIMA is to deepen scientific knowledge of marine and environmental systems, to support and encourage innovation, and to provide training. CIMA integrates two main research areas: Ocean and Coastal Dynamics and Environmental Systems and Resources. Both follow the Research-Tools Management-Dissemination approach, having society as the final end-user. CIMA research plan also incorporates four trans-disciplinary objectives that address significant fundamental and applied

scientific questions while responding to existing research priorities and societal needs, including technological innovation and science towards citizens. These objectives are: understanding the dynamics of oceans (from the coast to the open ocean); developing sustainable resource exploitation; assessing and mitigating global changes and risks; capitalizing knowledge towards a sustainable and resilient society. CIMA also supports managers and decision-makers defining best practices on environmental, coastal and marine strategies and planning.

CIMA contributed to the scientific knowledge in ecotoxicological effects of traditional and emerging pollutants (nanomaterials, pharmaceuticals); operational modeling of the Ocean and of oil spills; development of tools to support coastal management; and the development of alternative energies and establishment of sustainable systems.

## Chemistry Research Unit of University of Porto

CIQUP

|                       |                           |
|-----------------------|---------------------------|
| <b>WEBSITE</b>        | <b>DATE OF FOUNDATION</b> |
| http://ciqup.fc.up.pt | 1976                      |
| <b>RESEARCHERS</b>    | <b>FUNDING FCT</b>        |
| 44                    | 1,50 M Euros              |

### KEYWORDS

- Bioactive Compounds
- Drug Discovery
- Interfaces
- Nanostructuration
- Thermodynamics
- Science Communication

### STRATEGIC AIMS

CIQUP aims to increase its international recognition and reinforcing its position as a leading research unit in Portugal. CIQUP is committed to contribute to a smart specialization policy, by capitalizing on a strong pro-active role in transnational science, through key contributions in areas such as: drug design, development and delivery; nano- and micro-structured materials; environmental and sustainable chemistry; and development of devices and methods for energy harvesting and storage.

### RESEARCH UNIT DESCRIPTION

CIQUP-Research Centre in Chemistry of the University of Porto, sites at the Department of Chemistry and BioChemistry of FCUP and, since 1976, has been continuously evolving to reach its present status as a broadly recognized research unit of excellence in chemistry, in particular in FCT evaluations. CIQUP integrates the newly established Associate Laboratory "Institute of Molecular Sciences-IMS".

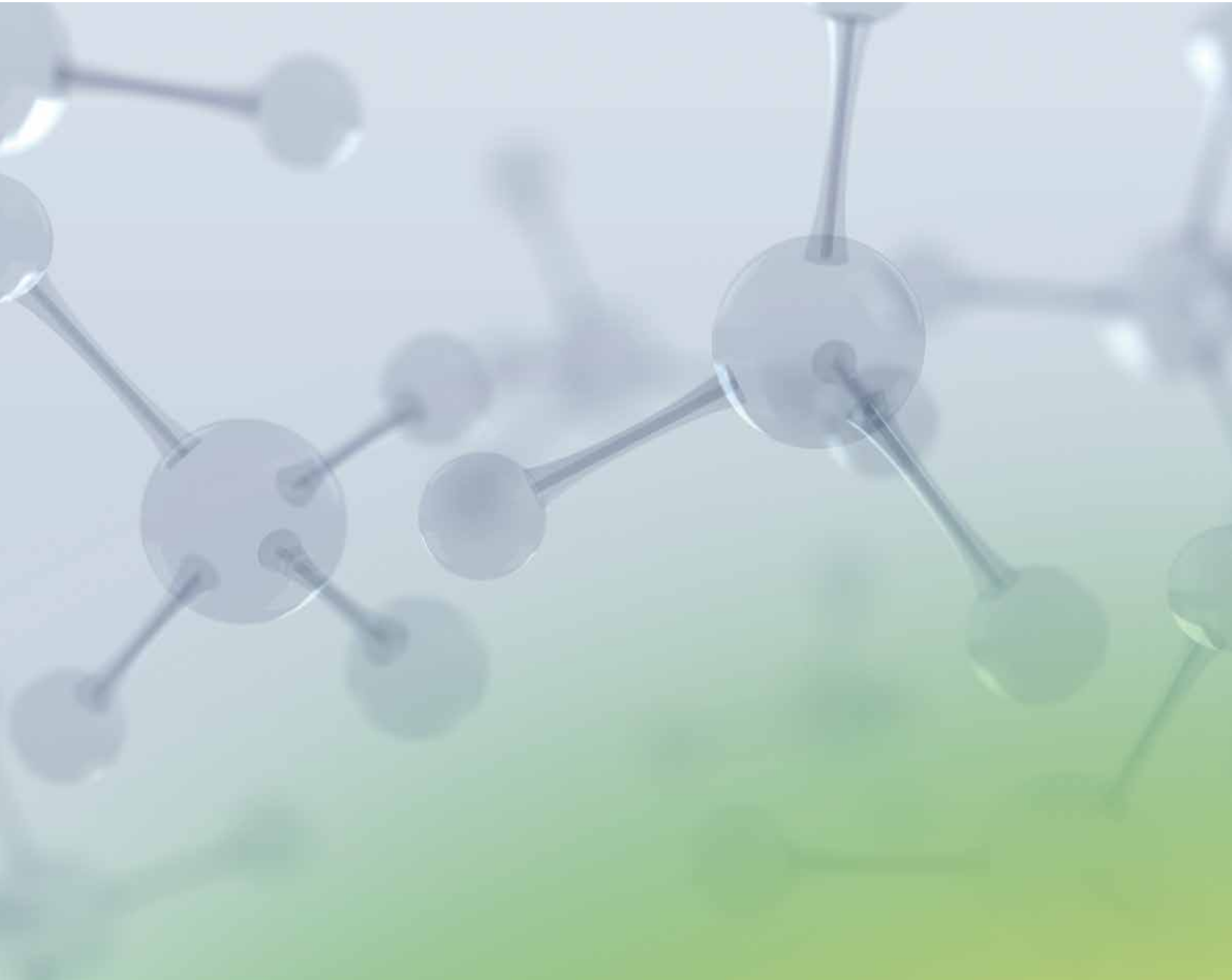
The mission of CIQUP is to "Attain excellence in chemistry, both in research activity and in advanced training of human resources and to contribute to disseminate chemical knowledge." CIQUP goals are in line with new societal demands and international guidelines regarding Science & Technology priorities to contribute for their progress The

strategic principles to achieve these goals are: Explore the appraised level of excellence; Develop the interactions with industry; Expand and reinforce collaborations and networks; Attract talented researchers and students.

CIQUP is organized in five research groups, Medicinal chemistry, Molecular & Supramolecular thermodynamics, Nanostructures & self-organization, Physical analytical chemistry & Electrochemistry, Education, science communication and society. The research activities are carried out around two overlapping and interconnected thematic lines: Physical, Biophysical & Medicinal Chemistry and Materials Chemistry & Nanoscience

CIQUP contributed to: Development of Advanced Methodologies; Design, Synthesis and Screening of Bioactive Compounds; Advancements in energetics and molecular Thermodynamics; Understanding Structures and Functionalities of Interfaces; Unraveling Nanostructures in Ionic Fluids.





## Centre for Informatics and Systems of the University of Coimbra

CISUC




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**WEBSITE**

www.cisuc.uc.pt

**DATE OF FOUNDATION**

1991

**RESEARCHERS**

72

**FUNDING FCT**

2,08 M Euros

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**KEYWORDS**

- Computer Science
- Software and Internet Services
- Intelligent systems
- Human Centric Computing

**STRATEGIC AIMS**

CISUC aims at excellence in research, training of young researchers, addressing societal needs, and enhancing Portugal's competitiveness. CISUC promotes innovation through national and international research projects with both public and industry funding, supporting the creation of start-ups and collaborating on strategies for regional and international development. We strongly favour interdisciplinary approaches, promoting the collaboration of researchers on problems affecting today's society.

**RESEARCH UNIT DESCRIPTION**

CISUC is one of the leading Portuguese research centres in the area of Computer Science and Information Technology, was created in 1991 under the national Science Program, and currently covers a substantial segment of Computer Science and Engineering research topics. The centre has about 150 integrated researchers, of which 72 have a PhD degree, organized into 6 research groups: Adaptive Computing; Cognitive and Media Systems; Communications and Telematics; Evolutionary and Complex Systems; Information systems; and Software and Systems Engineering. To promote cohesion, gain critical mass, and foster inter-group synergies, the groups cluster into 3 thematic strands: Resilient Software and Internet Services; Intelligent Systems; and Human-Centric Computing.

CISUC counts with a strong and rich innovation ecosystem centred in Instituto Pedro Nunes, the University of Coimbra technological knowledge transfer agency. This ecosystem has already supported the creation and development of many spin-off companies originated from ideas generated at CISUC, with thousands of highly qualified jobs resulting from the process.

Finally, the symbiotic relationship with the Department of Informatics Engineering is vital, allowing CISUC to attract young researchers and participate in Advanced Training.

## Centre for Earth and Space Research of the University of Coimbra

CITEUC




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**WEBSITE**

http://geofisico.dyndns.org/

**RESEARCHERS**

32

**FUNDING FCT**

0,75 M Euros

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**KEYWORDS**

- Geology
- Astronomy
- Geophysics
- Space Weather
- Environmental and Geological Risks

**STRATEGIC AIMS**

The Centre for Earth and Space Research of the University of Coimbra (CITEUC) is a Research Unit dedicated to fundamental and applied research in Earth and Space sciences, including their teaching sciences, history, applications, and dissemination.

**RESEARCH UNIT DESCRIPTION**

CITEUC work in a wide range of Earth and Space Sciences and has two research groups: i) Earth Dynamics (EDyn), focusing on Earth's inner structure and processes therein, crustal evolution, and Earth's history, including geomagnetism, seismology, tectonics, petrology and stratigraphy, and ii) Solar System Sciences (S3), focusing on solar physics, celestial mechanics, minor bodies of the solar system, and planetary geology. CITEUC is housed at the Geophysical and Astronomical Observatory which lead to a unique combination of continuously, acquired data requiring intensive laboratory work, to verify and certify all data integrated into national and international publicly accessible databases. Our central goal is the study of Earth and Solar System Sciences, but not only as pure research.

We aim to serve even more the community by pointing out the potential natural threats, coming from inside the Earth and outside of it. We continue to propose to look upon the Earth as an integrated complex system interconnecting

the information on what affects us either having a inner and/or outer origin. In this context, on the shoulders of our fundamental and applied research, we have made a global strategic structuring creating the "Space-Planetary Interactions Monitoring and Forecasting Laboratory" to characterise/quantify solar activity parameters, and their temporal evolution, and to integrate them with the analysis and recognition of patterns in magnetograms, in order to create Space Weather alerts. On the other hand, taking advantage of CITEUC's expertise in geosciences, OGAUC's data series, and our team members responsible for the "Natural Radioactivity Laboratory", we are developing another strategic transversal theme centred in Natural and Anthropic Hazards and Risks, and their analysis.

CITEUC are implementing three transversal themes, combining the two groups, namely, Space Weather Natural and Anthropic Hazards and Risks and History and Education and Dissemination/Popularisation of Sciences.

## Center for Mathematics and Applications

CMA/FCT/UNL

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www.cma.fct.unl.pt/en">https://www.cma.fct.unl.pt/en</a> | 1993               |
| RESEARCHERS   | FUNDING FCT        |
| 82  | 1,90 M Euros       |

### KEYWORDS

- Algebra and Logic
- Analysis
- Operations Research
- Statistics and Risk Management

### STRATEGIC AIMS

The Center for Mathematics and Applications is a research unit dedicated to the advancement of knowledge in Mathematics. Its focus is cutting-edge research in pure and applied mathematics, guided by high-quality standards. It values the use of mathematics in solving real-world problems, on topics of social relevance, and in collaboration with the business sector. It promotes knowledge transfer by integrating networks, publishing in scientific journals, and supporting advanced training.

### RESEARCH UNIT DESCRIPTION

The Center for Mathematics and Applications (NovaMath) is located in the Faculty of Science and Technology of the Universidade NOVA de Lisboa (FCT NOVA), on the Caparica Campus, on the southern margin of the Lisbon region. It is the only research unit at Universidade NOVA whose main research area is Mathematics and works in close collaboration with the Department of Mathematics of the same university. It welcomes professors and researchers from FCT NOVA, but also from other Portuguese institutions.

The center develops research in the area of mathematics and its applications, combining skills from different sub-areas of mathematics. It is organized into four research groups corresponding to sub-areas of mathematics - Algebra and Logic, Analysis, Operations Research and

Statistics and Risk Management - each with its own activities that combine around transversal themes: Biomathematics, Mathematics for Health and Data Science.

NovaMath hosts several research projects and researchers from around the world, who choose the center to further their training and develop their research activities. Collaborates in the Ph.D. in Mathematics at FCT NOVA. NovaMath is part of the international scientific community, contributing with high-quality research. It is the founder of the Portuguese Network of Mathematics for Industry, PT-MATHS-IN, and carries out various scientific dissemination activities aimed at the general public.

NovaMath contributed to: Artificial intelligence assisted mathematics; Stochastic partial differential equations; Machine learning architectures as a tool to detect and diagnosis COVID-19; Estimation methods for sea resources based on non-randomly sampled fisheries data; Advancing Machine Learning and Network Science to decipher the molecular mechanisms in cancer.

## Center for Mathematics, Fundamental Applications and Operations Research

CMAFCIO



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cmafcio.campus.ciencias.ulisboa.pt/">http://cmafcio.campus.ciencias.ulisboa.pt/</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 59  | 1,25 M Euros       |

### KEYWORDS

- Nonlinear Analysis and Differential Equations
- Operations Research
- Logic, Geometry and Dynamical Systems
- Applied and Industrial Mathematics

### STRATEGIC AIMS

CMAFcIO defined the following strategic objectives: cutting-edge research in the field of specific mathematics to create new knowledge; to strengthen and develop experience in mathematics applications and to strengthen connections with industry; to support and participate in advanced training for young people and in the organization of national and international scientific events. CMAFcIO maintains an important role in current research in Mathematics, qualified to the highest quality standards.

### RESEARCH UNIT DESCRIPTION

The CMAFcIO is an R&D Unit of the Faculty of Sciences of the University of Lisbon, result of the merge of the CMAF (Center for Mathematics and Fundamental Applications), created in 1985 by INIC as the follow up of the Center for Mathematics Studies of Lisbon, created by the IAC in 1940, with the CIO (Center for Operational Research) created in 1994.

The center conducts research in the field of Mathematical Sciences, covering domains ranging from its fundamentals to its applications, in three areas of research: Nonlinear analysis and differential equations, Logic, Geometry and Dynamical Systems, and Operational Research and Optimization. Its main objectives are to develop research and advanced studies in the fields of mathematics, train young

researchers at an initial, postgraduate and post-doctoral level, and encourage and develop applications of mathematics to relevant problems in Science and Industry.

In addition to the dissemination of scientific results, the unit promotes the communication of mathematics in schools and to the general public. The CMAFcIO includes, among its fifty members, professors from various university departments and three researchers at the Faculty of Sciences, nearly two dozen fellows, including a dozen doctoral students and a half dozen young people with research initiation grants.

CMAFcIO contributed to: Regularity of Lyapunov exponents for linear cocycles over hyperbolic and quasiperiodic-random dynamics; Vanishing viscosity with short wave long wave interactions for systems of conservation law; Mathematical models and algorithms in real-world problems: e.g. optimization of ambulance dispatching and relocation, mass rescue operation in ocean areas.

## Center of Mathematics of the University of Minho

CMAT



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| www.cmat.uminho.pt | 1991                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 41                 | 0,99 M Euros              |

### KEYWORDS

- Algebra and Discrete Mathematics
- Analysis
- Geometry and Topology
- Logic and Computer Science
- Applied Mathematics
- Probability and Statistics

### STRATEGIC AIMS

CMAT aims to develop and promote its research activity covering a large range of fundamental and applied mathematical areas. CMAT tries to answer to new scientific challenges with impact on the applied and technological real life problems as well as on the societal and regional development. CMAT intends to fulfill, through numerous collaborations with local and regional entities, the mission of organizing and participating in outreach activities, including the promotion of scientific awareness.

### RESEARCH UNIT DESCRIPTION

The Center of Mathematics (CMAT) is a research unit of the University of Minho (UM), with a Pole at the University of Trás os-Montes e Alto Douro (UTAD). CMAT is structured in four research groups gathering researchers from fundamental and applied mathematics: Algebra, Logic and Computation; Analysis and Applications; Geometry, Topology and Applications; Statistics, Applied Probability and Operational Research. The scientific interests of CMAT members cover the following areas: Matrix Theory, Numerical Linear Algebra, Combinatorics, Semigroups, Quantum Logics and Coding, Proof Theory, Algebraic Topology, Discrete and Differential Geometry, Mathematical Relativity, Differential Equations, Mathematical Modeling and Numerics, Dynamic Fields, Dynamical Systems, Hypercom-

plex Analysis, Operator Theory, Special Functions, Statistics, Applied Probability, Operational Research and Data Science. Areas of application include Computer Science, Engineering, Environment Sciences, Physics, and Health Sciences.

CMAT contributed to: Mathematical model of intelligent human-robot collaboration based on principles of brain processing; A coinductive approach to proof search through typed lambda-calculi; New numerical methods for distributed-order diffusion equations; New results in Ergodic Theory, Topological Dynamics and Generic properties of conservative systems; Development of a simulation tool for mixed power generation systems in collaboration with REN.

## Center of Mathematics and Applications of University of Beira Interior

CMA-UBI



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| www.cma.ubi.pt     | 1988                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 28                 | 0,75 M Euros              |

### KEYWORDS

- Analysis and differential equations
- Algebra and Geometry
- Probability and Statistics
- Theoretical Physics

### STRATEGIC AIMS

CMA-UBI strategic aims embrace an unequivocal commitment towards high-level scientific research in mathematics, its applications and theoretical physics. The main areas are: Dynamical Systems, Algebra and Geometry, Theoretical Physics, Probability and Statistics, and Numerical Analysis and Differential Equations. Our guidelines encompass the following components: Quality, Internationalization, Multidisciplinary focus, post-graduate training, and public engagement with mathematics and scientific knowledge.

### RESEARCH UNIT DESCRIPTION

The CMA-UBI was created to undertake high-level scientific research in several areas of mathematics, their applications and theoretical physics. It is a research unit hosted by the University of Beira Interior. CMA-UBI has two research groups: Physics and Mathematical Modelling Group (PMMG); Mathematics Group (MG). PMMG areas of research span from probability theory and stochastic processes, statistics, numerical analysis, partial differential equations to theoretical physics. MG research interests include: differential geometry, dynamical systems, ergodic theory, ordinary differential equations, linear and multilinear algebra, associative and non-associative rings and algebras. CMA-UBI has also the support of an External

Advisory Board composed of internationally recognized experts in areas of research that are representative of the scientific work done in CMA-UBI. CMA-UBI has been involved in the organization of several regular seminars (with internal and external speakers), short courses, national and international conferences and workshops. CMA-UBI is deeply committed with two PhD programs run by UBI: PhD in Mathematics and Applications and PhD in Physics (mathematicians and physicists of CMA-UBI integrate the directive board of this degree). Although the main core of its research is of fundamental nature, many of its integrated members, especially in statistics, have important and regular collaborations with research units in different areas, such as in health sciences.

CMA-UBI contributed to: A wider form of gravity fitting Starobinsky's  $R+R^2$  was proposed; Within nonautonomous perturbations, loss of hyperbolicity and non-exponential were found; Differential equations for reaction-diffusion with applications to chemical problems; Extending results of extreme value theory to non-stationary and anisotropic random fields; A conjecture related to the validity of positivity of Lyapunov exponents in symplectic contexts was proved.



## Center for Mathematics, University of Coimbra

CMUC



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://cmuc.mat.uc.pt/rdonweb/">https://cmuc.mat.uc.pt/rdonweb/</a> | 1978               |
| RESEARCHERS   | FUNDING FCT        |
| 66  | 1,90 M Euros       |

### KEYWORDS

- Algebra
- Analysis
- Geometry
- Numerical Analysis
- Optimization
- Statistics

### STRATEGIC AIMS

The Centre for Mathematics of the University of Coimbra (CMUC) is a research unit with scientific interests in the field of Mathematics. It aims to carry out advanced research activities, to provide graduate education and post-graduate training, to disseminate scientific culture and to provide the community with advanced R&D services. CMUC is committed with the best international standards and aims to be recognized as a research unit of excellence in Mathematics.

### RESEARCH UNIT DESCRIPTION

CMUC hosts about seventy researchers and twenty five PhD students, currently organized in six Research Groups (Algebra and Combinatorics; Algebra, Logic and Topology; Analysis; Numerical Analysis and Optimization; Geometry; Probability and Statistics) embracing the main areas of Pure and Applied Mathematics. The Centre's size and diversity encourage collaboration between people working in different fields, keeping in mind the fundamental unity of Mathematics. Each research group organizes a regular seminar, as well as several international events, and regularly hosts visiting researchers. The results of CMUC research are presented at international conferences and published in top quality international journals. CMUC is involved in graduate and postgraduate education, in as-

sociation with the Joint UC|UP PhD Programme in Mathematics.

CMUC has also three transverse Thematic Lines of activities, on Computational Mathematics, Outreach, and the History of Mathematics. The Lab for Computational Mathematics promotes research in computational mathematics and scientific computing, as techniques for the solution of challenging quantitative problems arising in Science, Engineering, Industry, Medicine, Finance, and Management. The Outreach Line coordinates the Delfos School, the Portuguese Mathematical Olympiad and other mathematical competitions, national and international, aimed at basic school, high school and undergraduate students, and regularly organizes events aimed at the public at large.

## Centre of Mathematics of the University of Porto

CMUP



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cmup.fc.up.pt/main/">http://cmup.fc.up.pt/main/</a> | 1942               |
| RESEARCHERS   | FUNDING FCT        |
| 61  | 1,78 M Euros       |

### KEYWORDS

- Mathematics
- Applied Mathematics
- Dynamical Systems
- Semigroups
- Geometry

### STRATEGIC AIMS

CMUP has established its reputation as one of the leading national research units in Mathematics, carrying out internationally recognized research at the highest level in the areas of Dynamical Systems, Semigroup Theory and Geometry, with outstanding individual contributions in all areas. CMUP aim to gain international recognition as a Mathematics centre, consolidating our most successful lines of research and reinforcing other promising lines.

### RESEARCH UNIT DESCRIPTION

The main activity of CMUP is to carry out research in Mathematics. This is to a large extent accomplished by providing suitable infrastructures and support for the research activities of its members. The Centre also hosts a number of postdoctoral researchers and is active in consulting and outreach activities. The Centre participates actively in postgraduate training, sponsoring three PhD programs: PIUDM (jointly organized by the Universities of Coimbra and Porto), PhD Program in Applied Mathematics (jointly organized by the Universities of Aveiro, Minho and Porto) and PhD Program in Computer Science.

CMUP has a broad spectrum of research domains in Mathematics and Applied Mathematics. It is structured into four research groups (Algebra, Analysis, Geometry and Probability & Statistics) which cross four transversal re-

search lines (Computational Mathematics, Dynamical Systems, Mathematical Models and Applications and Semigroups, Automata and Languages). Given the breadth of the research team, the core of the unit is production of internationally recognized research in all of the above areas. Aware of the new societal challenges (e.g. in the technological areas) in which Mathematics has been having an increasingly relevant role with crucial impact, CMUP strives to expand its spectrum, namely into Data Science and Machine Learning, having recently integrated an Intelligent Systems Associate Laboratory (LASI).

CMUP contributed to: SRB measures for partially hyperbolic systems whose central direction is mostly (resp. weakly) expanding; Development of new Lie theory producing higher Teichmüller spaces via Higgs bundles; Proof of a connection between extreme value theory and quantitative recurrence for chaotic systems; Join irreducibility of the Krohn-Rhodes complexity pseudovarieties by novel profinite techniques; Singularities of vector fields and bounds for the dimension of Lie groups acting on complex manifolds.

## Coimbra Chemistry Center

CQC



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.uc.pt/fctuc/dquimica/Investigacao/CQC">http://www.uc.pt/fctuc/dquimica/Investigacao/CQC</a> | 1977               |
| RESEARCHERS   | FUNDING FCT        |
| 84  | 2,65 M Euros       |

### KEYWORDS

- Chemistry
- Medicinal Chemistry
- Sustainable Chemistry

### STRATEGIC AIMS

The CQC has 3 main strategic goals: advancing research in areas of chemistry essential for the progress of society, developing partnerships to facilitate wealth production and job creation, and providing high-level advanced training to chemistry students. Its mission is to promote excellence in Chemical Sciences, by elucidating and controlling molecular mechanisms, developing new theories, and meeting the technological needs of society through the design of new molecular systems and devices.

### RESEARCH UNIT DESCRIPTION

The Coimbra Chemistry Center (CQC) is the main unit in the University of Coimbra (UC) dedicated to research in Chemistry. It was founded in 1977 and has research interests spanning from Theoretical and Computational Chemistry, Physical Chemistry, Chemical Physics, Synthetic and Materials Chemistry, Macromolecules and Colloids, and Biological and Medicinal Chemistry. It also has interests in the fields of Cultural Heritage and Forensic Chemistry. The centre is equipped with state-of-the-art instrumentation for both experimental and computational work.

The CQC has extensive collaborations with national and international research centres, companies and other institutions. It integrates several international networks, the Roadmap of Research Infrastructures of Strategic Inter-

est, hosts 4 Science Platforms of the UC (LaserLab, NMR-UC, Cryogenic Facility and Trace Analysis and Imaging Lab, the last shared with the Physics Department of UC), and participates as an active partner of both IUPAC and UNESCO. The CQC is also dedicated to the protection and development of intellectual property and technology transfer, with ca. 50 patents obtained since 2015 and 6 start-ups founded. It integrates the Associate Laboratory Institute of Molecular Sciences (IMS).

CQC contributed to the: Development of new paradigms in chemical reactivity via entangled IR/tunneling driven processes; Development of the redaporfin drug for photodynamic therapy of cancer (EMA & FDA orphan drug); Discovering of novel tetrapyrrolic macrocycles as highly-efficient theranostic agents for melanoma; Development of a new mechanistic model for the distribution of cholesterol among blood compartments; Design of a novel monolithic drug-in-NLC-in-adhesive transdermal patch for drug co-delivery.

## Structural Chemistry Center

CQE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cqe.tecnico.ulisboa.pt">http://cqe.tecnico.ulisboa.pt</a> | 1975               |
| RESEARCHERS   | FUNDING FCT        |
| 179   | 4,20 M Euros       |

### KEYWORDS

- Chemistry
- Synthesis, Catalysis and Reactivity
- Materials, Soft Matter and NanoChemistry
- Sustainable Chemistry, Environment, Energy
- Medicinal and Biological Chemistry for Health

### STRATEGIC AIMS

Structural Chemistry Center is defined by its threefold mission: i) the integrated development and use of chemistry-based knowledge to investigate challenging societal problems; ii) the promotion of advanced training in chemistry-related areas; and iii) the transfer of scientific and technological knowledge in terms of its social, economic and cultural impact.

### RESEARCH UNIT DESCRIPTION

Structural Chemistry Center (CQE) is a R&D Unit of the University of Lisbon (ULisboa) with sites at Instituto Superior Técnico (IST) and Faculdade de Ciências (FCUL). It is the largest Research Unit in Chemistry of ULisboa, with more than 300 affiliated members.

Research at CQE is aligned with four Thematic Lines (TLs): SYNCat (Synthesis, Catalysis and Reactivity), MATSoft (Materials, Soft Matter and NanoChemistry), SUSChem (Sustainable Chemistry for the Environment, Energy, and Manufacturing) and MEDLife (Medicinal and Biological Chemistry for Health). The four TLs are multidisciplinary and interdisciplinary areas that explore problems along a rational framework, initiated with the design, synthesis and characterization of new molecules and materials that can subsequently contribute to a better environment, a more sustainable energy production, or a healthier life.

CQE also comprises eleven research groups that reflect the scientific interests of their members, their capacity to share resources and their wish to be managed by a common structure.

The organization of CQE around eleven research groups and four TLs is an integrated and flexible concept: i) groups are encouraged to produce scientific work and contribute within the context of different TLs; ii) thematic lines are not compartmentalized: instead, they overlap in multiple research areas; iii) inter-group collaboration is expected to solve specific challenges posed by a given TL from different perspectives.

CQE contributed to: International recognition in arctic research activities related to climate change; Nucleoside-based compounds for agricultural chemistry and health; Sustainable energy solutions: "Fit for Purpose" electrochemical and photovoltaic devices; Eco-friendly processes: from one-pot homogeneous catalysis to new heterogeneous catalysts; Organic and metal-based drugs for cancer, tuberculosis, diabetes and Alzheimer therapies.

## Madeira Chemistry Research Centre

CQM



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://cqm.uma.pt">https://cqm.uma.pt</a> | 2004               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 24          | 0,90 M Euros |

### KEYWORDS

- Chemistry
- Biochemistry
- Agrofood quality
- Natural Products
- Dendrimers
- Health

### STRATEGIC AIMS

CQM's main objective is to be a leading international R&D entity in Natural Products and Nanomaterials fields, contributing to the development and internationalization of UMa and Madeira Archipelago, as well as for economic growth and social cohesion, in Portugal and Europe.

CQM also aims to create an R&D environment that attracts outstanding students and researchers where fundamental knowledge is produced, and solutions to the real-world problems are found.

### RESEARCH UNIT DESCRIPTION

CQM's team integrates researchers with complementary competencies, such as analytical chemistry, organic & inorganic chemistry, physical chemistry, computational chemistry, biochemistry, pharmaceutical science, and molecular and cellular biology. The two well-established and globally recognized research groups: Materials Group (MG) & Natural Products Group (NPG), share knowledge and state-of-the-art research infrastructures. A space of 730 m<sup>2</sup> is available for research activities that comprise ten devoted labs, including facilities for chemical synthesis, physico-chemical characterization of compounds/materials, and in vitro biological assays (animal cell culture and microbiology). The MG has a strong knowledge of nanomaterials chemistry, developing work in hybrid

dendrimer-based nanomaterials (e.g., carbon dots/dendrimer nanomaterials), functionalization of dendrimers for biological targeting (e.g., cancer cells), and inorganic nanoparticles templated by dendrimers. The applications involve drug/gene delivery, bioimaging, and theranostics. The NPG has extensive expertise in Chromatography and Mass Spectrometry-based identification and structural elucidation of molecules. LCMS-based methodology development in natural products and foodstuffs, natural molecules screening and target analysis, disease biomarker discovery, isolation of new compounds with relevant biological/pharmaceutical properties have been key research topics.

CQM contributed to the: Design of new dendrimer-based materials as carriers for drugs and nucleic acids for cancer and HIV infection treatment; Development of new dendrimer-based contrast agents for medical imaging, namely for MR, CT, and PET techniques; Identification of new disease biomarkers, like cancer biomarkers, achieved via OMICS exploitation; Identification and isolation of new compounds with relevant bioactive properties from terrestrial and marine sources; Valorisation of waste from the fish industry through its use in preparing materials for biomedical applications.

## Chemistry Center - University of Minho

CQ-UM



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://cq.uminho.pt">cq.uminho.pt</a> | 2003               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 27          | 0,42 M Euros |

### KEYWORDS

- Organic Synthesis
- Functional materials
- Bioactive Compounds

### STRATEGIC AIMS

CQUM promotes research and advanced training in chemistry at the interface with biology, physics, materials science, medicine and nanosciences, in the design and synthesis of new personalized drug candidates, the preparation and modification of new materials for future technological solutions, and of analytical techniques for pollutants control, acting as a cluster for innovation and knowledge transfer, through R&D activities and collaboration with external entities.

### RESEARCH UNIT DESCRIPTION

The Chemistry Center of the University of Minho (CQUM) is a research unit financed by the Foundation for Science and Technology, and an organic subunit of the School of Sciences of the University of Minho.

The research at CQUM is developed in the thematic areas of Synthetic Chemistry and the Preparation and Characterization of Functional Materials, through the interaction between three research groups (Applied Biomolecular Chemistry, Heterocycles for Societal Challenges and Sustainable Chemistry - New Methods and Materials) and collaborations with other national and international research units and external entities.

The research includes the development of new bioactive compounds for selective therapeutic systems for vari-

ous diseases (e.g. microbial infections, cancer, malaria, leishmaniasis, diabetes or Alzheimer), the development of nanomaterials for the controlled delivery of drugs, the application of (bio)molecules in medical diagnosis, probes for bioimaging, the extraction and encapsulation of natural products for application as biopesticides and food preservatives, the development of new functional, smart and sustainable materials for a wide range of applications including biomedical use, optoelectronics, energy storage, catalysts, smart windows and sensors, the development of synthetic methodologies based on by-products, and analytical methodologies aimed at environmental monitoring and waste recovery.

CQUM main achievements include: New drug candidates for microbial infections, cancer, malaria, leishmaniasis, diabetes or Alzheimer; Application of (bio)molecules in medical diagnosis and bioimaging probes; Nanomaterials for controlled drug delivery; New adaptable, smart and sustainable materials for a wide range of technological applications; Analytical devices and methodologies for environmental monitoring and waste recovery.

## Chemistry Center - Vila Real

CQVR



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://cqvr.purpleprofile.pt/">http://cqvr.purpleprofile.pt/</a> | 2002                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 31  | 0,74 M Euros              |

### KEYWORDS

- Functional Materials
- Organic Dyes
- Environmental Sustainability
- Eco-innovative Waste Management
- Food Innovation and Wine quality
- Nutraceuticals and Health

### STRATEGIC AIMS

The CQVR performs research in fundamental and applied Chemistry. It aims to use scientific knowledge to the welfare of the society by developing new advanced materials with improved performance for different applications, new solutions to match the agro-food industrial activity with a healthy environment, new safe and healthy food products. Although the research is internationally recognised, it has a local impact as several projects are being developed in collaboration with local companies.

### RESEARCH UNIT DESCRIPTION

CQVR embraces fundamental and applied research in the fields of health, wellness, energy, environment and food science, throughout interactive synergies between 4 research groups: Organic, Materials, Environment and Food Chemistry & Biochemistry. In the field of Organic Chemistry the Unity activity is mainly focused in the design of compounds for biomolecules detection, cancer treatment, ophthalmic lens industry and explosive detection.

The research of Materials Chemistry group is mainly oriented to the development of materials and technologies for energy-efficient buildings of tomorrow. For this purpose, the group develops novel and sustainable construction materials, solar harvesting materials/devices, and bio-inspired coatings. New solutions for sensors in the field of

health and environment have also been studied, as well as strategies for production of nanomaterials with multifunctional properties. Environmental Chemistry group is mainly devoted to the development of efficient wastewater treatments and conversion of wastes into valuable products (biofuels, biofertilizers). They also aim to ensure water security to the population and understand the microbial and biochemistry activity of soil. Food Chemistry & Biochemistry group focus its research activities in new food formulations/functional foods, innovative technologies to improve the production, safety and quality of wine and foods. The toxicity of microplastics and their impact on some diseases is also investigated.

## GeoBioSciences GeoTechnologies and GeoEngineering

GEOBIOTEC



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.ua.pt/geo/PageText.aspx?id=17534">http://www.ua.pt/geo/PageText.aspx?id=17534</a> | 2007                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 71  | 1,64 M Euros              |

### KEYWORDS

- Geomaterials
- Geoenvironments
- Lithospheric Evolution
- Sedimentary Basins
- Soil Resources

### STRATEGIC AIMS

GeoBioTec, as the name indicates, combines Geosciences with Biology since its formation, integrating multi and interdisciplinary groups. GeoBioTec Strategic Focus is on Geo-Resources/Geo-Environment, working actively with some of the most important national mining projects and taking advantage of our skills and resources.

### RESEARCH UNIT DESCRIPTION

Geobiotec comprises 5 research groups: Lithospheric Evolution; Complex Environmental Systems; Georesources, Geotechnics and Geomaterials; Basin Analysis and Paleontology; Agro-Forestry. The Unit has developed several thematic areas: a) geodynamic evolution of the Iberian Variscan Belt; b) magmatic petrogenesis in several different crustal segments; c) isotope geology applied to magmatic petrogenesis, geochronology, and provenance studies in both geological and non-geological samples; d) establishment of river reference conditions; e) hydrogeology and hydrochemistry; f) surface geophysics; g) clay mineral assemblages used for basin analysis on-shore and on the continental platform; h) exploration, characterisation, processing, specification, application and evaluation of raw materials; i) rock and soil geotechnical properties; j) physical and chemical properties of special clays and sands traditionally used as curative or healing materials;

k) physical and chemical degradation mechanisms and products of natural stones, mortars and cements; l) Bioremediation, Phytomining, Bioremediation; m) biogeoecological studies; n) biomonitoring environmental exposure and link with health quality. Despite Geobiotec includes lines devoted to fundamental research, there is a main focus on topics related to the life cycle of primary raw materials (availability of minerals; prospection, recognition and exploitation of mineral deposits; beneficiation and processing; disposal, treatment and recycling of mineral wastes) and to geo-environmental and medical geology studies (decommissioning, closure and abandonment of mines and quarries; impacts of present and past exploitation of mineral deposits in the environment; geochemistry of atmospheric powders and soils, and its influence in human health).

Geobiotec research unit is fully committed to the new trends of research and exploitation of raw materials: Sustainable exploitation; Remining; Reuse; Recycling, putting particular emphasis on development of new materials and/or new applications for old materials.



## Group of Mathematical Physics of the University of Lisbon

GFMUL



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://gfm.cii.fc.ul.pt/?set_language=en">http://gfm.cii.fc.ul.pt/?set_language=en</a> | 1995               |
| RESEARCHERS   | FUNDING FCT        |
| 18  | 0,61 M Euros       |

### KEYWORDS

- Stochastic Analysis
- Geometric spectral theory and shape optimisation
- Quantum Geometry and Pseudo differential operators
- Topological gauge theories and quantum gravity
- Analytic ODEs, dynamical systems and Integrability
- Schroedinger problem and optimal transport

### STRATEGIC AIMS

Our aim is to develop rigorous mathematical methods motivated in particular by problems in modern Theoretical Physics. This is not only about making rigorous what physicists and other specialists already know, but about providing them with tools and ideas inspired by the most recent developments in Mathematical Sciences. Among the topics currently developed by GFM members are Stochastic Analysis, Geometric spectral theory, Geometric and Topological Quantum theory, Integrability and analytic ode's theory.

### RESEARCH UNIT DESCRIPTION

GFMUL is a research center (FCT classification Excellent) which has had, along the years, a key role in the acknowledgement in Portugal that Mathematical Physics is a respectable field of Mathematics. It has a strong interdisciplinary component. GFMUL organised, for instance, ICMP 2003 in Lisbon and, since then, many high level international conferences.

GFMUL has a long successful tradition of welcoming Post-Docs and Researchers from around the world. At the moment our members represent 8 distinct nationalities. Many of our older Post-Docs have found stable academic positions abroad.

Scientifically, GFMUL is presently organised into 4 wide in-

terconnected research orientations : (1) Stochastic Analysis, (2) Geometric spectral theory, (3) Geometric and Topological Quantum Theory, (4) Integrability and analytic ODEs theory.

The GFMUL's members, especially young ones, are systematically encouraged to apply to national and international grants, to collaborate with scientists abroad and to participate actively in international conferences, where they interact with scientific leaders of their fields. This has helped us to receive in Lisbon famous scientists willing to share their enthusiasm about mathematics and attract future local researchers.

GFMUL is the only research center in Portugal devoted specifically to Mathematical Physics.

## Games, Interaction & Learning Technologies

GILT



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.gilt.isep.ipp.pt/">www.gilt.isep.ipp.pt/</a> | 2005               |
| RESEARCHERS  | FUNDING FCT        |
| 11   | 0,12 M Euros       |

### KEYWORDS

- Serious games
- Learning Technologies
- Assistive Technologies

### STRATEGIC AIMS

GILT fosters multidisciplinary knowledge through applied research and effective transfer of technology to the society aiming to boost innovative approaches to education and to promote inclusion of disadvantaged groups. The strategy of the unit has always been anchored in two pillars: internationalization and exploitation of research results.

### RESEARCH UNIT DESCRIPTION

GILT - Games, Interaction and Learning Technologies is a R&D unit hosted by the Porto Polytechnic since 2005. GILT seeks excellence in multidisciplinary research, development and innovation in the use of technology to support the sustainable development of the Society, while embedded in an international environment. GILT develops and exploits scientific and technical knowledge in the fields of educational technology, assistive technology and related areas. GILT aims at: - Fostering multidisciplinary knowledge through applied research, innovation and advanced studies in the field of learning technologies and - Transferring knowledge and technology to promote the inclusion of disadvantaged groups.

The activity of the unit is organized in five thematic lines: Learning Technology, aims to further research and develop the integration of technology in educational settings; Assistive Technology, fosters equity and equal opportuni-

ties by assuring general access to digital content through digital means irrespectively of disabilities, socio-economic status and education; Serious Games, delivers a multidisciplinary approach to exploit the motivational and immersive nature of games for serious purposes like training, education, marketing or awareness raising; Interaction, addresses new approaches to human-computer interaction, including digital arts, brain-computer interaction devices and related subjects; Health, researches the use of multimedia in medicine and health environments.

The network of partners cooperating with GILT includes over 200 institutions all over the world. GILT facilities occupy an area of approximately 100m<sup>2</sup>, totally equipped through internal revenue sources. The equipment includes state-of-the-art Virtual and Augmented Reality devices and a large panoply of mobile devices, for research, development and testing purposes.

## Cultural Heritage, Studies and Safeguard

HERCULES  
LABORATORY



| WEBSITE                | DATE OF FOUNDATION |
|------------------------|--------------------|
| www.hercules.uevora.pt | 2009               |
| RESEARCHERS            | FUNDING FCT        |
| 27                     | 1,33 M Euros       |

### KEYWORDS

- Heritage Science
- Archaeometry
- Materials characterisation
- Biodegradation and biotechnological solutions
- Digital technologies applied to cultural heritage
- Multidisciplinary research

### STRATEGIC AIMS

HERCULES Laboratory (HERança CULTural Estudos e Salvaguarda / Cultural Heritage Studies and Safeguard) is a multidisciplinary research unit dedicated to the study and valorization of Cultural Heritage. Although HERCULES Lab strategically considers the Mediterranean as a forefront geographical area for research and its analytical facilities unique for that purpose, its research scope is broader and its research is developed worldwide.

### RESEARCH UNIT DESCRIPTION

HERCULES Lab was established in 2009 in Évora University and, in 2010, a mobile laboratory unit, HERCULES mobile, was added to the infrastructure. HERCULES Lab is a unique research infrastructure in Portugal and a landmark in Europe (as recognized in HERCULES SAB report) equipped with state-of-art equipment and highly skilled researchers able to perform diagnosis, in-situ and laboratory analyses in cultural heritage (including artistic, built and archaeological).

The researchers of HERCULES Lab have always been deeply engaged in strengthening its scientific expertise and analytical capabilities promoting groundbreaking cultural heritage research and achieving considerable funds through different financial mechanisms. In order to ensure that the human and financial resources of HERCULES Lab

are deployed in full accordance with its aims and objectives, a dedicated Management Structure was created, comprising the Governing Board (composed by the Director and the 2 Deputy Directors) and the Scientific Committee.

The Governing Board sets out strategies, priorities and plans. HERCULES Lab coordinates the National Roadmap Strategic Research Infrastructure ERIHS.pt, the Portuguese hub of the European Research Infrastructure in Heritage Science. HERCULES Lab is the most important service provider to national heritage stakeholders and with its mobile unit develops collaborative research worldwide including Italy, Vatican, Spain, France, Morocco, India, Oman, Brazil, Angola being a reference in cultural heritage science.

## Institute of Astrophysics and Space Sciences

IA



| WEBSITE                | DATE OF FOUNDATION |
|------------------------|--------------------|
| http://www.iaastro.pt/ | 2014               |
| RESEARCHERS            | FUNDING FCT        |
| 61                     | 1,98 M Euros       |

### KEYWORDS

- Astronomy and Astrophysics
- Stars and Planets
- Galaxies and Cosmology
- Astronomical Instrumentation and Space Systems
- Science Communication

### STRATEGIC AIMS

The vision of the Instituto de Astrofísica e Ciências do Espaço (IA) is to achieve international leadership in key areas of astrophysics and space sciences, taking full advantage and realising the potential created by the national membership of the European Space Agency (ESA) and the European Southern Observatory (ESO). This is done through state-of-the-art research, enabled by our leading participation in strategic international ground and space-based projects and missions.

### RESEARCH UNIT DESCRIPTION

The Instituto de Astrofísica e Ciências do Espaço (IA) is a research infrastructure with a national dimension, embodying a bold vision for the development of Astronomy, Astrophysics and Space Sciences in Portugal. It results from the merging, in 2015, of the two most prominent research units in the field in Portugal: the Centro de Astrofísica da Universidade do Porto (CAUP) and the Centro de Astrofísica e Astronomia da Universidade de Lisboa (CAAUL).

Currently the institute is the largest research unit of this area in Portugal, being responsible for the majority of the national productivity in international ISI journals in the area of Space Sciences. This is one of the scientific areas with the highest relative impact factor and highest average number of citations per article for Portugal.

The mission of the IA is to foster research with the highest impact in the field of astrophysics and space sciences and to support teaching and training of young researchers and students in close collaboration with the Universities of Lisbon, Porto and Coimbra. It also aims to promote wide-ranging science communication activities that enhance public understanding of the Universe and our place in it, as well as awareness of the importance of research in this field.

IA has a demonstrated ability to drive major astronomical projects, at all development levels: scientific and technical definition, instrument concept and design, construction and commissioning, and scientific exploitation.

IA main achievements include: in planets, the first results from ESPRESSO finding WASP-76b, a planet where it rains iron; in stars, leadership in key work packages for the PLATO space mission; in galaxies, strong involvement in the MOONS and future BlueMUSE0 instruments for ESO's VLT; and in cosmology, the development of core software for the survey to be carried out with ESA's Euclid satellite.

# Institute of Biophysics and Biomedical Engineering

IBEB



|                                     |                                    |
|-------------------------------------|------------------------------------|
| <b>WEBSITE</b><br>www.ibeb.fc.ul.pt | <b>DATE OF FOUNDATION</b><br>1992  |
| <b>RESEARCHERS</b><br>15            | <b>FUNDING FCT</b><br>0,43 M Euros |

#### KEYWORDS

- Medical Imaging
- Biophysics
- Neurosciences
- Digital Health
- Personalised Diagnostics
- Biomedical Data Analysis and Processing

#### STRATEGIC AIMS

IBEB strategic aims include: Understanding the brain using non-invasive approaches (Improving understanding of brain connectivity, and Optimising the efficiency of brain stimulation); Improving the efficiency of cancer treatment and monitoring (New strategies to improve therapy, and Mapping the link between behaviour and cancer); Embrace multidisciplinary approaches and clinical and translational opportunities; Reinforce the research infrastructure; Support training; and Facilitate knowledge dissemination.

#### RESEARCH UNIT DESCRIPTION

The Institute of Biophysics and Biomedical Engineering (IBEB) is a research unit of the Faculty of Sciences of the University of Lisbon. IBEB was founded in 1992, and its activities are focused on research and postgraduate teaching. Research carried out at IBEB covers Biophysics and Biomedical Engineering approaches to understand some human health disorders. IBEB's scientific activity is organized into 4 transversal research lines, distributed by its Ph.D. members. IBEB contributes for the MSc and PhD programs in Biomedical Engineering and Biophysics of the Faculty of Ciências of Universidade de Lisboa and participates on other post-graduate courses within Ciências or in collaboration with other schools of ULisboa.

IBEB main achievements include: Use of MRI-derived met-

rics to differentiate benign from malignant breast lesions; Participation in guidelines for the safe application of transcranial direct current stimulation; Use of nanoparticles to induce tumor shrinking in animal models of melanoma; Exploration of the potential of Rotating Gamma Systems for tumor treatment; A platform for MRI-based preoperative mapping of epilepsy and brain tumor patients.

# Institute of Earth Sciences

ICT



|  |                                    |
|--|------------------------------------|
| <b>WEBSITE</b><br>http://www.ict.org.pt/ | <b>DATE OF FOUNDATION</b><br>2014  |
| <b>RESEARCHERS</b><br>76                 | <b>FUNDING FCT</b><br>1,81 M Euros |

#### KEYWORDS

- Atmosphere and Climate
- Environment
- Energy
- Geological resources and geomaterials
- Lithosphere Dynamics
- Geoheritage and Geosciences Education

#### STRATEGIC AIMS

ICT strategic aims are: To contribute for the development of scientific research in the earth sciences domain; To develop projects of scientific research and technological progress; To cooperate with other institutions through scientific exchanges; To publicise the results obtained by the research and by the technological development; To develop training of young researchers at the post-graduation level; To promote scientific and technological literacy to students and general public.

#### RESEARCH UNIT DESCRIPTION

ICT is a multidisciplinary institution organized into six research groups covering major areas of Earth Sciences, comprising a wide range of scientific expertise and a high laboratory intensity level justified by the facilities allocated to their activities. ICT mission is to develop exceptional-quality research, promote technological development and support public policies in Earth Sciences. ICT is fully committed to the 17 UN SDG (Agenda 2030) and the Portuguese RIS3 as well as in promoting gender inclusion and diversity.

The ICT Research Groups are: G1-Atmospheric Sciences Water and Climate; G2-Energy; G3-GeoResources and Geomaterials; G4-Geoconservation and Geoscience Education; G5-Environmental Monitoring and Remediation for

Sustainability; G6-Lithosphere Dynamics.

The results of the developed research are published in international peer-reviewed journals describing original theoretical and applied relevant research, distributed in Earth, Atmospheric, Energy and Environmental Sciences areas, contributing for the understanding of the atmosphere, ocean and solid Earth processes that control the dynamics of the Planet. ICT research is strongly connected to a network of international partners, many of them long-standing partners, and mobilizes many young researchers enrolled in ICT postgraduation programs. The Centro Ciência Viva de Estremoz is the main ICT partnership for the outreach initiatives bringing to all community the research done on the basis 'Science For All'.

ICT main achievements include: Developing and testing new technologies to capture and convert solar radiation into heat and electricity by photovoltaic or thermal means; Improvement of raw material prospecting, processing technologies and promotion of critical metals recovery; Geodiversity assessment and conservation of geological heritage as a background for protected areas and geoparks management; Multidisciplinary geological and geophysical research on lithosphere dynamics at different temporal and spatial scales; Monitoring environmental changes and the relation between Earth's atmosphere, inland waters and climate fostering a sustainable society.



## Institute Dom Luiz

IDL



| WEBSITE                            | DATE OF FOUNDATION |
|------------------------------------|--------------------|
| www.idl.campus.ciencias.ulisboa.pt | 2004               |
| RESEARCHERS                        | FUNDING FCT        |
| 112                                | 2,95 M Euros       |

### KEYWORDS

- Climate changes
- Natural Hazards & Resources
- Ocean

### STRATEGIC AIMS

IDL's core mission focuses on the use of quantitative science to unravel our Planet's Dynamics and to respond to major societal challenges posed by Climate Change, to promote a sustainable use of Earth and Energy Resources, and exposure to Natural Hazards.

### RESEARCH UNIT DESCRIPTION

Instituto Dom Luiz is an Associated Laboratory based at Faculty of Sciences, University of Lisbon, with a wide research agenda in Earth and Environmental Sciences. Established in 1853 as the first Portuguese Meteorological and Geophysical Observatory, IDL is an integrated Earth System Institute, with research in Solid Earth, Ocean and Atmospheric processes, their interactions, and their relevance for a sustainable society. IDL's research includes and combines analytical studies, big data analysis, observational activities, and modelling, spanning from geological to human timescales. As an integrated Earth System Science institute,

IDL actively promotes cross-discipline interactions from fields as diverse as Geology, Geodesy, Solid Earth Geophysics, Physical Oceanography, Hydrology, Meteorology and Climate, Environmental Science and Engineering. This makes IDL singularly suited to diagnose and model natural processes driven by the interaction of Earth's different

sub-domains. Given its uniquely broad scope and integrative position, between the academy and strategic state laboratories, IDL is a main cross-disciplinary platform in Portugal fostering frontier research on natural hazards and risk, on climate change and adaptability, on mineral resources onshore and offshore, and on renewable energy applications. IDL is internationally recognized for research in fields such as tsunami and seismic hazard, weather hazards and climate variability, mineral resources, renewable energy, and remote sensing applications.

IDL's structure keeps its core mission at heart: excellent science providing a know-how base to address grand societal challenges. Accordingly, IDL is structured in five, strongly interconnected research groups that share a high degree of complementarity: RG1 Climate change: atmosphere-land-ocean processes and extremes; RG2 Earth surface processes; RG3 Solid Earth dynamics, hazards and resources; RG4 Continental margins and the deep ocean frontier; RG5 Energy transition.

## Institute of Physics for Advanced Materials, Nanotechnology and Photonics

IFIMUP



| WEBSITE          | DATE OF FOUNDATION |
|------------------|--------------------|
| www.ifimup.up.pt | 2008               |
| RESEARCHERS      | FUNDING FCT        |
| 26               | 0,87 M Euros       |

### KEYWORDS

- Quantum Materials
- Advanced Energy Materials
- Materials and Photonics for Biomedicine
- Multifunctional Nanostructures
- Ultrafast Photonics and Spectroscopy
- Extreme Condition@NECL-Nuclear Methods@ISOLDE-CERN

### STRATEGIC AIMS

IFIMUP MISSION is, using physics insight, to enhance scientific knowledge in the fields of functional materials, photonics, nanoscience and nanotechnology, performing research, advanced training and services to the scientific community and industry. IFIMUP VISION states as an interdisciplinary and multidisciplinary institute of Excellence with high international impact on research and innovation, maintaining active exchange programs with research centres, universities, industry and other worldwide facilities.

### RESEARCH UNIT DESCRIPTION

IFIMUP is strategically a transversal Institute of Physics in the R&D Portuguese ecosystem with unique opportunities nationwide for cutting-edge advanced research and training in fundamental and applied Physics. IFIMUP R&D is structured in three working groups, all giving support to the three strategic science-drivers namely 1)Quantum Materials; 2)Energy Advanced Materials and 3)Vibrational and Ultrafast laser spectroscopy for Biomedicine. These transverse research vectors support a very strong collaborative environment, challenging an increasing number of Post-docs, PhD and MSc students. IFIMUP research strategy relies on the study of quantum, nanostructures and advanced materials behavior under broad ranges of temperature, intense electric/magnetic fields, high pres-

sure, aiming their usage in energy related applications, electronics and magneto-electronics, computing and photonics.

The institute has also extended experience and experimental facilities to study dynamic properties of matter namely at RF/microwave (sub-ns) and ultrafast dynamics (fs) timescales, having excellent facilities for ultrafast laser pulse generation and applications. IFIMUP hosts unique systems capable of generating phase-stabilized pulses in the single-cycle regime, unique diagnostics for their measurement and control, and uses currently these sources to the study and control of carrier and spin dynamics in many promising materials and at unprecedented temporal resolutions. The institute profits from being deeply integrated into the Physics and Astronomy Department (DFA) of FCUP having access to a constant flux of well trained motivated students in the areas of Physics, Physics Engineering and Medical Physics in graduation, master and PhD. IFIMUP provides excellent training in its core areas: materials and nanostructures characterization, cryogenics, high field technologies and ultrafast spectroscopies, attaining full employability in Academia and Industry.



## Research Network in Biodiversity and Evolutionary Biology

INBIO



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://inbio-la.pt">http://inbio-la.pt</a> | 2011               |
| RESEARCHERS   | FUNDING FCT        |
| 180   | 4,98 M Euros       |

### KEYWORDS

- Biodiversity
- Evolutionary Biology
- Conservation Biology
- Landscape Ecology and Planning
- Genomics
- Global change

### STRATEGIC AIMS

The vision of InBIO is to firmly establish itself as a strong, competitive, and internationally recognized network of excellence in the fields of evolutionary biology, biodiversity and conservation, integrating all levels of biological organization from genes to ecosystems.

### RESEARCH UNIT DESCRIPTION

InBIO is an Associated Laboratory established in 2011, upon formal recognition of its key position to advise the Portuguese State in public policies related to the conservation and management of biodiversity and the environment.

Research at InBIO aims to advance knowledge on the origins and maintenance of biodiversity, and to apply this knowledge to address societal challenges related to climate and land use changes, environmental degradation, the loss and sustainable use of biodiversity and agrobiodiversity, and the management, restoration and sustainable use of ecosystems and ecosystem services. InBIO research is strongly aligned with national and international goals, including Europe's 2020 Agenda and Horizon 2020 Strategy, the Millennium Development Goals, and the 2030 Agenda for Sustainable Development.

Research at InBIO has a high level of internationalization, with the institution and its researchers being tightly con-

nected in networks of collaborations with tens of top universities and research centres worldwide. Furthermore, research at InBIO has a global scope, involving projects in all continents but Antarctica, though with a strong focus in the Mediterranean Basin, Africa and Portuguese-speaking countries. This has led to the development of a network of TwinLabs, mainly in Africa, which promotes scientific research and capacity building.

InBIO is strongly committed to promote advanced training and to communicate and disseminate science and improve public awareness, appreciation and understanding of biodiversity, through audio-visual materials; regular organization of conferences, seminars, and public events; featuring in the media; collaborations with museums and schools; and engagement of stakeholders in scientific projects.

Researchers have access to complete lab facilities and field equipment, including modern genetic and genomic labs. Researchers are organised in 34 Research Groups, which are organised in 3 Thematic Lines.

## Institute for Plasmas and Nuclear Fusion

IPFN



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.ipfn.tecnico.ulisboa.pt">www.ipfn.tecnico.ulisboa.pt</a> | 2008               |
| RESEARCHERS  | FUNDING FCT        |
| 93   | 3,14 M Euros       |

### KEYWORDS

- Plasma Science and Engineering
- Nuclear Fusion
- Intense Lasers
- Photonics
- High performance computing

### STRATEGIC AIMS

An ambitious research program balancing contemporary scientific problems and a portfolio of technological applications, supported by 4 strategic vectors: i) internationalization through peer recognition of competencies in several fields and participation in high-profile projects; ii) national reach with integration of researchers from several Portuguese universities; iii) strong commitment to high-level education and advanced training; and iv) creation of reference research infrastructures.

### RESEARCH UNIT DESCRIPTION

Plasma science is a multidisciplinary research area with an extraordinarily broad impact either on science, technology or industry and is often a key component of many other disciplines, including nanoscience, atomic and molecular physics, surface physics, biophysics, astrophysics and space science.

IPFN is a Research Unit of Instituto Superior Técnico with expertise in Plasma Physics, Engineering and Technologies, Controlled Nuclear Fusion and ion beams, Lasers and Photonics and Advanced Computing. This wide and recognized expertise grants IPFN an important participation in landmark large-scale EU research projects and programs (e.g. JET, ITER, ELI, ESA and FET Open). IPFN is the Portuguese representative in the Euratom co-fund action for

fusion, awarded to the consortium EUROfusion of EU Fusion Laboratories.

IPFN is the sole Portuguese R&D institution in the field of Plasma Science and Engineering, one of the top Physics laboratories in the country (hosting researchers based at different Portuguese universities), and accumulates experience of 25 years in R&D. IPFN has critical mass to foster scientific and technological excellence in an international context, providing a unique setting for world-class research, technological transfer and advanced training, with the required multidisciplinary to be competitive in the participation to ambitious large-scale physics projects.

Since its foundation, IPFN is an Associate Laboratory of FCT, fully embracing the public policy of scientific employment. IPFN is part of 2 research infrastructures in the National Roadmap of research infrastructures – ESTHER and L2I.

## Research Institute for Volcanology and Risks Assessment

IVAR



|   |                                    |
|---|------------------------------------|
| <b>WEBSITE</b><br>http://www.ivar.azores.gov.pt | <b>DATE OF FOUNDATION</b><br>2016  |
| <b>RESEARCHERS</b><br>20                        | <b>FUNDING FCT</b><br>0,91 M Euros |

### KEYWORDS

- Volcanology
- Natural hazards
- Risk assessment
- Civil protection
- Seismovolcanic monitoring
- Environmental Geology

### STRATEGIC AIMS

IVAR's mission is to promote and improve Science and Technology in the area of Volcanology and related domains, in order to understand the volcanological phenomena and to assess the risk directly or indirectly associated with them, including volcanic eruptions, earthquakes, hydrothermal explosions, toxic gases release, landslides, floods and tsunamis, events that frequently occur coupled in space and in time, at different scales, as result of complex geological mechanisms.

### RESEARCH UNIT DESCRIPTION

The Azores archipelago is exposed to important seismic and volcanic activity, as well as to the high recurrence of extreme meteorological phenomena, that are associated with some of the major landslide and flood events, responsible for some of the major catastrophes on the region. These factors make the Azores a natural laboratory of excellence for the development of studies in the field of Earth and Space Sciences. IVAR is a multidisciplinary research unit of the Azores University, located at S. Miguel island, Azores archipelago.

IVAR research activities are developed within the Earth Sciences domain involving a multidisciplinary approach for the prevention and forecast of natural hazards. The IVAR general goals are to: (1) promote basic and applied

research in the domains of volcanology and risks assessment (2) perform experimental development, (3) run a multi-parametric monitoring system in the Azores focused to support the civil protection actions, (4) encourage scientific cooperation with national and international institutions, public or private; (5) teach graduate and postgraduate students, and (6) promote the diffusion of scientific research results at national and international levels.

The scientific structure of IVAR is organized in a single research group, composed of seven Scientific Units (UC's) that are complementary within the multidisciplinary extents of Volcanology and Hazards assessment. Presently are constituted the following UC's: Physical Volcanology and Magmatism; Neotectonics and Crustal Deformation; Gas Geochemistry; Hydrogeology and Environmental Geology; Landslides and Floods; Risk and Emergency Planning; and Environmental Health.

## Laboratory for Instrumentation, Biomedical Engineering and Radiation Physics

LIBPHYS



|  |                                    |
|--|------------------------------------|
| <b>WEBSITE</b><br>http://libphys.uc.pt | <b>DATE OF FOUNDATION</b><br>2013  |
| <b>RESEARCHERS</b><br>46               | <b>FUNDING FCT</b><br>0,94 M Euros |

### KEYWORDS

- Radiation Physics
- Biomedical Engineering
- Fundamental Parameters
- Analytical Methods
- Instrumentation

### STRATEGIC AIMS

LIBPhys strategic aims include: Produce high quality research on atomic physics, nuclear physics, and biomedical engineering; Increase funding and internationalization; Strengthen advance scientific and technical training; Fortify the scientific communication to the public; and Enhance the societal impact in the community towards a sustainable development and improvement in quality of life.

### RESEARCH UNIT DESCRIPTION

The Laboratory for Instrumentation, Biomedical Engineering and Radiation Physics (LIBPhys) is formed by researchers from the Universities of NOVA of Lisbon, Coimbra, and Lisbon. LIBPhys's research activities occur mainly at the campus of NOVA School of Sciences and Technology of the NOVA University of Lisbon (FCT-NOVA), Faculty of Sciences and Technology of the University of Coimbra (FCT-UC), and School of Dental Medicine of the University of Lisbon (FMD-UL).

The LIBPhys is devoted to research in atomic, molecular, nuclear physics and electronic and industrial automation instrumentation with applications to analytical methods, radiation detection, and biomedical engineering.

To efficiently coordinate the scientific research interests of this unit, four thematic strands (TS) of research have been identified, comprising researchers from the three

research institutions: Fundamental Parameters and Metrology; Cryogenic, Electronics and Radiation Detection Instrumentation; Analytical Techniques Development and Application; Biomedical Engineering.

LIBPhys main achievements include: Measurement of the size of the helium nucleus with an unprecedented level of precision; Study of the hybrid layer and its relevance in the adhesion of adhesives to the tooth structure; Development of a 40-80 K vibration-free cooler for the ATHENA satellite; Relativistic ab initio calculations of fundamental atomic parameters; and New diagnostic and monitoring methodologies in the health area, based on electrophysiological signals and artificial intelligence.

# Laboratory of Instrumentation and Experimental Particle Physics

LIP



|                                     |                                    |
|-------------------------------------|------------------------------------|
| <b>WEBSITE</b><br>http://www.lip.pt | <b>DATE OF FOUNDATION</b><br>1986  |
| <b>RESEARCHERS</b><br>85            | <b>FUNDING FCT</b><br>3,09 M Euros |

#### KEYWORDS

- Experimental Particle Physics
- Astroparticle Physics
- Scientific Computing
- Particle and radiation detector systems
- Development of new instruments and methods
- Applications to Health and Space Exploration

#### STRATEGIC AIMS

Under the supervision of FCT, LIP defines the national policy for the participation at CERN, leading particle-physics related science and innovation, ensuring the involvement of the National academic and business communities, and sharing knowledge with society. LIP is committed to support public policies in areas of particular importance for sustainable development, including fundamental and applied research, digital infrastructures and competences, health, education and scientific literacy.

#### RESEARCH UNIT DESCRIPTION

LIP is the reference laboratory for research in particle physics and related technologies in Portugal, and the Portuguese reference partner of CERN. The laboratory has nodes in Lisboa, Coimbra and Braga, closely collaborating with local universities. LIP has about 200 members and is an Associate Laboratory rated as “Excellent” in the latest independent evaluation promoted by FCT.

Growing increasingly multidisciplinary, LIP’s research includes a world-class fundamental research programme in particle and astroparticle physics, technology applications to healthcare, space exploration, information technologies and big data analytics. At the centre of LIP’s mission are also advanced scientific and technical training and a strong commitment with engaging society with science

and community development.

LIP collaborates at CERN, ESA, GSI, SNOLAB, SURF, Fermilab, and the Pierre Auger and SWGO observatories; represents Portugal in European digital infrastructures and in science and society international forums; and is part of several infrastructures in the FCT roadmap: National Distributed Computing Infrastructure (INCD), ProtoTera, Brain Imaging Network (BIN), Portuguese Space Agency. The laboratory has infrastructures providing support to the research groups and offering high quality services to the community, namely: mechanical workshop, laboratories and competence centers; outstanding computational facilities; administrative support, project management and communication offices.

LIP main achievements include: Contribution to CERN’s LHC, from detectors to Higgs discovery and new physics searches; Involvement in some of the main astroparticle projects & results, from neutrinos to dark matter; Technology transfer to proton therapy, dosimetry, medical imaging, space radiation studies.

# Information Management Research Center

MAGIC



|   |                                    |
|---|------------------------------------|
| <b>WEBSITE</b><br>http://www.novaims.unl.pt/doces-investiga | <b>DATE OF FOUNDATION</b><br>2013  |
| <b>RESEARCHERS</b><br>28                                    | <b>FUNDING FCT</b><br>0,38 M Euros |

#### KEYWORDS

- Decision Support Systems
- Information Systems
- Information Management
- Data Science
- Smart Cities
- Machine Learning

#### STRATEGIC AIMS

MagIC’s research strategy as outlined in the NOVA IMS Strategic Plan for 2019/2022, assumes itself as a core axis of activity, wanting to “continue the pace of progress already achieved, with the consolidation of the Excellence of the Research Center through the dynamization of its four priority areas of intervention (Geoinformatics; Data Science; Information Systems; Data-Driven Marketing) and the corresponding interconnections.

#### RESEARCH UNIT DESCRIPTION

The Information Management Research Center (MagIC) is the research center of Nova Information Management School (NOVA IMS), the School of Information Management and Data Science at the NOVA University of Lisbon. The MagIC team is structured around four research streams that support the alignment and collaboration between researchers: Geoinformatics we are interested in contributing to the development of smart and open cities. Our work is centered on creating the tools and methods that allow for a more data-driven approach to city management, to promote a sustainable, safe, and livable environment for their ever-increasing populations; Data Science, where we look to continue to work on supervised learning algorithms both through the application of evolutionary strategies and data generation algorithms for imbalanced learning.

We also emphasize geospatial applications, mainly in the context of smart cities; Information Systems, where the emphasis is on understanding, at the individual and organizational level, what are the key drivers for diffusion, adoption and success of information technology artifacts; Data-Driven Marketing, where we have a twofold interest: a) applying theories and tools (e.g., SEM) to have a better understanding of human judgment and decision-making; b) understanding consumer processes in digital environments and underlying neural mechanisms for information processing and decision-making.

# Marine and Environmental Sciences Centre

MARE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.mare-centre.pt/en">http://www.mare-centre.pt/en</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 198   | 4,59 M Euros       |

#### KEYWORDS

- Ocean and Coastal Areas
- River Basins
- Environment
- Biodiversity
- Anthropogenic Impacts
- Marine Resources and Biotechnology

#### STRATEGIC AIMS

The creation of MARE in 2015 materialised a vision on understanding and managing aquatic ecosystems based on a multipolar centre formed by several distinct R&D groups from Universities that, in the previous decades, made significant scientific contributions to the understanding and awareness of the Ocean and Environment.

#### RESEARCH UNIT DESCRIPTION

MARE is a multipolar RD&I Centre that combines expertise allowing approaching scientifically and technologically all types of aquatic systems, from river basins and associated landscapes, to estuaries, coastal, and large marine ecosystems. Conceptually, MARE integrates four domains of action: 1. LIFE, understanding the patterns and processes influencing the distribution, functioning and evolution of biological diversity on the planet; 2. ENVIRONMENT AND RESOURCES, centred on understanding environmental processes influencing the way anthropogenic pressures and impacts and natural cycles interact and the consequences for the way we explore, manage and model natural resources, ecosystems and the environment; 3. TECHNOLOGY AND INNOVATION, addressing interdisciplinary research applied to find technological and innovative angles to understand Earth and its processes, ecosystem services, and link technology transfer to industry and so-

ciety; 4. INFORMATION AND SOCIETY, linking science to policy and outreach initiatives, promoting scientific and Ocean literacy and raising awareness on the most pressing issues impacting sustainable development of societies. Structurally, MARE integrates two ecosystem-oriented Research Groups (1. River Basins; 2. Coastal Systems and Ocean), and seven research Thematic Lines. The main goals of MARE Strategic Program are: 1. Advance the knowledge on the functioning of marine ecosystems, and interrelated estuarine and freshwater systems; 2. Develop scientific and technological tools towards the sustainable use of freshwater, estuaries and marine ecosystems under the framework of regional, national and international priorities; 3. Develop scientific knowledge and sound technology to help providing food and other biotic and non-biotic resources to society; 4. Promoting good ecological and healthy status of oceans and seas, estuaries and river basins; 5. Drive international cooperation to advanced education and training resulting in a new generation of scientists and professionals prepared for the Blue Economy; and, 6 - Promote Ocean literacy and contribute to a participative Blue Society.

# Molecular, Structural and Cellular Microbiology - ITQB

MOSTMICRO-ITQB



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.itqb.unl.pt/mostmicro">http://www.itqb.unl.pt/mostmicro</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 107   | 3,51 M Euros       |

#### KEYWORDS

- Molecular Microbiology
- Infection Biology and Pathogenesis
- Molecular and Cell Biology
- Structural Biology
- Microbial Biotechnology
- Metabolism and Bioenergetics

#### STRATEGIC AIMS

The vision of MOSTMICRO-ITQB is to unveil biological processes at the Molecular, Cellular and Population levels, with a focus on microbes that are important for human health, biotechnology and the environment. The specific objectives are to study the molecular bases of microbial processes, the mechanisms of pathogenesis, the organization of microbial cells and the dynamics of populations, the basis for novel therapies and new processes for clean biotechnology.

#### RESEARCH UNIT DESCRIPTION

MOSTMICRO-ITQB is a Research Unit at ITQB NOVA, Universidade NOVA de Lisboa, Oeiras. The objectives for 2018-2022 are: To excel in molecular microbiology research and to seed innovation: Scientific Development (Axis 1); To incubate and nurture talent: Researcher Training and Career Development (Axis 2); To widen the impact of research: Wider Impact (Axis 3). To achieve this, MOSTMICRO-ITQB gathers a unique multidisciplinary set of researchers, an ideal setting to carry out studies at the interface of several disciplines, for a deeper understanding of microbial life and its impact on Health and the Sustainability. Research is organized in 3 Thematic Lines, addressing key scientific problems and societal challenges in Health and Sustainability: TL1) Molecular Mechanisms of Biological

Processes: to understand the fundamental processes of microorganisms, from a molecular perspective; TL2) Anti-Infective Strategies against Microbial Pathogens: to study important microbial pathogens and model organisms, ranging from single molecule to population-level studies, with the ultimate goal of fighting infectious diseases; TL3) Microbial Factories for Health and Sustainability; to explore the genetic and metabolic potential of microbes, and their enzymatic machinery, for the production of added-value molecules and processes.

MOSTMICRO-ITQB main achievements include: 1) Structural Biology impacting Health/Biotechnology – unveiled key protein structures and peptide behavior in membranes; 2) Developing as a key player in Microbial Cell Biology – major findings in bacterial cell division; 3) Microbial Biochemistry – unveiled new targets for drug discovery and biotechnology development; 4) Translating research into public health – advising on prevalence, contamination risk, disease evolution; and 5) Creating knowledge on SARS-CoV-2 – virus biology, development and commercialization of diagnosis test.



## NOVA Laboratory for Computer Science and Informatics

NOVA LINC'S



### WEBSITE

<http://nova-lincs.di.fct.unl.pt/>

### RESEARCHERS

57

### FUNDING FCT

1,69 M Euros

### KEYWORDS

- Computer Systems
- Knowledge Based Systems
- Multimodal Systems
- Software Systems

### STRATEGIC AIMS

NOVA LINC'S mission is to develop cutting-edge research in key areas of Computer Science and Informatics, contribute to advanced education in the field, and share the produced knowledge, results, and innovation with users and communities within society.

### RESEARCH UNIT DESCRIPTION

NOVA LINC'S is a leading research unit in the area of Computer Science and Informatics. NOVA LINC'S research roadmap targets the theme "Science and Engineering for the Global Software Ecosystem". It unfolds in two lab-wide interacting streams: one on creating new principles and engineering for emergent computing and software ecosystems, another on developing innovative IT powered solutions for technical, societal, and interdisciplinary fields. We build on our portfolio of research achievements, on our ability to balance fundamental, applied research and problem driven innovation, and on thriving interactions with diverse external technology and knowledge users. NOVA LINC'S integrates four research groups, providing a broad coverage of Computer Science and Informatics research: Computer Systems; Knowledge-Based Systems; Multimodal Systems; and Software Systems.

Each group is led by a Principal Investigator (PI), responsible for steering and promoting the activities of the group

in articulation with the lab program. Within this framework all researchers may dynamically team in a project-oriented way. We are internationally known for high impact contributions and technological solutions in topics such as distributed data management, software modelling and requirements engineering, programming and verification languages, tools, and systems, knowledge representation and automated reasoning, multimedia information processing and interaction.

NOVA LINC'S research successfully integrates development of foundations and resulting engineering oriented towards challenges of practical relevance, and building on effective bidirectional exchanges with partner knowledge and technology users and communities. Our results are continuously leveraged within many collaborative partnerships in many societal areas, important for providing test-beds, to raise new innovation-driven challenges and, ultimately, to generate value.

## UAc - Okeanos R&D Centre - University of the Azores

OKEANOS - UAC



### WEBSITE

[www.okeanos.uac.pt](http://www.okeanos.uac.pt)

### DATE OF FOUNDATION

2015

### RESEARCHERS

31

### FUNDING FCT

1,61 M Euros

### KEYWORDS

- Ocean Sciences
- Open Ocean
- Deep Sea
- Marine Aquaculture
- Marine Biodiversity
- Marine Conservation and Management

### STRATEGIC AIMS

Okeanos mission is to conduct leading deep-sea and open ocean research and education to advance the understanding of marine systems in a changing planet, and promote the sustainable blue economy and management of marine ecosystems for the benefit of the society and the environment.

### RESEARCH UNIT DESCRIPTION

Lorem ipsum dolor sit amet, consectetur adipiscing elit, Okeanos was founded in 2015 as a research centre of the University of the Azores (UAZ) and develops both fundamental and applied research with many international partners from around the world, and promotes strong links with governmental and private organizations, and with the society as a whole.

Okeanos benefits from existing UAZ and IMAR facilities and resources such as offices, laboratories (biology, genetics, chemistry, oceanography, deep-sea, aquaculture, and diving), scientific equipment (including an ROV) and research vessels. Okeanos activities are directed to scientific research and education on the ecology, ecosystem functioning, and ecosystem based management of open ocean and deep-water marine ecosystems, including seamounts, hydrothermal vents, mid-ocean ridges, abyssal plains, and the pelagic and mesopelagic realms, with a

special focus on the Atlantic Ocean but with extensions to other ocean basins. Most biology and ecology research have targeted key deep-sea and pelagic taxa, including benthic invertebrates, soft-bodied animals, fishes and vulnerable megafauna (e.g. cetaceans, seabirds, sea-turtles and sharks). Ecosystem functioning studies have focused in understanding the transfer of energy from chemosynthetic communities to background ecosystems, the main drivers of seamount productivity, and aspects related to the benthopelagic coupling or the two-ways energy transfer between the deepsea and the open ocean.

Okeanos has contributed profoundly, and will keep contributing, to the sustainable management of the oceans at the local, national, european, and international levels through a dedicated agenda which promotes the transfer of scientific knowledge to governmental and private organizations, and to the society. Okeanos has also paid special attention to improving ocean literacy and environmental awareness. This long-term goal of has been achieved by establishing links with local schools, organizing public seminars, and partnering with national and international media to produce documentaries, TV and radio shows.

## Molecular Physical-Chemistry R&D Unit

QFM-UC



| WEBSITE           | DATE OF FOUNDATION |
|-------------------|--------------------|
| www.ci.uc.pt/qfm/ | 1994               |
| RESEARCHERS       | FUNDING FCT        |
| 14                | 0,27 M Euros       |

### KEYWORDS

- Vibrational Spectroscopy
- Biospectroscopy
- Medical Diagnostics
- Vibrational Osteometry
- Metal-based Anticancer Agents
- New Food Products

### STRATEGIC AIMS

QFM-UC main strategic aims: Development of new chemotherapeutic agents – search for new targets/controlled delivery; Optimisation of vibrational spectroscopy methods for medical diagnosis/surgical margins assessment – in cooperation with health institutions; Novel methodologies for forensic/archaeometric analysis – FTIR, Raman and neutron spectroscopy studies of bones and archaeological artefacts; Research on new food products – antioxidant/anti-inflammatory nutraceuticals – in collaboration with the food industry.

### RESEARCH UNIT DESCRIPTION

The “Molecular Physical-Chemistry” R&D Unit – University of Coimbra (QFM-UC) is an inter-institutional/multidisciplinary Unit founded in 1994, hosted in the Department of Chemistry of the University of Coimbra. It comprises members from two Institutions: University of Coimbra and Polytechnic of Coimbra (Agricultural (ESAC) and Health (ESTeSC) Schools).

It encompasses the VIBIMA laboratory (Vibrational Spectroscopy Laboratory for Bioprobing), a facility of excellence in the field of optical vibrational spectroscopy comprising state-of-the-art versatile equipment. QFM-UC also includes labs for chemical preparation and characterisation and a fully equipped cell culture facility. This ensures

an excellent interplay between physical-chemical methods and biological approaches, allowing to reliably link structure to biological activity.

The Unit’s members are experienced researchers with a recognised proficiency in the application of vibrational spectroscopy to the study of biologically relevant systems, aiming at: (i) development of new anticancer agents; (ii) early diagnosis of disease and identification of surgical margins, and translation into the clinics; (iii) forensic and archaeological characterisation of human bones; (iv) development of chemopreventive food products (nutraceuticals).

QFM-UC main achievements include: Design of Pt/Pd anticancer drugs and identification of intracellular water as a novel target; Characterisation of water dynamics in human cancer and normal cells/tissues by neutron scattering; Optimisation of early cancer diagnosis by vibrational spectroscopy, in human resected tissues; Characterisation of heat-induced changes in human bone by FTIR, Raman and neutron spectroscopies; Development of new food products – chemopreventive nutraceuticals from halophyte plants.

## Associated Laboratory for Green Chemistry - Clean Technologies and Processes

REQUIMTE



| WEBSITE               | DATE OF FOUNDATION |
|-----------------------|--------------------|
| www.requimte.pt/laqv/ | 2001               |
| RESEARCHERS           | FUNDING FCT        |
| 317                   | 8,51 M Euros       |

### KEYWORDS

- Environmentally Sustainable Chemistry
- Clean Chemical Processes
- Food Science and Technology
- Materials Science
- Water, Food and Energy nexus
- Analytical Chemistry

### STRATEGIC AIMS

LAQV aims at keeping a pivotal role in the Portuguese and International scientific systems in all areas related to Sustainable Chemistry by fulfilling specific strategic objectives: increase the research impact in the Sustainable Chemistry field; ensure economic and social outcomes from the research outputs; attract the best young researchers; share the principles of Sustainable Chemistry, reinforce the network of academic, industrial, and regulatory stakeholders.

### RESEARCH UNIT DESCRIPTION

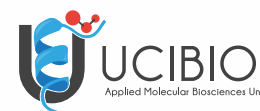
The Laboratório Associado para a Química Verde | Associated Laboratory for Green Chemistry (LAQV@REQUIMTE) is the Portuguese Research Centre for Sustainable Chemistry, a key component of an imperative World Sustainable Development. Following a vision of a world in which Sustainable Chemistry is used as a powerful and dynamic tool to tackle the challenges of modern life, the mission of LAQV is to initiate, advance, and promote its principles through research, networking, training, and outreach activities.

LAQV actively supports their members to undertake from blue-sky to applied research, with strong collaboration ties with academia, industry, and regulatory authorities. At present, more than 1000 researchers, including 501 PhD

holders and 334 PhD students, work at LAQV, and focus their interests in 6 thematic lines that are aligned with the Research Agenda of the European Technology Platform for Sustainable Chemistry (SUSCHEM), the United Nations (UN) Sustainable Development Agenda, and the priorities of Horizon Europe. LAQV hosts researchers from Universities of Porto, Aveiro, Coimbra, Évora, Trás-os-Montes e Alto Douro and New University of Lisbon, and also from Polytechnic Institute of Porto. LAQV is a primordial partner in several training programmes, being the Doctoral Programme in Sustainable Chemistry its flagship. LAQV was recently recognized by the Portuguese Foundation for Science and Technology (FCT), as an Excellent Research & Development Institution.

# Applied Molecular Biosciences Unit

UCIBIO




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**WEBSITE**

www.ucibio.pt

**DATE OF FOUNDATION**

2015

**RESEARCHERS**

127

**FUNDING FCT**

3,44 M Euros

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**KEYWORDS**

- Biomolecular Interactions
- Drug Discovery and Development
- Health and Environmental Safety
- Environmental Bioengineering
- Nanobiotechnology
- Diagnostics and Therapeutics

**STRATEGIC AIMS**

The strategic plan of UCIBIO is outlined around 6 main goals: to produce and disseminate high quality research; increase the societal impact of the basic and applied research developed; strengthen existing training programs and activities and offer new ones; secure increased funding and internationalization; fortify the translation of Biomolecular research from academia to industry and society; and expand communication to the general public.

**RESEARCH UNIT DESCRIPTION**

UCIBIO (Applied Molecular Biosciences Unit) results from the synergy between FCT NOVA and University of Porto, and holds the highest classification of Excellent. To fulfil its goals, research is centered around four Thematic Lines: TL1 - Biological & Biomolecular Interactions; TL2 - Diagnostics, Drug Discovery & Development; TL3 - Safety In Human & Environmental Health; TL4 - (Nano)Bioengineering.

Eight Research Groups contribute to these TLs with complementary expertise and highly interdisciplinary and integrative research: Structural Molecular Biology (SMB), Molecular Microbiology & Genomics (MMG), Theoretical & Computational Biosciences (TCB), Toxicology (TOXI), Disease Pathways & Biomarkers (DTB), NanoImmunoTech (NIT), Bioengineering (BENG) and Medicinal Technology

(MEDTECH).

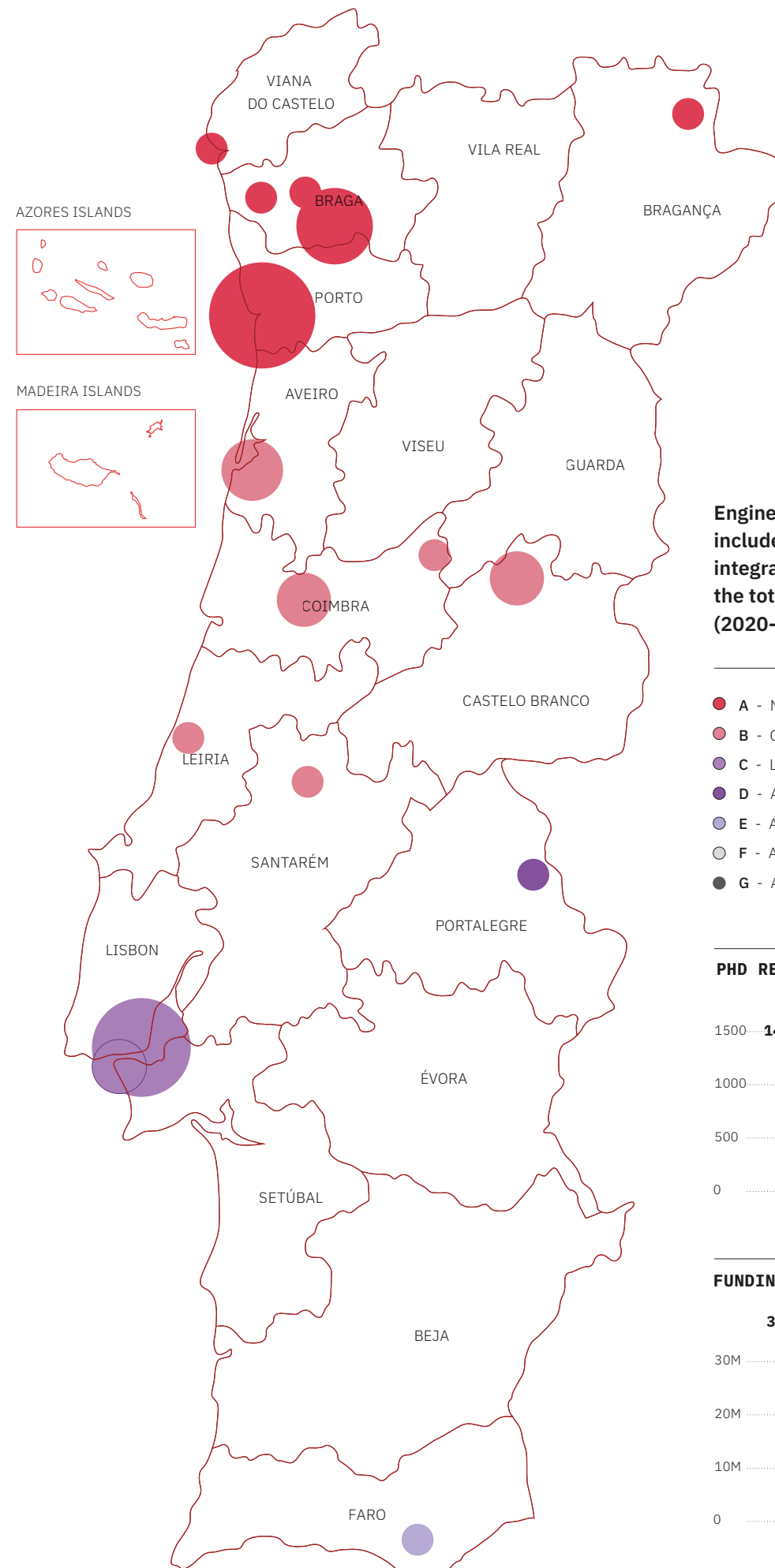
UCIBIO succeeded in founding 4 spinoffs, a diagnosis test recommended by WHO, as well as patents and agreements with Industry and private institutions. Internationalization of our research has reinforced our status, particularly in Europe, by participating on a large number of initiatives (e.g. Coordination and participation in EU projects; participation in Regulatory and Evaluation Boards).

UCIBIO main achievements include: Translation of Research activities to SMEs (Aqua in Silico, Nano4Global, CellmAbs and 73100), scientific community and society (Portuguese Yeast Collection); Impact on law enforcement and legislative initiatives in the area of substance abuse; Production of biodegradable bioplastics from the transformation of industrial byproducts or waste; Antimicrobial resistance (AMR): development of diagnostic methods and contributions to AMR policymaking; Rational design of glycan-based anticancer vaccines for therapeutics in a large set of tumor

# Engineering and Technology Sciences

## S.2.2

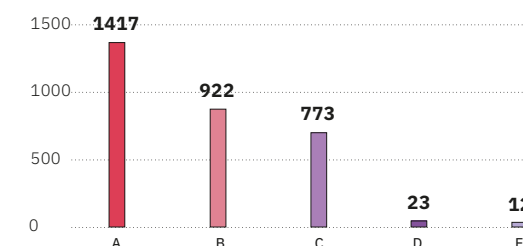
- |            |                            |            |          |
|------------|----------------------------|------------|----------|
| 2AI        | CISE                       | INESC TEC  | TEMA     |
| 2C2T       | CISTER                     | INESC-ID   | UNIDEMI  |
| C2I2       | C-MADE                     | IPC        | VALORIZA |
| CDRSP      | C-MAST                     | ISISE      |          |
| CEB-UM     | CMEMS                      | ISR-UC     |          |
| CEDRI      | CONSTRUCT                  | ISTAR-IUL  |          |
| CEFT       | COPELABS - COPELABS        | IT         |          |
| CEMMPRE    | CTAC                       | LAETA      |          |
| CENSE      | CTS                        | LARSYS     |          |
| CENTEC     | FIBENTECH                  | LASIGE     |          |
| CENTRE BIO | GECAD                      | LEPABE     |          |
| CEOT       | I3N                        | LIACC      |          |
| CERENA     | IBB                        | LSRE-LCM   |          |
| CERIS      | ICVS/3B'S - LA - ICVS/3B'S | METRICS    |          |
| CICECO     | IEETA                      | PROMETHEUS |          |
| CIEPQPF    | INESC COIMBRA              | RISCO      |          |
| CIETI      | INESC MN                   | SYSTEC     |          |



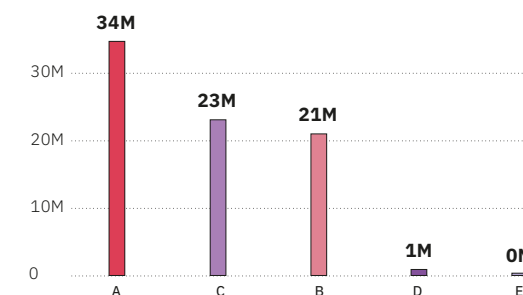
Engineering and Technology Sciences include 54 R&D Units (17.3% of the total) integrating 3147 researchers (17.0% of the total) and with a funding of 79 M€ (2020-2023).

- A - NORTHERN
- B - CENTRAL
- C - LISBON METROPOLITAN AREA
- D - ALENTEJO
- E - ALGARVE
- F - AUTONOMOUS REGION OF AZORES
- G - AUTONOMOUS REGION OF MADEIRA

### PHD RESEARCHERS



### FUNDING (M€)





## Applied Artificial Intelligence Laboratory

2AI



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| www.2ai.ipca.pt    | 2018                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 14                 | 0,45M Euros               |

### KEYWORDS

- Artificial Intelligence
- Computer vision
- Machine learning
- Robotics
- Human-AI collaboration

### STRATEGIC AIMS

2Ai defined the following main strategies: to research on novel methods applied to the 2Ai impact areas; the development of public databases and prototyping tools for AI; to study the regional and national landscape to foster a sustainable AI R&D ecosystem and also promote innovation through the creation and nurturing of new SMEs and spin-offs, contributing to the creation of a critical mass of highly skilled human resources in AI and the attracting international funds and investors for research.

### RESEARCH UNIT DESCRIPTION

The Applied Artificial Intelligence Laboratory (2Ai) from the School of Technology of the Polytechnic Institute of Cávado and Ave (IPCA) pursues research on fundamental advances in AI, mainly focusing on applying its cross-cutting themes in the development of technically innovative solutions and services for health, industry, environment and security. Since its creation, in 2018, 2Ai has been accredited as an R&D unit by FCT and is a member of the first portuguese associated laboratory for AI, has transferred one patented technology to an international health company for the value of 1 ME.

The scientific vision for this research work focuses on augmenting the knowledge, information and interaction at the disposal of agents, robots and humans to improve

their performance at the 2Ai areas. To this end, 2Ai aims to apply machine learning techniques, spanning natural language processing, deep learning and computer vision, to extract information and provide knowledge to potentiate intelligent decision automation systems and human-AI collaboration. 2Ai also focuses on the application of gamification concepts as an engine for the development of new smart and personalized training approaches. Furthermore, the search for more natural interfaces to improve the overall control of the context environment will complete an integrated suite of research efforts, on the path towards innovative technologies and smarter services. The creation of these types of solutions can generate new markets, and improve the efficiency of existing goods and services across the 2Ai impact areas.

## Centre for Textile Science and Technology

2C2T



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| www.2c2t.uminho.pt | 1978                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 26                 | 0,62 M Euros              |

### KEYWORDS

- Smart Textiles
- Functional Materials

### STRATEGIC AIMS

2C2T is focused in the research themes Nano and Multifunctional Materials, sustainable and Advanced Processes and Technologies and Design and Product Engineering; Further integration of design research methodologies with materials engineering research; Enlarge research partnerships with industry; Reinforce the involvement of industrial and regional partners exploring new opportunities addressed in the National and European RDI priorities to promote the development of the economy.

### RESEARCH UNIT DESCRIPTION

2C2T started its activity in 1978, being the first Unit of R&D in Portugal specialized in the area of Fibrous Materials Engineering and Design. The vision and mission of 2C2T is to be recognized for excellent research in the field of fibre based materials, helping society to tackle the biggest and most pressing problems and providing the knowledge base for the continuing viability of the textile value chain for global competition. To accomplish this, the Unit adopts a multidisciplinary approach, carrying out research work with other research institutions and companies, covering the complete supply chain. Nowadays, the Unit involves 27 Integrated Researchers organized in two research groups, namely the Fibrous Materials Engineering group and the Fibre-based Product Design group.

The major science and technology achievements that contributed to advance the state-of-the-art in the field and to the development of innovative industrial solutions were considered in the following areas: Fiber-based sensors and energy storage systems; Micro and nano materials; Nanofibrous structures Textile wastewaters and Nanofibrous structures Textile wastewaters.

The advancements in the smart textiles arena culminated in the emergence of a new generation of sensors that impart a 'wear-and-forget' functionality. 2C2T developed a strong know-how and publication record in the development of fibre-based sensors embedded in the textile structure and contributed to the realization of pre-commercial wearable systems with industrial and economic feasibility. The most relevant contributions micro and nano functionalization applied to textiles obtained were accomplished on Coloured Nano materials after the success achieved by the spin-off Micropolis that patented a technology for fixing microcapsules of hydrogels onto textiles using functional reactive groups and that was acquired by a Belgian firm.

## Smart Cities Research Center

C2I2



| WEBSITE     | DATE OF FOUNDATION |
|-------------|--------------------|
| www.ipt.pt  | 2018               |
| RESEARCHERS | FUNDING FCT        |
| 13          | 0,40 M Euros       |

### KEYWORDS

- Smart Cities
- Data Analytics
- Energy and Transportation
- Environmental and Urban Planning
- Information Systems
- Ambient Assisted Living

### STRATEGIC AIMS

Ci2 mission is to create and disseminate new knowledge in two main interrelated areas: Smart and Pervasive Environments and Sustainable Use of Resources. Ci2 is also committed to involving students in their projects to promote advanced education.

### RESEARCH UNIT DESCRIPTION

Ci2 brings together national and international researchers, who carry out fundamental and applied research in areas, such as, Big Data and Decision Support Systems, Monitoring and Control, E-health and Assisted Living Environments, Energy, Mobility, Environmental Sustainability circular economy and resource valorisation.

In addition to interacting with the private companies and public entities to promote the practices necessary for the sustainable development of cities and regions, Ci2 also develops research activities in partnership with other national and international research units and companies within the scope of its strategic objectives. The integration of students in research activities represents a pillar of Ci2's contribution to disseminating knowledge and the creation of skills, highlighting the participation in actions such as the organization of summer schools and the dissemination of research and science practices in the student community. The highlights of achievements are: Low-power and low

rate based monitoring systems; Ambient Assisted living; Microgrid and net-zero energy buildings systems; Autonomous robotic systems to remotely detect pollution sources; and Integrated and sustainable solid waste and wastewater recovery technologies.

## Centre for Rapid and Sustainable Product Development

CDRSP



| WEBSITE               | DATE OF FOUNDATION |
|-----------------------|--------------------|
| www.cdrsp.ipleiria.pt | 2007               |
| RESEARCHERS           | FUNDING FCT        |
| 17                    | 0,56 M Euros       |

### KEYWORDS

- Additive Manufacturing
- Biofabrication
- Sustainable Manufacturing
- Composite and Stimuli-Responsive Materials (4D)
- Computational Methods (3D/4D)

### STRATEGIC AIMS

CDRSP has a strategic aim advance of knowledge on 4D-DDM. Inspired by the Turing Machine we will extend the mathematical CDRSP concept of a Universal Printer. This unifies materials, methods and processes introducing a comprehensive design, optimization and manufacturing workflow for polymers, ceramics and metals which enables new design concepts, functional gradients, and multiple materials to be transformed into functional products with the minimum delay.

### RESEARCH UNIT DESCRIPTION

CDRSP is a multidisciplinary research centre aiming at contributing to the advancement of science and technology, leading to more suitable, effective and added-value products, materials and processes, moving from bench side to the society, believing that we are in the cusp of the Fourth Industrial Revolution, which is likely to fundamentally alter the way we work, live and relate to one another. The convergence of physical, digital, and biological sciences will bring about profound changes in the way we design products and produce them, be they may be from metal, ceramics, polymers, biological materials or composites. The strategic focus of CDRSP is to emerge as a Centre with worldwide impact in the field of Direct Digital Manufacturing based on AM/3D printing. This goal is well aligned to

the needs of the Fourth Industrial Revolution, in terms of preparing and skilling a new generation of work force who can take up the emerging challenges in this area, both in academia and industry. To fulfil its objectives, CDRSP has and will continue balancing strengths in the Computational and Mathematical Methods, Advanced Materials and study of Novel Manufacturing Processes, in a basis of both applied and basic research.

CDRSP has state-of-the-art research facilities, comprising 11 Laboratories mainly dedicated to DDM domains and managed by PhD researchers. The Centre has earned wide global visibility through its contribution to the Scientific and Technological System based on 18 Integrated Researchers.

CDRSP has been dynamic in several RDI projects and activities, mostly with industry, where the most significant 5 main achievements are: Novel computational and mathematical methods for AM/3DP Mathematical structures; Novel manufacturing processes; Controlling and characterization of multi-scale materials; Novel bio-constructs for bone, cartilage and skin regeneration; and Industrial innovation and transformation of the manufacturing industry and society.

## Centre of Biological Engineering of the University of Minho

CEB-UM



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www.ceb.uminho.pt/">https://www.ceb.uminho.pt/</a> | 1994               |
| RESEARCHERS   | FUNDING FCT        |
| 126   | 3,03 M Euros       |

### KEYWORDS

- Biotechnology
- Bioengineering
- Industrial Biotechnology
- Environmental Biotechnology
- Health Biotechnology
- Food Biotechnology

### STRATEGIC AIMS

The Centre of Biological Engineering (CEB) is a reference research unit in Biotechnology & Bioengineering and wants to contribute decisively for development and translation of knowledge into the business sector, contributing for advances in Biotechnology Industry, including Food, Energy, Environment and Health sectors, and to the social and economic development of the North of Portugal.

### RESEARCH UNIT DESCRIPTION

CEB is a research unit of the University of Minho. It is associated with the Department of Biological Engineering, with whom it shares resources and namely human resources. In addition to faculty belonging to the Department, CEB also integrates faculty from other Departments, researchers without a permanent employment contract with the UMinho as well as researchers connected to other National or International Institutions.

CEB is a research unit formed by 126 integrated researchers holding a PhD, 94 are PhD students, and 38 collaborator researchers. CEB develops its research activities on 2 organizational levels: The Research Thematic Lines - 1st level of organization where conducts research into 4 research lines: Industrial B&B; Food B&B; Environmental B&B; and Health B&B. The Research Groups - 2nd level of organization implemented through 8 groups: Applied

Mycology; Molecular Biotechnology, Bioreactors, Biofuels and Food; BIOFILM Science & Technology; Bioprocess Engineering & Computational BIOSYSTEMS; Bioresources, Bioremediation & Biorefinery; Bioprocess & Bionanotechnology; FUNctional CARBohydrates, and the new group BioMark- Biosensors Research.

Having reached remarkable international standards of scientific productivity, by generating and disseminating high quality research and contributing to the creation of technology and of highly educated human resources, CEB aspires at increasing the global impact of its research, assuming the leadership in some niche topics, while reinforcing the interaction with economic players. In addition, CEB intends to continue translating B&B research from the labs to industry and promoting outreach activities that engage the public and the society in CEB's research and mission. Finally, the international recognition of CEB's research is showcased by the funding captured from the European, including two highly prestigious ERC grants. CEB reached a consolidated maturity, critical mass, and expertise.

## Research Centre in Digitalization and Intelligent Robotics

CEDRI



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cedri.ipb.pt/">http://cedri.ipb.pt/</a> | 2018               |
| RESEARCHERS   | FUNDING FCT        |
| 18  | 0,56 M Euros       |

### KEYWORDS

- Digitalization
- Cyber-physical systems
- Robotic systems
- Artificial intelligence
- Optimization

### STRATEGIC AIMS

CeDRI strategic aims are to contribute to develop science and technology in industrial embedded and cyber-physical systems, intelligent systems and data analytics, intelligent and collaborative robotic systems, and modelling, simulation and optimization for decision support; to transfer and disseminate scientific and technological knowledge; and to supervise research work leading to PhD and MSc, contributing to the training of human resources with scientific and technical quality.

### RESEARCH UNIT DESCRIPTION

CeDRI (Research Centre in Digitalization and Intelligent Robotics) is an inter-disciplinary research unit that clusters together researchers from Electronics, Computer Science and Mathematics to develop and apply scientific knowledge related to robotics, intelligent systems, and information and communication technologies in the scope of the digitalization and automation of industrial systems, contributing to the development of the scientific and technological system and promoting the competitiveness of the socioeconomic system. A special emphasis is devoted to regions of low population and economy density, characterized by small scale SMEs and a rarefied local industrial system, whose competitiveness is strongly affected by the difficulties to access industrial innovation.

In the era of the 4th industrial revolution, CeDRI aims for applied research on developing innovative approaches to industrial cyber-physical systems, combining scalable data connectivity and computing power (e.g., Internet of Things, Machine-to-Machine, Big data and Cloud computing), intelligent systems and data analytics (e.g., Multi-agent systems, machine learning and data analysis techniques), and digital-physical conversion (e.g., artificial vision and intelligent robotics).

CeDRI most significant 5 main achievements are: the research and deployment of innovative industrial solutions based on digital technologies; cooperation with regional and cross-board companies aiming the transfer of technology and knowledge; significant contribution in training of human resources with scientific and technical quality; International recognition, e.g., organizing international events and driving technical committees; and development of innovative training programs, especially addressing requalification and upskilling.

## Transport Phenomena Research Center

CEFT



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://paginas.fe.up.pt/ceft/Welcome.html">https://paginas.fe.up.pt/ceft/Welcome.html</a> | 1996               |
| RESEARCHERS   | FUNDING FCT        |
| 24  | 0,77 M Euros       |

### KEYWORDS

- Mechanical Engineering
- Chemical Engineering
- Energy
- Fluids
- Microfluidics

### STRATEGIC AIMS

Transport Phenomena Research Center (CEFT) vocation lies on research two major topics: Energy with particular emphasis on cleaner fuels, such as natural gas and biomass, as well as to issues pertaining to the carbon problem, and the hydrogen economy, such as the optimization and development of fuel cell technology and systems for hydrogen production and storage; and Fluids with several sub-topics, all of them interrelated: complex fluids, smart fluids, multiphase flows and biofluids.

### RESEARCH UNIT DESCRIPTION

CEFT began its activity in the 1996 and is today a medium-sized research group in the areas of transport phenomena and energy. The host institution is Faculty of Engineering of University of Porto. CEFT is a horizontal research unit with members from the Departments of Chemical and Mechanical Engineering. It has also researchers from the Polytechnic Institutes of Viseu and Coimbra.

The research of CEFT on transport phenomena spans from the macro to the micro scales and integrates successfully an experimental approach with numerical methods and theoretical formulations. The activity is organized in two main groups, Energy and Fluids. The activities developed by the energy group are mainly focused on the optimization and development of fuel cell technology and

systems for hydrogen production and storage. Studies on heat and mass transfer in textiles and on the conditions of thermal stress in certain professional activities are of great importance. The Fluids group has 4 main sub-areas: Complex fluids, include flows of non-Newtonian fluids, computational rheology, and the investigation of elastic instabilities, inertial and elastic turbulence; Smart fluids have viscosities that can be tuned by the appropriate use of magnetic fields; Multiphase flows, computational fluid dynamics investigations are carried out for diverse applications as the combination with 3D printing for process intensification; Biofluid flows encompasses flows quite diverse, development of biochips for trapping and fast detection of pathogenies, studies on cell adhesion and biofilms to biofouling and infection risk prevention.

The dissemination of knowledge, an imperative social activity, and the training of highly skilled young researchers in Transport Phenomena are also important achievements of the group. For this purpose, CEFT supports some groups of young researchers who are working in Polytechnic Institutes.

## Centre for Mechanical Engineering, Materials and Processes

CEMMPRE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.uc.pt/en/iii/research_centers/CEMMPRE">http://www.uc.pt/en/iii/research_centers/CEMMPRE</a> | 1995               |
| RESEARCHERS   | FUNDING FCT        |
| 74  | 1,58 M Euros       |

### KEYWORDS

- Intelligent manufacturing
- Desenvolvimento & Teste
- Surface and Interface Engineering
- Nanomaterials and Nanotechnology
- Bioengineering
- Senso

### STRATEGIC AIMS

The main focus of CEMMPRE is to promote interdisciplinary research and innovation to create high value for the academic, non-academic sectors and society; intensify the visibility and increase relationships with Regional, National, and International stakeholders; contribute to the scientific employment and to create undergraduate and graduate research opportunities; and increase the impact of scientific indicators, through open innovation, open science and open to the world.

### RESEARCH UNIT DESCRIPTION

CEMMPRE is an interdisciplinary R&D Unit working on fundamental and applied research in Mechanical and Materials Engineering, and other related areas. CEMMPRE team has about 200 Researchers, organized in two research groups: Mechanical and Intelligent Manufacturing, and Materials and Processes. The majority of the Researchers belongs to the University of Coimbra but there are also members from others institutions, such as Polytechnics of Coimbra, Leiria, Lisboa and Castelo Branco and Instituto Pedro Nunes (IPN).

The mission of CEMMPRE is to advance scientific and technical knowledge and capabilities, through an interdisciplinary collaboration across different scientific areas, leading to breakthroughs and innovations, contributing to

a more sustainable world. CEMMPRE is committed to find solutions to some of the biggest issues of our days, such as the Green Deal and the Digital Transition, having a direct relationship with the Sustainable Development Goals, namely, Good health and well-being; Industry, innovation and infrastructure, and Responsible consumption and production.

The relationships between CEMMPRE and other institutions, such as IPN, have led to stimulating new ideas for new mechanical processes, materials, technologies, prototypes, and products to be directly transferred to enterprises, mainly through its laboratories LED&Mat (Laboratory for Wear, Testing & Materials) and LEC (Laboratory for Electroanalysis and Corrosion).

CEMMPRE achievements are: Industrial production systems (management and robotics, including decision-making methodologies); Sustainable manufacturing processes (modelling and optimization of additive, forming, and joining); Mechanical behaviour and design methodologies (mechanical and biomechanical applications); Surface & interface engineering (tribological, protection, sensors, and bio-active applications); and Industrial and environmental technologies (bacteria-metal interactions, biological and synthetic polymers).



## Center for Environmental and Sustainability Research

CENSE



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="https://www.cense.fct.unl.pt">https://www.cense.fct.unl.pt</a> | 2007                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 27                 | 0,74 M Euros       |

### KEYWORDS

- Sustainability
- Assessment and monitoring
- Integrated modelling
- Policy and management
- Stakeholders engagement
- Technological and social innovation

### STRATEGIC AIMS

CENSE aims at promoting excellent interdisciplinary research and advanced training in sustainability and environmental sciences and engineering, focusing on the interactions between human and ecological systems. The Center fosters the exploration and co-creation of new sustainable development pathways, contributing to the production and transfer of relevant knowledge for society, across its emerging topics and research lines.

### RESEARCH UNIT DESCRIPTION

CENSE is a research unit of NOVA School of Science and Technology of NOVA University Lisbon, dedicated to the production and transfer of knowledge on the interactions between human and ecological systems. The Center explores the functioning of these systems to support technological and social innovations for sustainability. CENSE's research unfolds along five thematic areas: Ecological Economics and Environmental Management, Energy and Climate, Computation for Sustainability, Bioresources and Green Technologies, and Sustainable Water Sanitation, Wastes and Resources Recovery.

CENSE develops its activities through research projects, advanced training programs, knowledge transfer, as well as networking and collaboration with other national and international research organisations. In an atmosphere of

collaboration and freedom to innovate, CENSE researchers explore new pathways for building a sustainable society. CENSE's intervention in society is promoted through technical and applied studies in collaboration with private and public organizations, outreach initiatives and promotion of scientific culture, and the support to formulation and evaluation of public policies.

## Centre for Marine Technology and Ocean Engineering

CENTEC



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.centec.tecnico.ulisboa.pt/en/">http://www.centec.tecnico.ulisboa.pt/en/</a> | 1994                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 43                 | 1,10 M Euros       |

### KEYWORDS

- Marine environment
- Dynamics and Hydrodynamics
- Marine structures
- Safety and logistics of maritime transportation

### STRATEGIC AIMS

CENTEC's main objective is to maintain its world-leading position in research in naval architecture and Ocean engineering, contributing to the areas of uncertainty modelling and risk analysis. CENTEC seeks to consolidate its core research activities in Marine Environment, Ship Dynamics and Hydrodynamics, Marine Structures, and Safety and Logistics of Maritime Transportation and explore new research areas.

### RESEARCH UNIT DESCRIPTION

CENTEC is a research centre of IST, classified as Excellent and funded by FCT. CENTEC concentrates on developing scientific research, development and demonstration activities, and their application to sustainable exploration and exploitation of marine resources, through the various fields of interest such as maritime transport and ports, ocean space utilization, including coastal areas, exploration and exploitation of marine resources, and nautical activities, as well as the protection of the marine environment and its resources. These activities are made possible by the design, construction, maintenance and planning of the operation of ships and other floating structures and submersibles that constitute the main objectives of CENTEC's activities.

CENTEC places significant emphasis on research activity

in risk analysis, safety and reliability, including occupational safety, and promotes their application to the industrial and tertiary sectors. One of the important objectives of CENTEC is to promote and encourage advanced education on naval architecture and ocean engineering through teaching and research activities and to promote the dissemination of scientific results through the participation and organization of technical and scientific meetings.

## Centre Bio: Biorefineries, Bioindustries and Bioproducts

CENTRE BIO



| WEBSITE                                       | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://blc3.pt/">http://blc3.pt/</a> | 2016               |
| RESEARCHERS                                   | FUNDING FCT        |
| 12  | 0,32 M Euros       |

### KEYWORDS

- Biomaterials, Bioplastics, Biofuels
- Circular economy, Biorefinery, Biotreatment
- Biomass production technologies
- Food biotechnology
- Educational programs

### STRATEGIC AIMS

The Centro BIO main strategic goals are: to accelerate the development and implementation of an Integrated Biorefinery System, in the context of a Bioeconomy Circular, to promote local and regional industrial development; to create, coordinate and promote a European Southern Research Alliance in Bioeconomy and Circular Economy; stimulate the growth of a thriving bio & circular based society to improve the efficient use of biological resources using technology and innovation.

### RESEARCH UNIT DESCRIPTION

The Centre BIO R&D Unit is coordinated by the BLC3 Association- Technology and Innovation Campus located at the inner side of Portugal at Oliveira do Hospital. BLC3 is a private non-profit association that develops excellent research and technological intensification activities, incubation of ideas and enterprises and support to the economic fabric. The Centro BIO team includes 36 members, of those 17 PhD holders and 6 PhD students, as well 3 collaborators from other 2 Research Units and 1 collaborator from 1 private enterprise. The Centre BIO R&D Unit is pursuing the R&I activities in field of Bioeconomy and Circular Economy areas along its 4 vertical subareas, namely Citizenship, Territory and Nature Based Solutions, Energy and Environment and AgriFood and Forest. Within these

strategic areas, the Centre BIO R&D Unit activities support the transfer of knowledge and technology to market and scale up technologies, a targeted and result-oriented approach while valuing the rural territory by attracting young and critical masses to the interior; to promote advanced human resources training, while building a critical mass network of individuals and entities from the national and international academia and industrial sector.

Some of Centre BIO main achievements since its creation include the development of a new system for agrifood wastewater valorization into new bio-ingredients for pharmacy and cosmetics industries, the production of bio-PLA, biomaterials and bioproducts from lignocellulosic biomass residues; the creation of a genetic resources bank devoted to the Portuguese variety Galega of *Olea europaea* and recently at MicroProtect (COVID19), new technology was developed to break the chain of infection of airborne pathogens.

## Center for Electronics, Optoelectronics and Telecommunications

CEOT



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.ceot.ualg.pt">www.ceot.ualg.pt</a> | 2007               |
| RESEARCHERS  | FUNDING FCT        |
| 12   | 0,38 M Euros       |

### KEYWORDS

- Sensor networks
- Wireless networks
- Internet of Things
- Sensing in Biology
- Non-destructive monitoring
- Optics and electrical signals in vegetable tissues

### STRATEGIC AIMS

CEOT strategic aims are to develop new systems, concepts, methods and techniques in telecommunications, sensing and data analysis, to adopt a multidisciplinary approach between engineering and the physical and biological sciences for the integrated development and emergent applications, to develop high-quality research and disseminate CEOT's outcomes and to establish effective partnerships with the industry, universities and other laboratories.

### RESEARCH UNIT DESCRIPTION

CEOT is a research center based in the University of Algarve (UALg), constituted by a multidisciplinary blend of researchers in the fields of informatics, computer science, electronics, physics and biology, that share a common research focus in sensing. The research activities are divided in two main branches: Networks and Sensing in Biology. In the former the research is centered in network communications, with a strong emphasis in the Internet of Things (IoT), while in the latter is focused in sensing for agronomic applications, based on optical and electrical measurements. These lines of research are merged in an interdisciplinary environment aimed in developing IoT applications for agriculture and biology, to monitor tree, crop and fruit health/quality.

## Center for Natural Resources and Environment

CERENA



**WEBSITE**

www.cerena.pt

**DATE OF FOUNDATION**

2006

**RESEARCHERS**

63

**FUNDING FCT**

1,78 M Euros

**KEYWORDS**

- Energy
- Environment
- Resources and raw materials
- Processes and systems modelling
- Circular Economy
- Engineering

**STRATEGIC AIMS**

CERENA's scientific challenges were envisioned to address current state-of-the-art technological and societal challenges, aligned with the United Nations Sustainable Development Goals, while promoting collaboration and cross pollination between researchers in the strategic research areas: a) machine learning and artificial intelligence; b) geomodeling, geophysics and geochemistry; c) physical and chemical processes.

**RESEARCH UNIT DESCRIPTION**

Center for Natural Resources and Environment is a R&D Unit accredited by FCT and rated with Excellent. CERENA's mission is to develop research at the highest level of excellence related to the sustainable use of natural resources, including energy, as well as their impact on the environment. CERENA uses an approach that is simultaneously integrative, multidisciplinary and multi-scale, from the molecular level to the planetary scale, where researchers from different scientific fields - earth, chemical and material engineering - converge towards the same objectives. We are committed to finding solutions to current societal challenges, including those related to climate action, environment, health, raw materials and natural resources efficiency and safe, clean and efficient energy, in order to contribute to achieving the goals of sustainable development.

CERENA is a medium size R&D Unit with 63 fully integrated PhD researchers from various scientific fields such as mining engineering, geosciences, chemical engineering, materials engineering and geophysics among others gathered either by a common field of application and/or by the methodological approaches. The team accounts with 50 PhD students and about 41 other researchers which are organized in three main groups: raw Materials, energy and environment. CERENA is hosted by two portuguese engineering schools: Instituto Superior Técnico from University of Lisbon and Faculdade de Engenharia da Universidade do Porto and it participates actively international research networks such as EIT Raw Materials, KIC-InnoEnergy, Eurlco, IETS, COST Actions.

## Civil Engineering Research and Innovation for Sustainability

CERIS



**WEBSITE**

http://ceris.pt

**DATE OF FOUNDATION**

2015

**RESEARCHERS**

83

**FUNDING FCT**

2,74 M Euros

**KEYWORDS**

- Hydraulics
- Environment and water resources
- Systems and management
- Transportation systems
- Structures and geotechnics
- Construction

**STRATEGIC AIMS**

CERIS objectives are: promote trend-setting and leading research based on PhD programs and research projects; transfer its expertise through specialized training, services and consulting; and to ensure a wide dissemination of its results. To attain its objectives, CERIS promotes fundamental and applied research, typically based on mathematical modelling, experimentation and fieldwork and aspires to remain in a leading position at international level in most of its research areas.

**RESEARCH UNIT DESCRIPTION**

CERIS - Civil Engineering Research and Innovation for Sustainability - is an FCT-registered research unit operating in the Civil Engineering area. It is hosted by the Department of Civil Engineering, Architecture and Georresources (DECivil) of Instituto Superior Técnico (IST), University of Lisbon (ULisboa). Supported by 8 laboratories, CERIS has more than 80 integrated researchers, 190 PhD researchers (members and collaborators) and 233 PhD students, organized in the following Research Groups: 1. Hydraulics; 2. Environment and Water Resources; 3. Systems and Management; 4. Transport Systems; 5. Construction; 6. Structures and Geotechnics. CERIS was created in 2015 through the merge of CEHIDRO (Centre of Hydraulics, Water Resources and Environment), CESUR

(Centre for Urban and Regional Systems) and ICIST (Institute of Structural Engineering, Territory and Construction), 3 units from the 1970s. This merge intended to enhance a comprehensive thematic coverage, in depth and scope, and to promote multidisciplinary synergies within the Built and Natural Environment sector. For this purpose, CERIS is organized in four Thematic Strands that cut across the six Research Groups. CERIS interdisciplinary knowledge addresses issues such as safety and security, heritage rehabilitation, eco-efficient materials, solutions and technologies, environment and pollution control, hydraulic infrastructures and water resources urban and regional systems.

## Aveiro Institute of Materials

**CICECO**



| WEBSITE          | DATE OF FOUNDATION |
|------------------|--------------------|
| www.ciceco.ua.pt | 2001               |
| RESEARCHERS      | FUNDING FCT        |
| 183              | 5,1 M Euros        |

#### KEYWORDS

- Materials
- Energy
- Sustainability
- Information and Communication Technology

#### STRATEGIC AIMS

To develop the scientific and technological knowledge necessary for the innovative production and transformation of materials for a sustainable development and the benefit of society (from ceramics to soft matter and hybrids). To strengthen our leading role as an inter-disciplinary European research laboratory in the field of materials; Contribute to the development of a scientific culture at the national level and educate students to high levels of scientific literacy; Stimulate innovation within the industrial sector.

#### RESEARCH UNIT DESCRIPTION

CICECO-Aveiro Institute of Materials received the status of Associated Laboratory of the University of Aveiro (UA) in 2002 and became the best rated (Excellent, 15 points) national Materials Science and Engineering Institute (MSE) in the 2017/18 FCT research assessment. It comprises ca. 500 chemists, physicists and materials engineers, including over 200 PhD scientists and 203 PhD students. Thematic Lines include 'Materials Science and Engineering, and Nanotechnology', 'Sustainability and Circular Economy', 'Biomedical Science and Engineering', and a transvers axis 'Industry and Manufacture' that intercepts all Lines, and scientific, social, environmental, economic, sanitary and wellbeing objectives.

CICECO has an international reputation in MSE and is very productive (ca. 10 patents, over 500 SCI papers/year), has a successful partnership with industry, and is engaged in many EU programs. CICECO achieved 8 ERC Grants (1 Starting, 2 Consolidator, 2 Advanced, 3 PoC) in the last 5 years

CICECO instrumental facilities are the best in the country for research in MSE, are fully available to all researchers, and comprise SEM, TEM, STEM, AFM, X-ray diffraction (single-crystal, powder, films), NMR (300, 500, 700 MHz, DNP, solids, liquids), vibrational spectroscopies, measurement of optical, magnetic (SQUID), electric, thermal, and mechanical properties, clean room, wet chemistry labs, furnaces, autoclaves, reactors, ALD, CVD, a computer cluster, etc. Researchers are also granted access to CDTM, an interface unit which also assist with pre- and post-award project management.

## Chemical Process Engineering and Forest Products Research Centre

**CIEPQPF**



| WEBSITE                             | DATE OF FOUNDATION |
|-------------------------------------|--------------------|
| http://www.uc.pt/fctuc/deq/cie-pqpf | 1994               |
| RESEARCHERS                         | FUNDING FCT        |
| 61                                  | 1,27 M Euros       |

#### KEYWORDS

- Materials
- Forest
- Environment
- Process
- Product

#### STRATEGIC AIMS

CIEPQPF favours multiscale unified avenues to Chemical Engineering problems, driven by the following goals: create knowledge and bind activities around common scientific objectives; foster the integration of interdisciplinary problem-solving approaches and apply integrated methodologies for the development of materials, products and processes; and reduce chemical processes environmental impacts and develop "greener" and more sustainable ways of production.

#### RESEARCH UNIT DESCRIPTION

Lorem ipsum dolor sit amet, consectetur adipiscing elit, The Chemical Processes and Forest Products Engineering Research Centre (CIEPQPF), established in 1994, is an internationally-recognized research centre that is mostly focused on the scientific areas related to Chemical Engineering, and to its associated domains and new paradigms. CIEPQPF favours multidisciplinary and multiscale unified approaches to Chemical Engineering problems in view of developing new products/processes. Tools like advanced computational methods, together with modern product engineering strategies that combine both experimental developments with structured (molecular) modelling, simulation and data-driven approaches, will provide a deeper understanding of phenomena of interest in the realm of

Chemical Engineering. In addition, current relevant research topics were definitively incorporated into current CIEPQPF research activities, such as: Nanotechnologies; Green Growth/Green Economy and Blue Growth/Blue Economy (both re-shaped in the light of Circular Economy concepts); Green & Environmental Technologies; Big Data & Process Systems Engineering for Industry 4.0; and Advanced Materials for a wide range of applications (pharmaceutical, biomedical, food, agriculture, environmental, space, and industrial).

These activities have allowed a continuous strengthening in the multilateral cooperation with other top national and international academic or industrial institutions.



## Center for Innovation in Industrial Engineering and Technology

CIETI



| WEBSITE               | DATE OF FOUNDATION |
|-----------------------|--------------------|
| www.cieti.isep.ipp.pt | 2007               |
| RESEARCHERS           | FUNDING FCT        |
| 35                    | 0,71 M Euros       |

### KEYWORDS

- Energy and biofuels
- Water and solid waste treatment and air quality
- Process optimization and control
- Remote laboratories
- Materials and biomaterials
- Thin films and nanotechnology

### STRATEGIC AIMS

The Center for Innovation in Engineering and Industrial Technology (CIETI) has as its main strategic objective to promote research for the creation and development of new products, processes and systems that contribute to innovation in the industry. It also supports education and scientific training at the Polytechnic of Porto – School of Engineering (ISEP), integrating undergraduate and master's students, and co-supervising doctoral theses.

### RESEARCH UNIT DESCRIPTION

CIETI is a multidisciplinary research and development unit of Instituto Superior de Engenharia do Porto - Polytechnic of Porto. The group's activities are divided into four lines of work: biomaterials and nanotechnologies; eco-sustainability and circular economy (environment, energy and waste recovery); optimization of chemical and industrial processes; remote laboratories and engineering education.

CIETI collaborates with several national companies and technology centers, especially in leather and footwear, and interacts with several foreign higher education institutions, in terms of project execution and joint supervision of master's and doctoral theses. CIETI's internationalization dimension has also involved the joint submission of patent applications, the organization of technical-scientific dis-

semination events, and the reception of visiting foreign researchers in its different areas of work. Most of CIETI's activities are focused on sustainability, not only with regard to basic research, but also applied research and support to industry. A significant part of CIETI's activity focuses on Sustainable Development Goals (SDG4, SDG7, SDG9, SDG11, SDG12, SDG14 and SDG15) in a multidisciplinary and multicultural perspective.

Some of CIETI main achievements since its creation include the patent PT 115371 A; Luís M. Oliveira et al.; for the method for creating optical diagnostic and treatment windows in biological materials in the ultraviolet zone; a pilot installation for the digestion of green chips and casings in the tanning industry in order to obtain fat (BIOFAT/ Luís Leal) and the coordination of the VISIR remote laboratory network, for experiments with electrical and electronic circuits.

## Electromechatronic Systems Research Centre

CISE



| WEBSITE                 | DATE OF FOUNDATION |
|-------------------------|--------------------|
| http://www.cise.ubi.pt/ | 2015               |
| RESEARCHERS             | FUNDING FCT        |
| 17                      | 0,43 M Euros       |

### KEYWORDS

- Electric Grids
- Energy Efficiency
- Reliability

### STRATEGIC AIMS

CISE is focused on the study of electromechatronic systems, integrating into a single domain the following three main engineering areas: electrical, mechanical and electronic engineering. The general objectives of its scientific plan are focused on the areas of: fault diagnosis; fault tolerance; reliability; energy efficiency; asset management; control, design and characterisation of electrical machines, power electronics, and electric grids.

### RESEARCH UNIT DESCRIPTION

CISE comprises four dedicated research facilities, the Electromechatronic Systems Laboratory (LSE) at the University of Beira Interior, the Laboratory of Electric Energy Systems (LSEE) at the University of Algarve, the Laboratory of Electromechatronic Systems Modelling (LESM) at the University Mohamed Khider in Biskra, Algeria, and the Guarda International Research Station on Renewable Energies (GIRS-RES) at the Polytechnic of Guarda. LSE is equipped for simulation studies and experimental tests in some of the research areas of the electromechatronic systems domain. At LSEE the research work is focused on fault detection and diagnostics of transmission and distribution network components and power systems protection devices. LESM facilities provide the tools required to the development of research activities aiming the theoret-

ical and computational modelling of electromechatronic systems. The research activities are complemented by GIRS-RES, which is especially dedicated to the renewable energies study. This facility provides, among others, the appropriate conditions for the installation of bulky equipment, both indoor and outdoor.

The general objectives are accomplished through the implementation of seven distinct work packages (WPs): WP1: Energy Sources; WP2: Power Systems; WP3: Power Electronics Components; WP4: Hybrid/Electric Transportation; WP5: Industry Applications; WP6: Trigeration Systems; WP7: Facilities.

CISE's highlight achievements are: Establishment of the first research facility abroad (Biskra, Algeria). Internationalisation of the research team (members spread over 13 countries). European public policy initiatives: elaboration of position statements.

## Research Centre in Real-Time and Embedded Computing Systems

CISTER



| WEBSITE                | DATE OF FOUNDATION |
|------------------------|--------------------|
| www.cister.isep.ipp.pt | 1997               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 16          | 0,57 M Euros |

### KEYWORDS

- Real-Time Computing Systems
- Cyber-Physical Systems
- Safety-Critical Systems
- Wireless Sensor Networks
- Embedded Systems

### STRATEGIC AIMS

The Research Centre in Real-Time and Embedded Computing Systems (CISTER) is focusing on research, development, and innovation of Real-Time Embedded Computing Systems (RTES).

### RESEARCH UNIT DESCRIPTION

The Research Centre in Real-Time and Embedded Computing Systems (CISTER) is focusing on research, development, and innovation of Real-Time Embedded Computing Systems (RTES) for 20 years. During these two decades, CISTER has provided seminal results and achieved a high level participation in many international R&D initiatives that drive the main developments of this class of systems. CISTER is based upon a research group created in 1997 at the School of Engineering (ISEP) of the Polytechnic Institute of Porto (IPP). Since then, it has grown to become a leading international research centre in RTES. CISTER includes researchers affiliated with ISEP (the majority) and FEUP.

Real-time computing systems are those in which correctness depends not only on the logical result but also on the time at which the result is produced. These systems are typically deployed on embedded processors that represent around 96% of all processors worldwide. Embedded processors are present in a wide variety of systems that op-

erate in a growing number of sectors of the society. RTES are presented as the key strategic research, development and innovation area, crucial for boosting the development of future generations of highly complex and automated computing systems, which will be pervasive in virtually all application domains. Notable examples are aeronautics, aerospace and defence systems, robotics, autonomous transportation systems, Internet of Things, energy-aware and green computing, smart factory automation, smart grids, advanced medical devices and applications.

CISTER's activity plan follows a research strategy that encompasses a first axis on performing high-quality research activities, as well as a set of orthogonal axes that link this research with a very rich ecosystem of national and international networks, industrial partners, research students and stakeholders.

## Centre of Materials and Building Technologies

C-MADE



| WEBSITE                        | DATE OF FOUNDATION |
|--------------------------------|--------------------|
| https://cmadeubi.wordpress.com | 2006               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 14          | 0,30 M Euros |

### KEYWORDS

- Sustainable materials and binders
- Mechanical behaviour and durability
- Energy efficiency and environment
- Resource efficiency and raw materials
- Territorial analysis and building design

### STRATEGIC AIMS

To develop a research and innovation agenda focused on sustainable construction, climate change mitigation and development of eco-materials; to attract young researchers, empowering the Portuguese Interior for its science-based development and contributing to creating highly qualified scientific jobs; and consolidate a cluster of knowledge of excellence of the research and innovation agenda developed at C-MADE.

### RESEARCH UNIT DESCRIPTION

The CMADE is a research unit formed by two Portuguese universities with a well-known reputation for its welcoming environment that promotes learning-research: the University of Beira Interior (UBI) and the University of Trás-os-Montes e Alto Douro (UTAD).

The research unit carries out scientific and technological activities and dissemination actions, with the involvement of national and foreign researchers, fostering collaborative innovation and knowledge transfer, particularly with industry.

C-MADE's mission is to promote excellence in science and contribute to new developments in civil engineering and related areas, including sustainable materials and binders, mechanical behaviour and durability, energy efficiency and environment, resource efficiency and raw materials.

C.MADE's achievements are: Environmentally sustainable technologies for mining and industrial waste up-cycling. Technologies for eco-materials production with co-utilisation of waste and carbon dioxide. Patents (e.g., ECO2BLOCKS/GEOGREEN) for sustainable and energy-efficient construction. Hydrodynamic models of transport processes in watercourses (e.g., ash from forest fires). and Numerical optimisation of models for the design of structural members and components.

# Centre for Mechanical and Aerospace Science and Technologies

C-MAST

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.aerospace.ubi.pt/new/index.html">http://www.aerospace.ubi.pt/new/index.html</a> | 1994               |
| RESEARCHERS   | FUNDING FCT        |
| 25  | 0,50 M Euros       |

#### KEYWORDS

- Materials and Aerospace structures
- Energy and Fluid mechanics
- Dynamics and control of space systems
- Optimization of production and T. innovation

#### STRATEGIC AIMS

C-MAST aims to create the melting pot that helps researchers feel a motivating research environment in which they can reach their full potential. Its specific objectives are to carry out high-level focused research on its strategic topics; promoting international research collaboration, specially through C-MAST focuses on highly qualified human resources, as well as the intensification of research, internationalisation, development of cooperation with industrial partners and dedication of additional effort to technology transfer and communication of science.

#### RESEARCH UNIT DESCRIPTION

The Center, that started as CMAT, develops studies in Mechanical and Aerospace Engineering within a wide spectrum of areas, from Astrodynamics to Energy and Structures. In 2013 it was renamed “Centre for Mechanical and Aerospace Science and Technologies” (C-MAST). The centre organises itself in 2 research groups: AeroMaS - Aerospace Materials and Structures; EnerMeF - Energy and mechanics of fluids, and 2 cross-cutting thematic lines that provide cross-fertilization between the 2 groups: space systems, and optimization of production and technological Innovation. AeroMaS performs research on: space structures and systems; -Composites, structures and nanotechnologies; -Multifunctional materials, and Sustainability and

innovation. EnerMeF working in the topics: Optimization of Energy Systems; Heat Transfer and Thermal Systems; Aerodynamics and Aerospace Propulsion Systems, and -Computational Models for Rheology and Magnetohydrodynamics/Electrohydrodynamics

Some of C-MAST main achievements include the identification of a novel fluid mechanical instability at low local Reynolds numbers which is manifested by the formation of a spiral vortex when two fluid streams collide with each other and then evolve along a line perpendicular to the original motion, thus creating an elongational flow, in altitude, orbital dynamics, and control of spacecraft and distributed systems research the most important and original new results have been obtained in research on tether systems and other example of novel findings: on Magnetohydrodynamics-Electrohydrodynamics (MHD-EHD) numerical models created by our team have been acknowledged internationally For ms DBD type a phenomenological model, free of empirical parameters and able to model high altitude flows, allowed to demonstrate the change in exit velocity angle of thrusters through boundary layer control. The plasma fluid model accuracy implied a super-time-stepping treatment, for improved.

# Microelectromechanical Systems Research Unit

CMEMS-UMINHO



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.mems.dei.uminho.pt">www.mems.dei.uminho.pt</a> | 2013               |
| RESEARCHERS  | FUNDING FCT        |
| 29   | 0,86 M Euros       |

#### KEYWORDS

- Electronic Microsystems
- Mechanical Microsystems
- Micro-Nano-Fabrication
- Biomedical Microsystems
- Neural Electrodes
- Smart Prosthesis

#### STRATEGIC AIMS

CMEMS aims at being an interdisciplinary and multidisciplinary center of excellence, pioneering high international impact research and innovation in the field of smart micronanosystems, from material science to prototype testing, with application to different fields (biomedical, health, transports, ocean, space), while maintaining active exchange programs with universities and research centers around the world. CMEMS aims to be a pioneer in solutions with high societal and economic impact.

#### RESEARCH UNIT DESCRIPTION

CMEMS was established in December 2013 at University of Minho and supports a research team with high degree of multidisciplinary members, from different backgrounds (engineering, physics, medical) and from academic and industrial fields. CMEMS team (more than 30 PhD members, totalling about 100 members) include senior researchers, national and internationally distinguished collaborators, post-doctoral investigators, PhD and Master students, as well industrial partners. The focus is on modelling computation, development and micro/nano fabrication of devices and components for two major domains: industrial applications (transportation, spatial, ocean) and health and biomedical applications (neuroengineering, micro endoscopy, surgery, rehabilitation). The industrial appli-

cations are focused on microdevices and components: mechanical, optical, wireless, electronics, sensors, actuators, materials, and industrial coatings. The biomedical applications highlight the neuronal electrodes, lab and organ-on-a-chip, endoscopic capsules, implantable devices, smart prostheses, surgical micro instruments, cellular solutions bioinspired and micro/nano functionalization of surfaces.

Since its implementation, CMEMS was awarded with the FCT grade of Excellent and, in 2021, together with CEB, was awarded the status of Associate Laboratory on Biotechnology, Bioengineering and microElectromechanical Systems (LABBELS).

CMEMS's highlight achievements are member of MICRO&NANOFABS@PT Infrastructure –To share access to micronanofabrication and design tools; member of the Associate Laboratory on Biotechnology, Bioengineering and microElectromechanical Systems; and publishes more than 100 journal papers each year.

## Institute of R&D in Structures and Construction

CONSTRUCT



**WEBSITE**

www.fe.up.pt/construct

**DATE OF FOUNDATION**

2015

**RESEARCHERS**

51

**FUNDING FCT**

0,87 M Euros

**KEYWORDS**

- Risk, Safety and Comfort
- Built and Historical Heritage and City
- Eco-efficient materials and Durability
- Transport and Energy

**STRATEGIC AIMS**

Research on Safety, Serviceability, Durability, Economy, Comfort and Sustainability of Civil Engineering constructions, developing the following Thematic Lines: New construction materials. Recycling and valorisation; Built historical heritage. Preservation, natural hazards, and climate change; Safety assessment and seismic engineering. Modelling and testing; Assessment and SHM of energy and transportation infrastructures; Railway infrastructures; and Efficient and smart Construction.

**RESEARCH UNIT DESCRIPTION**

The Research Unit Institute of R&D in Structures and Construction (CONSTRUCT) was created in 2015, stemming from the merging of two previous research units both settled at the Civil Eng. Department of FEUP.

CONSTRUCT includes 6 research groups in the areas of STRUCTURES, GEOTECHNICS and CONSTRUCTION, with a total of 51 PhD integrated members, 25 post-doc researchers, 100 PhD students and a significant number of other collaborators, developing research activities in 6 thematic lines, and using laboratories with an overall area larger than 3500m<sup>2</sup>, accommodating equipment evaluated in more than 5M€, which corresponds to the largest and best equipped laboratorial infrastructure available in Civil Engineering Departments of Portuguese Universities.

The research groups are: LABEST – Laboratory of the Concrete Technology and Structural Behaviour; LESE – Laboratory of Earthquake and Structural Engineering; VIBEST – Laboratory of Vibrations and Structural Monitoring; GEO – Geotechnics; LFC – Laboratory of Building Physics; GEQUALTEC – Management and Technology of Building Construction.

## Cognitive and People-centric Computing R&D Unit

COPELABS

**WEBSITE**

http://copelabs.ulusofona.pt

**RESEARCHERS**

18

**FUNDING FCT**

0,21 M Euros

**KEYWORDS**

- Next generation internet
- Next Generation Internet
- Data mining

**STRATEGIC AIMS**

COPELABS has the following goals: To assist in the development of national critical mass; To assist in strengthening research synergies, by continuously pursuing activities of dissemination within the scientific community and appealing to the younger researchers. To contribute to the scientific development and dissemination towards a broader public; To transfer knowledge and technology to relevant enterprise and institutional partners.

**RESEARCH UNIT DESCRIPTION**

For 2018-2022 COPELABS shall keep on pursuing the path already exploited between 2013-2017, where technology is used to improve quality of living, via the applicability of cyber-physical interconnected systems, in different contexts (Smart Cities; Mobility). With the integration of a consolidated computer science team derived from the staff reinforcement that University Lusófona has been developing during the last years, COPELABS expands from input towards networking and telecommunications, into four main areas of computer science: cognitive and user-centric networking; computational systems; data mining and statistics; knowledge and management information systems models. The COPELABS team comprises 41 elements: 28 integrated researchers of which 18 hold a PhD, and 13 collaborator researchers. The activities de-

veloped always have in mind to bring into life (prototypes technology readiness 4-6) innovative concepts, while at the same time creating novel results, which are published via the usual means. COPELABS follows an open-access policy, and all its results are deposited via its open-access Scientific Repository.

As a small unit with high laboratorial intensity, COPELABS has a flat, horizontal structure, where both integrated members and collaborators can contribute to 4 interest areas: cognitive and user-centric networking; computational systems; management information systems; data mining and statistics. Such diversification is therefore supported by partnerships with both academic and industrial partners, derived from the unit's prior background and solid international positioning, and expected to grow further. Some relevant partners to cite are ATHENA, Technical University of Munich, University of Klagenfurt, Lakeside Labs, Universidade de Campinas, Universidade Federal do Pará, Columbia University, University of California at Los Angeles. From an industrial perspective, we cite a few of our partners: FON, Siemens AG, Huawei; Nokia BellLabs, NOS, Tekever.



## Centre for Territory, Environment and Construction

CTAC



|                        |                           |
|------------------------|---------------------------|
| <b>WEBSITE</b>         | <b>DATE OF FOUNDATION</b> |
| http://ctac.uminho.pt/ | 2008                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 27                 | 0,58 M Euros       |

### KEYWORDS

- Ecomaterials
- Energy and Sustainability in Buildings
- Building Renovation
- Mobility and Transport Infrastructures
- Urban Environment Assessment
- Water Risk Management and Security

### STRATEGIC AIMS

The strategic objective of the unit is to produce knowledge to support its vision of “Sustainable and Resilient Territories”, developing innovative materials and technologies and systems in the fields of built environment, systems and infrastructures for transport, water, and wastewater and for territory development, contributing to climate-change-resilient buildings and infrastructures, supporting a steady improvement in the quality of life.

### RESEARCH UNIT DESCRIPTION

The Centre for Territory, Environment and Construction (CTAC) is a research unit of the School of Engineering of University of Minho (UMinho), associated to the Department of Civil Engineering (DEC), with whom it shares resources and namely human resources. Currently aggregates 153 members, holding 37 researchers PhD and 31 PhD students.

CTAC has a dynamic international cooperation through partnerships covering the development of research projects by participating in international research networks, mainly in the fields of sustainable environment as well as in international projects of knowledge transfer. The center is also involved in several masters and doctoral programmes, covering the main research fields of the unit, under the leading principle “to teach what is being inves-

tigated”.

Constituted by three research areas, Construction Materials and Technologies, Hydraulics and Environment and Territory. Your vision is based on the link between research and society which constitute the driving force of intervention of the unit, where, in addition to the contribution for more sustainable built environment, territories, people play the central role, contributing to the improvement of the quality of life.

CTAC's has strong connection and proximity to industry and municipalities.

## Centre of Technology and Systems

CTS

|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| www.cts.uninova.pt | 1991                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 39                 | 1,00 M             |

### KEYWORDS

- Cyber-Physical Systems
- Electronics and Embedded Systems
- Collaborative Networks
- Interoperability
- Intelligent Decision-Support Systems
- Energy, Robotics and Industrial Systems

### STRATEGIC AIMS

CTS develops its activities in major domains of Electrical, Electronics and Computer Engineering, addressing engineered systems with a cyber-physical dimension and their supporting technologies, and committing to the following strategic objectives: Deepen the development of cognitive and collaborative cyber-physical systems; Build effective interdisciplinarity; and Create a basis for continuous scientific quality improvement.

### RESEARCH UNIT DESCRIPTION

CTS addresses engineering systems with a cyber-physical dimension, including modelling and design, technology development, support methods and governance models, and their application and assessment. Ongoing activities aim to achieve substantial scientific and technological contributions to the development of the next generation of cognitive and interconnected cyber-physical systems. The research focuses on systems with increasing levels of intelligence, autonomy, and hyper-connectivity. This involves data-rich environments, distributed intelligence, mobility, and autonomy, where several areas play a key role, namely: sensors, microelectronics, embedded systems, machine learning, computational intelligence, robotics and automation, interoperability, collaborative networks, security, and collaboration man-system. Global

sustainability concerns are also maintained, including energy efficiency and system optimization.

CTS is committed to contributing to contemporary societal challenges, including a component of applied research in industry and services, guiding its action by the continuous effort to achieve research of excellence and creation of effective value creation with the results obtained, guided by ethical principles and responsible research. It also maintains a strong commitment to training young researchers and an active presence in international networks.

CTS's highlight achievements: World-class research on energy-efficient sensor-to-digital interfaces in nanoscale CMOS. Vehicular visible light communication and electronic control systems using Petri nets. Pioneering research on energy flexibility and collaborative energy communities. World-class contributions to collaborative networks and sustainable business ecosystems. and Advanced cyber-physical systems in smart manufacturing, agriculture, wildfires, and healthcare.

## Fiber Materials and Environmental Technologies

### FIBENTECH

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www.ubi.pt/Entidade/FibEnTech">https://www.ubi.pt/Entidade/FibEnTech</a> | 2012               |
| RESEARCHERS   | FUNDING FCT        |
| 32  | 0,40 M Euros       |

#### KEYWORDS

- Fiber Materials
- Cellulose materials
- Textile Materials
- Water and wastewater treatment and reuse
- Materials functionalization

#### STRATEGIC AIMS

FibEnTech has elected as main objective to carry out fundamental and applied research in the areas of Fiber Materials and of Environmental Technologies.

#### RESEARCH UNIT DESCRIPTION

The R&D Unit FibEnTech, created in 2012, came up from the interaction between the former Textile and Paper Materials Unit, created in 1991, and other research groups, from UBI and other Portuguese institutions. The Mission defined for the FibEnTech unit is to establish strategic projects in partnership with other research institutions, and enterprises, integrating in the working teams primarily master and doctoral students, to have a continuous increase of critical mass and knowledge that allows transferring and licensing technology. Having in mind its Mission, this research unit has elected as main objective to carry out fundamental and applied research in the areas of Fiber Materials and of Environmental Technologies, to:

- Contribute to develop optimized performance properties of classical and/or advanced textile materials for classical or new applications considering the improvement of design and aesthetics aspect, and the influence of technology.
- Develop mass customization strategies for more competitive textile and clothing companies by personalized production
- Contribute to establish a state-of-the-art

laboratory dedicated to the design of smart clothing capable of interacting in an efficient and reliable mode with the wearer through embedded electronic sensors, actuators, and interfaces in several types of contexts. -Within the scope of biorefinery, develop cost-effective processes to produce chemicals/energy/polymers from lignocellulosic materials. -Produce advanced functional composites and regenerated cellulose filaments based on biopolymers. -Find integrated solutions. -Articulate research activities with PhD curricula and encourage scholarships and training among researchers. -Develop research activities in collaboration with various national and international companies and institutions. -Promote productivity, quality, and competitiveness in the textile and paper industries and contribute to the economic development of the region and of the country.

## Research Group on Intelligent Engineering and Computing for Advanced Innovation and Development

### GECAD



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.gecad.isep.ipp.pt/">http://www.gecad.isep.ipp.pt/</a> | 2004               |
| RESEARCHERS   | FUNDING FCT        |
| 12  | 0,43 M Euros       |

#### KEYWORDS

- Intelligent Systems
- Smart Grids
- Decision Support
- Ambient Intelligence
- Affective Computing
- Electricity Markets

#### STRATEGIC AIMS

GECAD's goals are related with the field of AI R&D for Engineering and Computing complex systems and envisages to: conceive, develop, and test new models that contribute for the scientific advancement; propose, coordinate, participate, and develop R&D and innovation projects; Disseminate its scientific results; promote the advanced formation of human resources; produce impact in the economy and in the society by knowledge transfer and participation in projects with companies.

#### RESEARCH UNIT DESCRIPTION

GECAD - Research Group on Intelligent Engineering and Computing for Advanced Innovation and Development - conceives and implements intelligent models and solutions to deal with complex real-world problems. Incorporating intelligence in engineering and computing systems, GECAD produces its most relevant contributions in Energy (smart grids, renewables, demand response and energy markets) and in Ambient Intelligence. Solutions for Industry, Cities, Security, Health, and Tourism are relevant GECAD outcomes.

GECAD expertise, namely in Artificial Intelligence, Ambient Intelligence, Affective Computing, Decision Support, Smart Grids, Energy Efficiency and Sustainability, Demand

Response, Cyber-Physical Systems, Cybersecurity, and Internet-of-Things, is bringing substantial added value to daily life and businesses, with a strong impact potential.

GECAD combines Data-driven approaches, such as Clustering, Deep Learning, and Reinforced Learning, with Cognitive and Knowledge-based approaches, able to make intelligent systems wiser by acquiring, using, and enlarging human knowledge which is usable even in never previously occurred or anticipated situations and contexts. In this way, GECAD is shaping the advance and application of Knowledge-based solutions. Enabling easier and more effective interaction and collaboration between Humans and Intelligent Systems, GECAD ensures user-centric approaches that provide a more intelligent and adaptive world to People.

GECAD's highlight achievements: Intelligent Energy Systems and Smart Grids. Intelligent Homes, Buildings, and Communities. AI-oriented Cybersecurity. Intelligent Health and Well-being, and Affective Computing.

# Institute of Nanostructures, Nanomodelling and Nanofabrication

i3N



| WEBSITE     | DATE OF FOUNDATION |
|-------------|--------------------|
| www.i3n.org | 2006               |
| RESEARCHERS | FUNDING FCT        |
| 95          | 3,73 M Euros       |

#### KEYWORDS

- Nanofabrication
- Micro-Nanotechnologies
- Nanostructured Materials
- Advanced Functional Materials

#### STRATEGIC AIMS

i3N's vision and mission: to foster top quality science in Functional Advanced Micro/NanoMaterials and Micro/Nanotechnologies, supported by computing modelling; and to remain at the international leading edge of research by promoting breakthroughs concepts and exploiting materials multifunctionalities integration in devices and systems, at a nano-scale level towards the development of eco-sustainable products to serve key sectors as the circular economy, internet of things and industry 4.0.

#### RESEARCH UNIT DESCRIPTION

Created in 2006 as Associate Laboratory by the Portuguese Minister of Science, Technology and Higher Education, i3N is nowadays a partnership between 2 leading research units in fundamental and applied science: CEN-IMAT (Materials Research Center, NOVA University of Lisbon) and FSCOSD (Physics of Semiconductors, Optoelectronics and Disordered Systems, U. Aveiro).

i3N has 279 members including 51 academic staff, 48 post-Docs, 88 PhD students, 11 technicians/administrative and 81 collaborators. It is important to highlight that 30% of members are coming abroad, aligned with the international culture promoted by i3N.

i3N is a cross-interdisciplinary institute built on existing institutional strengths, and offers world class, in develop-

ment and innovation at leading-edge of research and education, organized in 6 research groups in order to address the challenges of i3N strategic research fields: Sustainable and advanced functional materials/devices for nanosciences and nanotechnologies.

After 15 years, i3N has successfully achieved a leading position with strong national and international impact been a pioneer in the fields of paper and transparent (oxide) electronics. Moreover, i3N develops intensive work in Green and Clean Energy Systems, Nanomaterials Engineering and Functional Interfaces and Biomedical Engineering, supported by a relevant activity related to materials and devices characterization, modelling and simulation.

i3N's achievements: 7 ERC grants (2 AdG, 1 CoG, 2 StG & 2 PoC) in a total amount of 8.8 M€ since the beginning of the ERC. High number of granted patents and in particular international ones with well recognized companies. i3N integrates state of the art facilities in the areas of advanced micro/nano materials, nanotechnologies and nanosciences.

# Institute for Bioengineering and Biosciences

IBB



| WEBSITE                       | DATE OF FOUNDATION |
|-------------------------------|--------------------|
| http://ibb.tecnico.ulisboa.pt | 2013               |
| RESEARCHERS                   | FUNDING FCT        |
| 68                            | 1,71 M Euros       |

#### KEYWORDS

- Bioprocess Engineering
- Biomolecular Engineering
- Stem Cell Engineering
- Microbiology and Microbial Biotechnology
- Functional and Comparative Genomics
- Biospectroscopy and Biophysics

#### STRATEGIC AIMS

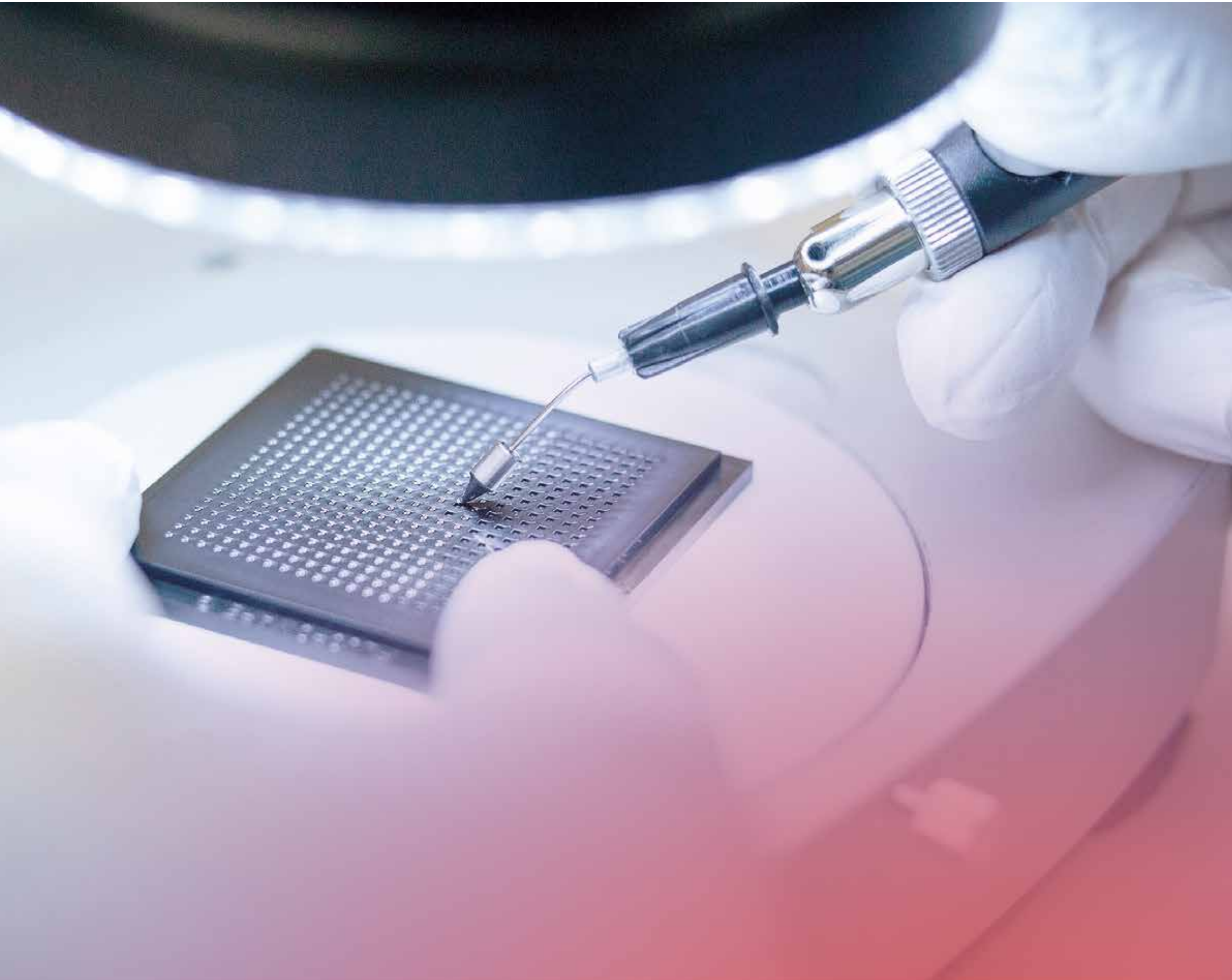
The mission of iBB is to promote cross-disciplinary research, development and education encompassing the biological, chemical, and engineering disciplines for the benefit of the health, industrial and environmental sectors. iBB aims to create a dynamic research and educational environment with international impact, and to contribute to the advanced training of the next generations of leaders in Biotechnology.

#### RESEARCH UNIT DESCRIPTION

The iBB is a multidisciplinary research unit at Instituto Superior Técnico that aims to excel in research and advanced education in biotechnology, by responding to the challenge of exploring innovative approaches to key scientific and technological questions in biosciences and bioengineering and of transforming scientific knowledge into tangible innovation. iBB was created in 2013, by the integration of the BioEngineering Research Group (BERG) and the Biological Sciences Research Group (BSRG). In 2017, the Stem Cell Engineering Research Group (SCERG) was created given the expertise on the area of Regenerative Medicine. This last evaluation included the Biospectroscopy and Interfaces Research Group (BSIRG) with complementary activities in Molecular and Cellular Biophysics and in Fluorescence Spectroscopy.

The combined activities of the four iBB Research Groups aim at cutting edge research and strategic advanced education in biotechnology and bioengineering, fundamental and applied biological sciences, spectroscopy, and chemistry. BERG explores engineering approaches to address unmet technological challenges and to translate the knowledge gained in molecular and cellular mechanisms into a rational development of efficient processes and applications of biological systems relevant to the health care and Industrial sectors. SCERG is focused on cell production platforms for the ex-vivo expansion of stem cells and/or their controlled differentiation into specific cell types and micro-tissues, as well as their integration with bioseparation and high-resolution purification technologies. BSRG conducts multidisciplinary research in fundamental and applied biological sciences. BSIRG concentrates on Molecular and Cellular Biophysics, on Fluorescence and Surface Spectroscopies, on Cosmochemistry and Astrobiology, and on the Synthesis of Molecules, Polymers and Nanoparticles, having in view both fundamental sciences, as well as Health and Industrial Applications.







## LA - ICVS/3B's Associate Laboratory

ICVS/3B'S - LA



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| http://icvs3bs.pt/ | 2011                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 161                | 3,30 M Euros              |

### KEYWORDS

- Tissue Engineering and Regenerative Medicine
- Biomaterials, biodegradables and biomimetics
- Neurosciences, Aging and Surgical Sciences
- Microbiology and Immunology of Infection

### STRATEGIC AIMS

Always strengthening the successful association between 3Bs and ICVS our joint Research Unit embraces the following Strategic Aims: basic and applied R&D in the interface Health Sciences/Technology; Advanced education/training offered to undergraduate/postgraduate students and healthcare/engineering professionals; Services, consulting, and technology transfer with industrial/clinical partners; and Dissemination and fostering of public awareness of science.

### RESEARCH UNIT DESCRIPTION

The ICVS/3Bs aggregates since 2011 two independent RUs: ICVS and 3Bs Research Group. It develops activities in Biomedical Engineering, Bioengineering, Biomedical Technology and Health Sciences (Biomedical & Clinical). Its mission at the Health Sciences/Technologies interface is to promote better healthcare by fostering the advance of knowledge in mechanisms of disease and advanced therapies, and to promote the generation of value through the development of innovative products/services and clinical interventions. It fosters the development of new technologies, therapies and medical products for prevention, vaccination, diagnosis, regenerative and precision medicine, minimally invasive therapeutic procedures, and nanomedicine.

The ICVS/3Bs has the human and material resources that strategically cover the complete development pipeline, from fundamental research, to tests in cellular and animal models for pre-clinical validation, up to clinical trials through the Clinical Academic Center - Braga (2CA), transposing to the market innovative therapeutic solutions.

The 3Bs Research Group develops its research in the following Thematic Lines (TL): i) Advanced biomaterials, biomimetics and nanomedicine; ii) Tissue engineering and precision medicine and iii) Stem cells and engineered 3D tissue/disease models.

The ICVS Group develops its research in the following Thematic Lines: i) Microbiology and Infection; ii) Neurosciences; iii) Surgical Sciences and iv) Population Health.

## Institute of Electronics and Informatics Engineering of Aveiro

IEETA

|                     |                           |
|---------------------|---------------------------|
| <b>WEBSITE</b>      | <b>DATE OF FOUNDATION</b> |
| http://www.ieeta.pt | 1994                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 47                  | 0,84 M Euros              |

### KEYWORDS

- Intelligent Robotics
- Biomedical Informatics
- Information Technologies
- Healthcare Technologies
- Information Processing
- Information Systems

### STRATEGIC AIMS

The main mission of IEETA is to put the expertise of its members at the service of the development of Intelligent Systems for Human Assistance, helping solving problems in several domains of knowledge.

### RESEARCH UNIT DESCRIPTION

The main mission of IEETA is to put the expertise of its members at the service of the development of Intelligent Systems for Human Assistance, helping solving problems in several domains of knowledge. This is a trend that IEETA has started several years ago and that now, more than ever, is a crucial goal, not only because of an aging society, but also because several threats, such as those due to environmental changes or the direct and intentional human action, may create catastrophic scenarios that require monitoring, surveillance, patrolling and assistance. This goal will be attained by providing scientific and technological expertise in the fields of Informatics Engineering, Computer Science and Engineering, and Electronics and Electrical Engineering. To accomplish this mission, IEETA is organized in three groups, in which its current 47 integrated PhD members are evenly distributed: BIT - Biomedical Informatics and Technologies; IRIS - Intelligent Robotics and Systems; ISP - Information Systems and Processing.

Empowered by its internal diversity and strong collaborative environment, IEETA has been able to provide contributions to complex and important societal challenges, only possible when high levels of multidisciplinary and interdisciplinary culture do exist. Indeed, although most of its members have a background in electrical and computer engineering or in computer science, it also has members with backgrounds in mathematics, biology, industrial management, and mechanical engineering. Moreover, most of the members of IEETA have been conducting joint work with researchers from domains as varied as mathematics, biology, medicine and health, physics, chemistry, materials, social sciences, mechanics, psychology, and humanities. The large scope of journals where the members of IEETA have been publishing is clear evidence of the determination of having impact in several other areas.

# Institute for Systems Engineering and Computers at Coimbra

INESC COIMBRA

| WEBSITE       | DATE OF FOUNDATION |
|---------------|--------------------|
| www.inescc.pt | 1986               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 55          | 0,85 M Euros |

#### KEYWORDS

- Optimization and decision in engineering systems
- Energy management and systems and energy policy
- Telecommunication network performance optimization
- Geospatial information
- Computational mechanics
- Hydrosystems planning and management

#### STRATEGIC AIMS

The global objectives in accordance with the statutory mission are: To design more efficient and effective systems by integrating competences in several Engineering Sciences to address problems from operational to strategic levels; To support basic and applied research and advanced education; To transfer knowledge and have impact on the economic fabric and society by providing scientific and technical support to public and private organizations.

#### RESEARCH UNIT DESCRIPTION

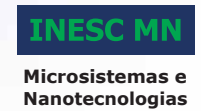
INESC Coimbra is an interdisciplinary R&D unit gathering about 100 researchers from ten higher-education institutions with expertise in multiple branches of engineering, with a common fabric in operations research and decision support systems. Activities combine theory, methodology and technical issues to tackle complex problems in relevant application domains, concerning scientific challenges issued from the needs of industry and public institutions. This interdisciplinary nature has enabled addressing new challenges in traditional application domains, namely network infrastructures, and in emerging fields as consumer empowerment in smart grids, radiotherapy planning for cancer treatment, integration of geospatial data in information systems, networks for disaster resilient communication services and water-energy nexus. A balance is

sought between fundamental and applied research, innovative models and algorithms being proposed as a basis for applied research in traditional and emerging fields.

The INESC Coimbra objectives have been achieved by developing interdisciplinary research, leading to publications in top scientific journals, R&D projects, contracts with industry and public administration, and international cooperation, in the areas: Decision support systems and methodologies; Energy systems and policy; Telecommunications networks planning; Spatial decision support in regional and urban planning; Geospatial information; Computational mechanics applied to structural systems; Planning and management of hydraulic infrastructures and water resources. R&D clusters are formed for each project, involving researchers with different backgrounds in interdisciplinary work. This organization has been successful, leading to a relevant level of scientific publications and participation in R&D and industry projects, as well as a sustained growth enlarging the intervention potential to new and complementary fields.

# INESC Microsystems and Nanotechnologies

INESC MN



| WEBSITE         | DATE OF FOUNDATION |
|-----------------|--------------------|
| www.inesc-mn.pt | 2002               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 14          | 0,65 M Euros |

#### KEYWORDS

- Microsystems
- Sensors
- Lab-on-chip devices and microfluidics
- Spintronics
- Micro and nanofabrication
- MEMS and BioMEMS

#### STRATEGIC AIMS

The strategic aim of INESC MN research focuses on the development of complex microsystems that integrate micro or nanofabricated elements with the aim of being world leaders in microsystems for industrial sensing, in integrated detection systems for medical diagnostics and treatment follow-up, and in smart agro-food/environmental applications. This research focus is integrated into the advanced training, services and technology transfer of the unit.

#### RESEARCH UNIT DESCRIPTION

INESC MN is a private, non-profit research organization, designated of public interest. It is owned at 70% by INESC holding, and at 30% by IST-ID (the research arm of the Instituto Superior Técnico, the Engineering School of the University of Lisbon).

Our mission is to apply world class research in our core areas: development of microsystems for industrial sensing, health and agri-food/environmental applications; provide technology transfer and IP generation to commercialize our research; and train the next generation of young scientists and engineers in micro and nanofabrication, devices and microsystems.

INESC MN runs a class 10 and class 100 Cleanroom facility (total 350 m<sup>2</sup> including grey area) with full capability

for processing 150 and 200 mm diameter wafers for spintronic, thin-film MEMS, thin film semiconductor, microfluidic technologies, and backend fabrication onto CMOS integrated circuits. The cleanroom micro/nanofabrication facility is complemented by several support laboratories (magnetic, electrical and optical characterization, wafer and device testing, structural analysis, microfluidic and biosensing, and the SPM/AFM lab at IST).

Technology transfer is a central object of INESC MN and we maintain strong collaborations with Portuguese and international industry through multi-year contract research and European projects. INESC MN also provides microfabrication services to Portuguese and international research groups and industry.

INESC MNs' achievements: Installation of 200 mm-compatible microfabrication tools and processes in the INESC MN cleanroom. Secured major industry contracts to bring MTJ sensor technology to the market. Noise characterization to obtain ultrasensitive GMR and TMR sensors at low frequencies. Development of microfluidic cell chips for organ-on-chip applications and Development of GaN as a radiation resistant sensor material.

# Institute for Systems and Computer Engineering, Technology and Science

INESC TEC



| WEBSITE         | DATE OF FOUNDATION |
|-----------------|--------------------|
| www.inesctec.pt | 1998               |

| RESEARCHERS | FUNDING FCT |
|-------------|-------------|
| 286         | 6,47M Euros |

#### KEYWORDS

- Science, innovation and technology transfer
- Multidisciplinarity
- ICT from electrical and computer eng to physics
- Industrial management and innovation

#### STRATEGIC AIMS

To accomplish its mission, INESC TEC sets the following policy priorities: Full coverage of the knowledge value chain; Excellence in research, talent development, and innovation; Integration and multi-disciplinarity; Scale, density, and critical mass; International visibility and presence; Ethics, social responsibility, and diversity and inclusion.

#### RESEARCH UNIT DESCRIPTION

INESC TEC is a private, non-profit association dedicated to scientific research and technological development, technology transfer, advanced consulting and training, and pre-incubation of new technology-based companies. The University of Porto, INESC, the Polytechnic of Porto, the University of Minho and the University of Trás-os-Montes e Alto Douro are INESC TEC's associates. Presently, INESC TEC's main sites are located in the cities of Porto, Braga and Vila Real.

INESC TEC envisions being a relevant international player in Science and Technology in the domains of Computer Science, Industrial and Systems Engineering, Networked Intelligent Systems, and Power and Energy.

As an institution operating at the interface between the academic and business worlds, bringing academia, companies, public administration, and society closer together,

through its “managed science” model, INESC TEC generates knowledge as part of its research, and leverages that knowledge in technology transfer projects, seeking impact through both value creation and social relevance.

The dual mission of INESC TEC is to excel in research, seeking international influence, and to contribute to the competitiveness and internationalization of the Portuguese companies and institutions through a unifying commitment of fostering pervasive intelligence.

INESC TEC's achievements: Research and technology for emergency and critical events response. Technical and regulatory architectures for municipal Low Voltage grids concessions. Digitalisation of the Portuguese industry, leading European and national projects and initiatives. Development of the National Science, Technology and Innovation System. and Fostering digital competences in Portugal, namely through INCoDe.2030.

# Institute for Systems and Computer engineering, Research and Development

INESC-ID



| WEBSITE         | DATE OF FOUNDATION |
|-----------------|--------------------|
| www.inesc-id.pt | 1999               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 91          | 2,64 M Euros |

#### KEYWORDS

- Cyber-Physical Systems for Sustainable Energy
- Information and Decision Support Systems
- Computing Systems and Communication Networks
- Architectures and Circuits for Embedded Systems
- Interactive Intelligent Systems

#### STRATEGIC AIMS

INESC-ID's goals: Expand the set-up of inter-disciplinary projects; Reinforce the experimental infrastructures; Increase the internationalization, with the participation in research networks and the number of international post-doc and PhD students; Increase the technology-transfer activities; Contribute with qualified people (BSc, MSc, and PhD), in cooperation with the universities and schools; Improve the number and qualifications of the supporting staff; Improve internal quality assessment mechanisms.

#### RESEARCH UNIT DESCRIPTION

INESC-ID, “Instituto de Engenharia de Sistemas e Computadores: Investigação e Desenvolvimento em Lisboa” is a Research and Development and Innovation Organization (R&D+i) in the fields of Computer Science and Electrical and Computer Engineering. INESC-ID mission is to produce added value to people and society, supporting the response of public policies to scientific, health, environmental, cultural, social, economic, and political challenges.

INESC-ID promotes cooperation between academia and industry by addressing research on daily life issues, such as healthcare, space, mobility, human language technologies, agri-food, industry 4.0, and smart grids. This high level of knowledge transfer is achieved through both competitive research projects and direct contracted re-

search. Therefore, public, and private entities have access to a pool of knowledge, resources and services provided through the unique competencies available at the institution.

INESC-ID's achievements: Classification of Excellent in the last FCT assessment for research units. Associated laboratory since 2004, supporting the definition of public policies. It is one of the 10 main Portuguese research units attracting projects and funding from the EU. Active participation in European and national R&D+i projects. and Technology transfer through cooperation between academia and industry.

# Institute for Polymers and Composites

## IPC

| WEBSITE           | DATE OF FOUNDATION |
|-------------------|--------------------|
| www.ipc.uminho.pt | 2006               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 23          | 0,72 M Euros |

### KEYWORDS

- Polymer Science and Engineering
- Advanced Polymers and Composites
- Polymers and Composites Technologies
- Product Engineering Design
- Sustainability
- Cyber-Physical Systems

### STRATEGIC AIMS

The main mission of Institute for Polymers and Composites (IPC) is to provide advancements on polymer and composites science and technology for social sustainable development; to generate added value to the polymer, mould-making and related industries and, in general, to the society, contributing to socio-economic growth and to the social wellbeing; and to promote the society awareness of the role and importance of polymeric materials.

### RESEARCH UNIT DESCRIPTION

IPC is a research unit hosted by UMinho, associated with the Dept of Polymer Engineering, leveraging polymer science and technology solutions to meet industry needs and societal challenges. IPC adopts a multidisciplinary approach, covering and integrating the scientific disciplines of polymer chemistry, physics, engineering, and technology. IPC develops basic research and integrative applied R&D into applications. IPC targets the promotion of scientific excellence and innovation on its research area, developing activities at the international leading edge, fostering breakthrough concepts and their practical exploitation.

IPC envisages to contribute for the advancement and application of knowledge in its scientific domains, addressing the following R&D areas: BASIC KNOWLEDGE R&D AREAS (Advanced materials; Advanced manufacturing technologies; Advanced engineering design); INTEGRA-

TIVE R&D AREAS (Integration of advanced materials; Integrative manufacturing; Embedding functions into systems; Immersive engineering) and R&D APPLICATIONAL CHALLENGES (Polymers for advanced applications; Circular economy, Digital transformation). For the 2019-2022 period, IPC defined the following plan of activities: Increasing IPC involvement in European projects, delineating a plan focused on network and internationalization support activities; Development of advanced education and training; Incrementing the number of joint R&D projects with industrial partners, with a strong involvement in the Collaborative Laboratory - DTx; Implementation of structured dissemination activities of R&D projects and outputs; Involvement in social-cultural activities. Strong engagement in CoLab DTx, addressing the new paradigms in products, services, and human-machine interfaces and the consequent changes in industry and society, fostering collaborative research and technological development between multidisciplinary academic knowledge and industrial competences.

# Institute for Sustainability and Innovation in Structural Engineering

## ISISE



| WEBSITE       | DATE OF FOUNDATION |
|---------------|--------------------|
| www.isise.net | 2008               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 59          | 1,98 M Euros |

### KEYWORDS

- Structures and infrastructures
- Sustainability
- Innovation and advanced technology
- Conservation/rehabilitation of built environment

### STRATEGIC AIMS

The strategic vision of ISISE is to address the societal challenges of safety, industry 4.0, blue economy, energy, cultural heritage, cities of the future and the effects of climate change, and to provide solutions for those problems, based on research and innovation strategies for smart specialisation, European frameworks and industrial priorities. ISISE also aims to further strengthen its position as a recognized research unit of excellence.

### RESEARCH UNIT DESCRIPTION

ISISE was created in 2007 involving the Civil Engineering Departments from Universities of Minho and Coimbra. The objective is to continually achieve recognition in research, having leading clusters in Structural Engineering, with top quality R&D+I, and active members. The Unit is based on strong leaderships, with a proven record of internationalization, contracted research, cooperation with industry, top level dissemination in the international arena. Therefore, outstanding fundamental and applied research is the driving force of ISISE.

The unit is organized in 4 Research Groups related to Functional Performance, Historical and Masonry Structures, Structural Composites, and Steel and Mixed Construction Technologies. A Management Board manages the unit, with monthly video conferences. The hosting institutions are well-equipped and with complementary laboratory fa-

cilities, with a total area about 5000 m<sup>2</sup>.

The Unit aims to increase the structural and functional performance of Civil Engineering Works, from a perspective of advanced technology and innovation, from Materials to Life Cycle Performance. The approach includes aspects such as advances in experimental and numerical techniques, product development and technology transfer to the industry, durability and reliability, recycle, reuse, conservation and rehabilitation, condition assessment, and risk assessment.

ISISE's achievements: Innovative solutions for mitigation of noise and vibration produced in transportation systems. Sound reputation on testing and computational mechanics of masonry structures; International reputation on FRC and FRP for structural applications and strengthening. Contribution to knowledge, practical implementation and technological transfer in steel systems. and Excellence on training activities supported by PhD programs and European Master Courses.



## Institute of Systems and robotics ISR - Coimbra

ISR-UC



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www.isr.uc.pt/">https://www.isr.uc.pt/</a> | 1992               |

| RESEARCHERS | FUNDING FCT |
|-------------|-------------|
| 42          | 1,05M Euros |

### KEYWORDS

- Robotics

### STRATEGIC AIMS

Developing of innovative leading edge research, technologies and services; Participation in large international projects involving the best research centers, and industries; Cooperation with industry through research contracts in advanced projects with high innovation contents; Patent registration for the innovative results with market potential; Dissemination of research work in top international journals and conferences; and Organization of international scientific meetings and conferences.

### RESEARCH UNIT DESCRIPTION

The Institute of Systems and Robotics-UC is a private, non-profit research institution founded in 1992 with the global purpose of setting up a first class multi-disciplinary research team, able to carry out leading edge research in several important areas of science and technology, with a special emphasis in systems and robotics. ISR-UC promotes advanced multidisciplinary R&D in the areas of Mobile Autonomous Robotics, Intelligent Transportation Systems, Search and Rescue Robotics, Robotic Manipulation, Computer Vision, Medical Robotics, Assistive Technologies, Biomedical Engineering, Advanced Industrial Automation Technologies and Intelligent Energy Systems. ISR-UC gives special attention to international scientific research cooperation with centers of excellence, as well

as to training and education initiatives. ISR-UC has also developed strong links with industry, either existing national and international companies, or promoting the creation of spin-offs. ISR-UC has a strong track-record in the publication in international top journals and conferences, as well as in participation in national and international R&D projects. ISR-UC is organized in seven Activity Areas: Human-Centered Mobile Robotics; Field Robotics; Medical Systems and Robotics; Computational Intelligence and Control; Artificial Perception and Cognition; Visual Perception; Intelligent Energy Systems. Currently ISR integrates the Associated Laboratory ARISE - Advanced Production and Intelligent Systems.

ISR's achievements: e-Tattos for Bio-monitoring Wearables: conductive and stretchable circuits. Video-based Computer-Aided Arthroscopy: accomplishing navigated arthroscopy. Novel Computing for Artificial Multimodal Perception Algorithms. Visual Tracking-by-detection and Learning. and Robot Force Control on a Beating Heart: heart motion compensation robot force control techniques.

## Information Sciences, Technologies and Architecture Research Center

ISTAR-IUL



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://istar.iscte-iul.pt/">http://istar.iscte-iul.pt/</a> | 2015               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 34          | 0,76 M Euros |

### KEYWORDS

- Information Technologies
- Computational Models and Methods
- Architecture and Urban Studies
- Computer Sciences
- Mathematical Modelling
- Complex Systems Sciences

### STRATEGIC AIMS

the general strategic objectives of ISTAR are: Establish ISTAR as a high-level multidisciplinary research unit; Contribute to engaged research with all societal actors; Internationalize the unit and the research groups; Achieve a sustainable level of research funding; Maintain high standards of publication quality peak and average publication quality; Contribute to advanced training, academic and professional; and Increase the impact of research and achievements of ISTAR.

### RESEARCH UNIT DESCRIPTION

ISTAR is a research unit of ISCTE whose mission is the development of applied and multidisciplinary research aimed at the creation of knowledge directed to contemporary human, organizational and societal problems. Adopting user-centred approaches in the development and evaluation of information technologies with impact on society, ISTAR research results from the convergence of Computer Science and Information Technology, Mathematics (applied to computational problems), and Architecture and Urbanism (in its digital dimensions). ISTAR's vision is to become a reference research unit of ISCTE, in multidisciplinary and interdisciplinary research applied to real problems, and in the adoption of computational approaches in the context of the digital transformation of society.

ISTAR is organized in four research groups: Digital Living Spaces, Information Systems, Software System Engineering and Complexity and Computational Modelling. The association of ISTAR with three doctoral programmes fosters constant innovation and strengthens the core lines of research: Smart Cities, Societal Challenges and Digital Transformation. Within these lines we prioritize research in areas of: smart & sustainable communities and tourism, digital design and fabrication towards inclusive citizenship, distributed systems and cybersecurity, and data-driven decision support systems.

# Institute for Telecommunications

IT



|                                    |                                    |
|------------------------------------|------------------------------------|
| <b>WEBSITE</b><br>http://www.it.pt | <b>DATE OF FOUNDATION</b><br>1993  |
| <b>RESEARCHERS</b><br>263          | <b>FUNDING FCT</b><br>5,65 M Euros |

#### KEYWORDS

- Telecommunications
- Applied Physics
- Electronics
- Applied Mathematics
- Instrumentation and Measurements

#### STRATEGIC AIMS

IT objectives concern the creation and dissemination of scientific knowledge, technology transfer and societal challenges on information and communication technologies (ICT). IT activities are organized around four thematic lines devoted to major ICT topics, namely wireless communications, optics and photonics, information and data sciences and networks and services, as well as a fifth that supports the previous ones with fundamental research on basic sciences and enabling technologies.

#### RESEARCH UNIT DESCRIPTION

The Instituto de Telecomunicações (IT) is a private, not-for-profit, multi-site association of six universities, one polytechnic institute and two private companies. Established in 1993, was granted the statute of Associated Laboratory in 2001. Having a wide national coverage, the three main sites of IT are located at Universidade de Aveiro, Universidade de Coimbra and Instituto Superior Técnico of the Universidade de Lisboa, but has also delegations at U-Porto, UBI-Covilhã and IP-Leiria. IT is managed by a Board of Directors with individualized responsibilities regarding human resources, finances, planning and control and business development. IT scientific organization encompasses a Scientific Board, arranged in 16 clusters of research groups and has an Advisory Board composed by

a Scientific Committee and a Business Committee.

Relying on top-level laboratories, 30 clerks and technicians as well as around 200 integrated researchers holding a PhD degree, IT R&D activities are focused on fundamental research on information and communication technologies, with a strong emphasis on telecommunications. However, having a will to constitute a vehicle of technology-based economic development, IT mission also addresses applied research and technology transfer, aligned with Portuguese societal challenges and public policies (e.g., Information and Communication Technologies, Digital Transition, Mobility, Space, Education, and Health).

# Associate Laboratory of Energy, Transports and Aeronautics

LAETA



|   |                                     |
|---|-------------------------------------|
| <b>WEBSITE</b><br>https://www.idmec.ist.utl.pt/laeta/ | <b>DATE OF FOUNDATION</b><br>2006   |
| <b>RESEARCHERS</b><br>281                             | <b>FUNDING FCT</b><br>5, 92 M Euros |

#### KEYWORDS

- Mechanical Engineering
- Aerospace Engineering
- Transports Technology
- Energy

#### STRATEGIC AIMS

LAETA strategic aims are to address the main societal challenges related to the scientific knowledge existing in LAETA; grounded on Mechanical, Materials and Aerospace Engineering, to increase the critical mass of highly qualified human resources by setting the stage for the creation of scientific jobs in Portugal, ensuring appropriate conditions for the professional development of young researchers and to increase the number of research and innovation projects steaming from highly competitive international calls funded by both the public and private sectors.

#### RESEARCH UNIT DESCRIPTION

Created in 2006, LAETA is an Associate Laboratory in the fields of Energy, Transportation and Aerospace, which also addresses other emerging fields where its scientific knowledge, grounded on Mechanical, Materials and Aerospace Engineering, can be applied. LAETA's research, ranked as Excellent in the last evaluation performed by FCT, relies on a combination of faculty members from several universities and polytechnic institutes, researchers, PhD and MSc students, and supporting staff.

The core of LAETA is a dynamic, connected community of more than 500 researchers and students, located in all regions of continental Portugal. This human capital has been of paramount importance for LAETA's success in the

different dimensions of its activity, namely research & development, innovation & technology transfer, knowledge delivery & advanced training, and the support to policy-making and implementation. LAETA includes 4 management institutions (INEGI/University of Porto, IDMEC/IST-University of Lisbon, ADAI/University of Coimbra and AEROG/University of Beira Interior), and 30 participating institutions that include other universities, polytechnic institutes, hospitals and municipalities.

Some of LAETA main scientific achievements are the development of computational models to design composite structures, advances in metal forming and casting processes (high process efficiency; high production quality); advances in surface transports (vehicle's durability, recyclability and safety); advances in ocean renewable energy (international patents, service contracts, spin-off) and forest fires spread and safety (unique facilities, innovation leadership, recognition & awards).

# Laboratory of Robotics and Engineering Systems

LARSYS



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.larsys.pt/">http://www.larsys.pt/</a> | 2001               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 126         | 4,04 M Euros |

#### KEYWORDS

- Robotics and cyber-physical systems
- Engineering Systems
- Human Computer Interaction
- Socio-technical Systems
- Environmental technologies

#### STRATEGIC AIMS

The Associate Laboratory of Robotics and Engineering Systems (LARSyS) develops interdisciplinary research in dynamic and cyber-physical systems, human-computer interaction, and socio-technical systems, promoting new frontiers of knowledge with an impact on the oceans, urban environments, aeronautics and space, biomedical applications, and future work environments, and stimulating new industry-science relationships.

#### RESEARCH UNIT DESCRIPTION

In the area of OCEANS, LARSyS investigates advanced robotic systems and modern detection technologies, aiming at more efficient exploitation of new minerals, hydrocarbons, and marine energy resources, and avoiding negative impacts on the marine environment. LARSyS also develops necessary risk prevention mechanisms and the design of an observatory based on data collected by satellites and ocean sensors. Work on URBAN systems develops the knowledge base needed to collect and analyse information on urban environments to visualize the state of the city in real time, and to help policy makers design the cities of the future. The Lisbon Region and Madeira Islands will be the case studies. Research into AERONautical and space systems is connected to the AIR Center, and develops technologies for small new satellites, autonomous air

vehicles, robotic missions' systems at the international space station, and studies the impact of new manufacturing techniques on the aerospace and aeronautics industry. In the BIOMEDICAL area, LARSyS investigates the processing of biological signals (EEG, ECG, fMRI) to improve medical diagnoses, with emphasis on diagnostic tools, computer-brain interfaces, assistive technologies, and the use of bioinspired approaches to robotic systems. Finally, LARSyS investigates how to design, build, and promote a new generation of cognitive ROBOTIC systems, capable of interacting routinely with humans in different contexts, using machine learning and artificial intelligence.

LARSyS uses the following mechanisms for technology transfer: (i) advanced training of human resources and their integration into advanced technology companies; ii) direct incubation of new technology-based companies; iii) indirect incubation, through networks of technology transfer offices, namely through UTEN (Univ. Technology Enterprise Network), with links to UT Austin, MIT, and Carnegie Mellon), and iv) challenges and competitions.

# Extreme Computing

LASIGE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.lasige.di.fc.ul.pt/">http://www.lasige.di.fc.ul.pt/</a> | 1998               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 30          | 1,04 M Euros |

#### KEYWORDS

- Accessibility and Ageing
- Data and Systems Intelligence
- Health and Biomedical Informatics
- Cyber-Physical Systems
- Resilient Distributed and Networked Systems
- Reliable Software Systems

#### STRATEGIC AIMS

LASIGE's goals for the coming years include: Investment in the research domains where LASIGE excels; Broadening of its international visibility by supporting researchers securing international funding and participating in scientific networks; Reinforcing an open data policy; Expanding knowledge and technology transfer through collaboration with companies and creating innovative spinoffs in crucial areas.

#### RESEARCH UNIT DESCRIPTION

LASIGE is an R&D unit at the Faculty of Sciences of the University of Lisbon (FCUL), in the field of Computer Science and Engineering. LASIGE gathers experts from several areas of the computing field, including artificial intelligence, machine learning, concurrency, distributed computing, embedded and cyber physical systems, human-centred computing, information systems, security and privacy, software validation and verification, fault-tolerant systems, and applied computing to life and medical sciences. LASIGE's research is organized around 6 lines of excellence supported by key quality indicators (scientific output and level of funding). The unit's activities represent an added value to the Portuguese and European Science and Technology System. A highly engaged organization, LASIGE runs many international projects due to strong partic-

ipation in EU proposals. The work developed in the R&D Unit already boasted 3 spinoffs and several tech transfer efforts demonstrating the alignment of its research goals with state-of-the-art international research themes and agendas. LASIGE mentors more than 200 young researchers (students, both PhD and MSc) who regularly publish in top venues and enjoy top-notch bibliometric indices. To maintain its momentum, LASIGE actively implements organizational culture strategies to stimulate excellence in the research work it hosts.

LASIGE was evaluated as Excellent by FCT for its research activity in the 2013-2017 period.

LASIGE's achievements: LASIGE co-coordinates the H2020 funded SATO project, which gathers 16 partners from 7 countries. NEUROCLINOMICS2 and RESISTIR were deemed successful collaborations with the healthcare system. Vawlt, a LASIGE spinoff, received significant private funding 1 year after its inception. The algorithm GenoDup shows promise as a storage system for genomic sequencing data. LASIGE is a member of the Smart Energy LAB, aimed at knowledge transfer in the energy sector.

## Laboratory for Process Engineering, Environment, Biotechnology and Energy

LEPABE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.fe.up.pt/lepabe">http://www.fe.up.pt/lepabe</a> | 1998               |
| RESEARCHERS   | FUNDING FCT        |
| 72  | 2,08 M Euros       |

### KEYWORDS

- Processes Engineering
- Environment
- Biotechnology
- Energy
- Nanotechnology
- Materials Engineering

### STRATEGIC AIMS

LEPABE's mission is to develop innovative and sustainable processes and products to respond to societal challenges and contribute to the wealth and well-being of European society, fostering industrial competitiveness. Our vision is to contribute towards scientific breakthroughs in areas related to materials, energy, health, and the environment. As evolving strategy, LEPABE is one of three R&D units that established ALiCE, the newest Associate Laboratory in the field of Chemical Engineering.

### RESEARCH UNIT DESCRIPTION

LEPABE – Laboratory for Process Engineering, Environment, Biotechnology and Energy was established in 1998 within the Faculty of Engineering of the University of Porto. Starting from a small yet very motivated group of 20 researchers, LEPABE has been growing constantly and today, comprises 200 researchers of which half hold a PhD degree.

LEPABE's motto, "From Science to Innovation", is fuelled by the combination of basic science with applied engineering and innovation. The background of LEPABE's staff is multidisciplinary, with fundamental knowledge in fields such as reaction engineering, separation and surface science, advanced modelling and simulation tools, process control, transport phenomena, environmental and food

sciences and technology, biotechnology and molecular biology. This enables a high level of motivation and spreading into new areas, including emerging subjects such as nanoscience and new energy technologies.

R&D at LEPABE is organized into 5 groups: (1) Processes, Products and Energy; (2) Process Systems Engineering; (3) Biotechnology; (4) Supramolecular Assemblies and (5) Environmental Sciences and Technologies. This organization is based on 3 pillars of development: Sustainability and Energy, Processes and Products, Environment and Health. Cross-feeding of different fields is emphasized, increasing synergies and seeking advances in interfacial areas. This and cooperation with industry and stakeholders make today LEPABE a reference of excellence in science.

LEPABE's achievements: International recognition in Renewable Energy Harvesting, Conversion and Storage. Remarkable Polymer Product Development and Forest-derived Materials in collaboration with industries. Excellence in Biofilms research. International and national networks of reference in Nanotechnologies and Health. Cooperation in interfacial areas of Environment, Modelling and Health to tackle emergent problems.

## Artificial Intelligence and Computer Science Laboratory

LIACC



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://web.fe.up.pt/~liacc/">https://web.fe.up.pt/~liacc/</a> | 1988               |
| RESEARCHERS   | FUNDING FCT        |
| 19  | 0, 73 M Euros      |

### KEYWORDS

- Artificial Intelligence
- Computer Science
- Multi-Agent systems
- Intelligent simulation
- Declarative and reliable programming

### STRATEGIC AIMS

LIACC aims to contribute to the theory and application of AI, carrying out R&D activities spanning all dimensions of Intelligent Systems. Its research thematic lines include health and wellbeing, intelligent cities and mobility, innovative and sustainable industry/services, public admin and governance, infrastructures and highly connected society, and entertainment/games. LIACC is also committed to ensuring the ethical, transparent, and accountable use of AI to foster its societal value and impact.

### RESEARCH UNIT DESCRIPTION

LIACC is an R&D unit established in 1988, with headquarters at FEUP and a branch at FCUP. It hosts researchers from several other higher education institutions such as P.Porto, UFP, IPVC, ISMAI, and UAçores. With 25 integrated members, 40 collaborators with Ph.D., and 40 Ph.D. students, LIACC was awarded the classification "Excellent" by FCT. It pursues research on AI and Computer Science with emphasis on Complex Systems, Machine Learning, Data Science, Autonomous Agents, Simulation, Robotics, Natural Language Processing, High-Performance Computing, Declarative Programming, and Software Engineering. The high quality of its R&D activities has evolved steadily, with funding support from different agencies and programmes (e.g. H2020/EC, FCT, P2020, Industry, and Pub-

lic Administration) allowing LIACC to attract new talented researchers. It also contributes to education participating in degree programs at both MSc and Ph.D. levels with world-class supervision by its senior researchers.

LIACC offers a rich and involving environment fostering cooperation and creativity. It also offers appropriate ICT infrastructure including high-performance computers supporting a wide variety of AI projects demanding CPU/GPU-intensive processes. Also, LIACC is a founding member of LASI – Intelligent Systems Associate Laboratory, the largest Associate Laboratory in Portugal, contributing to LIACC's critical mass, funding opportunities, and internationalisation and also founder of MASDIMA as a spin-off company resulting from an R&D project.



# Laboratory of Separation and Reaction Engineering Laboratory of Catalysis and Materials

LSRE-LCM



| WEBSITE           | DATE OF FOUNDATION |
|-------------------|--------------------|
| lsre-lcm.fe.up.pt | 2004               |
| RESEARCHERS       | FUNDING FCT        |
| 63                | 1,90 M Euros       |

#### KEYWORDS

- Cyclic Separation and Reaction Processes
- Product Engineering
- Catalysis and Carbon Materials
- Thermodynamics and Environment

#### STRATEGIC AIMS

The Mission of LSRE-LCM is to contribute to developing scientific and technological know-how in the Chemical Engineering areas of Separation and Reaction Processes, Product Engineering, Catalysis and Carbon Materials, Thermodynamics and Environmental Engineering. The approach of LSRE-LCM relies on opening new interfaces into strategic fields such as bio-based and natural products, nanotechnology, and synthetic fuels to strengthen its position in these areas.

#### RESEARCH UNIT DESCRIPTION

LSRE-LCM is a leading national R&D Unit of Chemical Engineering due to its unique approach in dealing with the complexity required to solve problems that involve the production or use of chemicals, fuel, drugs, food, and many other products. It develops cutting-edge processes, catalysts and equipment for safe and sustainable energy and environment applications. Engineering science is genuinely multidisciplinary, and we rely on teamwork and expertise in different areas, allied to technology transfer to the industrial sector to achieve national and international success. LSRE-LCM has substantial impact on developing the scientific and technological national system, not only through its scientific outputs but also by creating spin-offs and contracts with industry. The main location of LS-

RE-LCM is at the University of Porto, Faculty of Engineering, with an external pole at Instituto Politécnico De Leiria. lsre-lcm contributes towards the sustainable development of the country, namely to its northern region. it is currently organized in four groups: cyclic adsorption/reaction processes; product engineering; thermodynamics & environment; catalysis and carbon materials.

The LSRE-LCM motto — SHAKING THE PRESENT. SHAPING THE FUTURE — guides our researchers in pursuing today's scientific challenges and innovations that will impact tomorrow's industrial and economic sustainable development.

LSRE-LCM integrates the recently created AliCE, Associate Laboratory in Chemical Engineering.

# Mechanical Engineering and Resource Sustainability Center

METRICS

MEtRiCS

| WEBSITE                   | DATE OF FOUNDATION |
|---------------------------|--------------------|
| http://www.metrics.com.pt | 2013               |
| RESEARCHERS               | FUNDING FCT        |
| 24                        | 0,58 M Euros       |

#### KEYWORDS

- Energy Conversion
- Advanced Engineering Systems
- Structures and Vehicle Engineering
- Environment and Sustainable Development
- Food Technology and Wellbeing

#### STRATEGIC AIMS

The Mechanical Engineering and Resource Sustainability Center (MEtRICS) mission is to provide technical solutions for a cleaner, safer and sustainable world and we aim to be a leading institution in this field.

#### RESEARCH UNIT DESCRIPTION

The MEtRICS presently includes 61 integrated members (IM) from the University of Minho and New University of Lisbon. There is a third participating institution, the Center for Residues Valorization. The number of PhD students is currently 46.

The research activities are organized along 4 research topics: Energy Conversion; Advanced Engineering Systems; Structures and Vehicle Engineering; Food Technology and Wellbeing. In following these topics of action the center commits to improve its productivity in key indicators such as publications and project development. In addition it will provide opportunities for the new generations of graduates to experience new technologies, understand the benefit of knowledge and develop their skills. This is an important role of our mission.

Being a center where knowledge creation is exploited for product development and innovation, there are material benefits to the society and the nation. In pursuing such objectives, we will keep present a certain set of guides and

values: a) Promote excellence in research. b) Develop advanced training for future generations and help them find an environment where they can be productive to the society. c) Promote the dissemination of knowledge by taking it to the society as a product or idea and by opening our doors to both younger generations and professionals. d) Impact on society by creating knowledge and bring it to the society. e) Internal cohesion and inclusion of our community. f) Obey ethical principles that value openness, truth, rigor and freedom.

## Research Unit in Materials, Energy and Environment for Sustainability

PROMETHEUS



|                           |                           |
|---------------------------|---------------------------|
| <b>WEBSITE</b>            | <b>DATE OF FOUNDATION</b> |
| http://prometheus.ipvc.pt | 2019                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 18                 | 0,43 M Euros       |

### KEYWORDS

- Sustainability
- Energy
- Materials
- Environment

### STRATEGIC AIMS

proMetheus is a multidisciplinary research unit which aims to develop knowledge, tools and methodologies, to optimize and create innovative products and solutions, regarding three strategic objectives: Development of Sustainable Energy Systems; Contribute to a Circular Economy; and Contribute to Environmental Sustainability

### RESEARCH UNIT DESCRIPTION

proMetheus is a research unit within the Polytechnic Institute of Viana do Castelo (IPVC), bringing together 41 members, mainly Professors of the School of Technology and Management and the Agrarian School, also counting on the collaboration of researchers from other R&D units. proMetheus aggregates research skills in engineering sciences, namely on materials, mechanics, civil, environmental and geoinformatics. It aims to create global knowledge, to develop and implement innovative and intelligent technological solutions that contribute to a circular, low-carbon economy and sustainable socio-environmental systems, in alignment with regional, national, cross-border and global strategic options, including the ones defined in the scope of the Sustainable Development Goals.

proMetheus research areas aim to respond to scientific challenges related to the development, innovation and optimization of i) new materials for the sustainable pro-

duction and storage of energy; (ii) sustainable building materials that promote efficient energy systems; (iii) sustainable design of buildings and infrastructure; iv) (eco) technologies for water and soil treatment, materials and (bio)energy recovery from biomass and waste; and vii) social and environmental systems analysis for natural resource management, ecosystem services assessment and governance development models supported in spatial information systems, digital networks and e-infrastructures. proMetheus's achievements: Optimisation of the ionic conductivity of solid electrolytes of fuel cells by hot pressing. Development of new methodologies for rehabilitation of buildings and infrastructure. (natural) solutions for water and (bio)waste treatment and valorisation and (bio)energy production. Promoting energy efficiency and sustainable use of biomass. Analysis, optimization and innovation of socioenvironmental systems and territorial systems governance.

## Risks and Sustainability in Construction

RISCO



|                        |                           |
|------------------------|---------------------------|
| <b>WEBSITE</b>         | <b>DATE OF FOUNDATION</b> |
| http://www.ua.pt/risco | 2015                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 23                 | 0,59 M Euros       |

### KEYWORDS

- Risk
- Sustainability
- Resilient cities
- Construction
- Built heritage conservation

### STRATEGIC AIMS

RISCO is a research unit located at the University of Aveiro and centred in the scientific area of Civil Engineering, that aims to promote the development of sustainable and resilient cities through safe, environmentally friendly, efficient and sustainable constructions. Its research activity is oriented for the mitigation of risks in the built environment, for the sustainability of the built environment and for built heritage conservation.

### RESEARCH UNIT DESCRIPTION

RISCO is a research unit focused to contribute to different international agendas and societal challenges from the UN sustainable development specific goals to European and national policies on different areas, such as risks assessment, climate change, efficient use of resources, circular economy and safeguarding of built heritage.

The three main research areas of RISCO are: Assessment and mitigation of risks in the built environment; Research on the risk mitigation of structures and infrastructures include integrated adaptation to climate change for resilient communities and cities, promoting the sustainability of solutions and well-developed methodologies and tools to provide efficient and effective means of supporting decision-making; and Sustainable solutions for the built environment.

Regarding the efficient use of resources in the built environment, research target the development and test of sustainable solutions for construction, supported on the concepts of resources efficiency (energy, water, materials) and on the sustainability of materials, processes and systems.

Renovation and conservation of the built heritage  
Built heritage represents a valuable asset that should be preserved. The research on the preservation of traditional construction techniques, materials and systems using endogenous resources is of paramount importance in safeguarding the integrity and authenticity of built heritage.

RISCO's achievements: Seismic risk and Fire safety assessment in buildings and cities. Coastal management, defence and cost-benefit strategies. Smart materials and design tools for energy efficiency and decarbonization of the building stock. Development of construction materials and systems for a circular economy. Traditional building construction technology characterization and valorisation.

## Research Center for Systems and Technologies

SYSTEC

SYSTEC

|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="https://systec.fe.up.pt/">https://systec.fe.up.pt/</a> | 2015                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 33  | 0,66 M Euros              |

### KEYWORDS

- Control Optimization and Estimation
- Networked Robotic Vehicle Systems
- Renewable Energy and Smart Mobility
- Advanced Manufacturing Systems

### STRATEGIC AIMS

R&D in Systems, Control, Optimization, Estimation, Automation, Robotics and Production Systems addressing specific and interdisciplinary challenges to enable the design of Cyber-physical architectures for: Production Systems, Networked Vehicles, Power Management (networked renewables and electrical mobility) anchored in Electrical Engineering, Mathematics and Data Science. Innovation and knowledge transfer impacts multiple societal challenges in academia, environment, industry, and services.

### RESEARCH UNIT DESCRIPTION

Hosted at FEUP (infrastructures, resources, and its vast collaborative research network), and at ISR (stakeholders networking and cooperation targeting innovation), SYSTEC has and ca 100 researchers and collaborators to advance its R&D&I agenda to promote: Excellence in R&D and in Innovation; Worldwide networking with top R&D institutions to ensure its position at the forefront of the state of the art; Interaction with end-users, stakeholders, and policy decision makers to tune with challenge-driven innovation dynamics; Emergence of actors relevant to the societal impact of science and technology; Integration with advanced formation activities.

SYSTEC's activities are organized along four directions associated with its Laboratories: LSCOE – Systems, Control,

Optimization, Estimation, and Data Science; C2SR – Cyber-Physical Control Systems and Robotics: Networked Robotic Vehicles and Systems Technologies; EMR - Electric Mobility and Renewables: Smart Power Systems and Technologies for Integrated Renewables and Electric Mobility; DIGI2 - Digital and Intelligent Industry.

To extend its strategic partnerships, beyond its areas of scientific excellence, SYSTEC is part of the Associated Laboratory ARISE, and participates in many initiatives, being Vasco da Gama, +ATLANTIC and HyLAB – Green Hydrogen COLABS, in the EMSO, and AIRCENTER infra-structures of the National Roadmap, as well as SHIFT2RAIL, and KIC – EIT Manufacturing, the few most significant ones.

SYSTEC's achievements: R&D Excellence: Five successful startups: MOBICAR, CONNECT ROBOTICS, NOMADTECH, ADDVOLT, 4DCTECH, OCEANSCAN. European - EIT Manufacturing, iRAIL, H2020 Marie Curie ITN-, and three National Doctoral Programs. Support for public policies: SHIFT2RAIL, EMSO, AIRCENTER, VCoLAB, HyLab, EIT MANUFACTURING, ARISE.

## Centre for Mechanical Technology and Automation

TEMA



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="https://www.ua.pt/tema/">https://www.ua.pt/tema/</a> | 1996                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 44  | 0,94 M Euros              |

### KEYWORDS

- Manufacturing Processes and Simulation
- Nanoengineering and bio-inspired manufacturing
- Manufacturing for Circular Economy
- Multiscale technologies and devices for medicine
- Technologies for the smart cities
- Technologies for the Wellbeing

### STRATEGIC AIMS

TEMA intends to maximize its national and international impact in terms of scientific productivity and its transfer to society by tackling the relevant challenges of our time, keeping the focus on classical mechanical engineering research as well as cutting-edge development areas.

### RESEARCH UNIT DESCRIPTION

Grounded on its human capital and their competences, TEMA is focused on relevant societal challenges aiming to contribute to a sustainable industry and to the wellbeing of people, translated into two mobilizing projects: Sustainable Manufacturing Solutions and Technologies for the Wellbeing. The first one is focused on the development and innovation on manufacturing engineering and technologies, with subsequent industrial applications. It is intended to increase productivity, improve products quality, and reduce waste in production processes. The strategy on Technologies for the Wellbeing aims to increase the quality of life of society by means of engineering systems, focusing on people and their needs.

TEMA Researchers contribute to sustainability in its broad sense developing research on new products based on both traditional and nanoengineering technologies; and computational and experimental tools to enhance quality, minimize costs, reduce raw materials and energy require-

ments.

TEMA researchers form one coherent group of more than 200 people with competences in the fields of applied mechanics, modelling and simulation, nanoengineering, biomechanics, transportation, and mobility technologies, applied energy, and intelligent systems, together with transdisciplinary areas aligned to the priorities of the international agenda towards equality, gender balance, diversity, and scientific and technological excellence.

TEAM's achievements: Filter system for removal of heavy metals from contaminated waters (patented). Solid-state battery, low-cost, high-energy density, and higher safety based on sulfite (patented). Modular façade with solar energy recovery for heating, air conditioning and ventilation (patented). Clean, smart, and integrated transportation systems using information and communication technology. 4D model of the functional development of tissue engineered cartilage.

## Research and Development Unit for Mechanical and Industrial Engineering

UNIDEMI



| WEBSITE         | DATE OF FOUNDATION |
|-----------------|--------------------|
| www.unidemi.com | 2003               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 42          | 1,04 M Euros |

### KEYWORDS

- Mechanical Engineering
- Industrial Engineering and Management

### STRATEGIC AIMS

Our vision is to: “Achieve world class Excellence in research, development and entrepreneurial results in the scientific areas of Mechanical Engineering and Industrial Engineering and Management”.

### RESEARCH UNIT DESCRIPTION

UNIDEMI is a Research and Development Unit in Mechanical and Industrial Engineering of Faculdade de Ciências e Tecnologia, with 42 integrated Researchers. UNIDEMI's Strategic Objectives are: Achieve Excellence in R&D Activities, Develop Excellent Multidisciplinary and Internationally Networked Research Teams, Increase Value Creation from Exploitation and Dissemination of Scientific and Technological Results.

UNIDEMI's strategy considers that it must develop a small core of very strong scientific distinctive competences, focusing on the development of 3 core scientific and technological competences that will be informally aggregated in 3 research groups according to scientific domains of the researchers. The Systems Engineering and Management Research Group has focus on the development of the Core Competence “Future Sustainable Digital Factories and Services” supported by specific themes of industrial systems like Lean, Green and Sustainability, Supply chain Management, Digital Platforms, Systematic Innovation, Quality

Engineering, Service Design, Axiomatic Design Theory, User-Centred Design, Design Thinking, Portfolio, Program and Organizational Risk Management, Human-Systems Interfaces for Cognitive Ergonomics. At Manufacturing and Technology Automation Research Group there is a high focus on the Core Competence of “Advanced Manufacturing Processes” addressing welding, friction stir processing, composites machining, destructive and non-destructive testing, in different materials, and manufacturing and operational contexts. At Fluid and Structure Engineering Research Group the focus is on the core competence “Fluid and Structures” addressing additive manufacturing and the innovative manufacturing processes and geometric and topologically optimized structures with different materials and aerodynamic studies.

## Research Center for Endogenous Resource Valorization

VALORIZA



| WEBSITE                          | DATE OF FOUNDATION |
|----------------------------------|--------------------|
| http://valoriza.ipportalegre.pt/ | 2018               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 29          | 0,52 M Euros |

### KEYWORDS

- Endogenous resources
- Bioenergy
- Environmental sustainability
- Waste valorization
- Low density territories
- Cross border cooperation

### STRATEGIC AIMS

VALORIZA is research unit whose scope of activity and strategic objectives converge towards the valorisation of endogenous resources in low-density territories with a rural and cross-border matrix and has its main objective is the promotion of applied research activities, based on experimental development and on knowledge transfer, with potential impact on territorial development processes and dynamics and Circular Economy promoting sustainable development.

### RESEARCH UNIT DESCRIPTION

VALORIZA - Research Center for the Valorization of Endogenous Resources focuses on the investigation and valorization of endogenous resources, assuming disadvantaged, low-density territories with necessary characteristics, as a field of research with specific, suitable characteristics. institutional mission of an institution with regional and capacity building, such as the Polytechnic Institute of Portalegre.

VALORIZA has privileged links to the region's socio-economic fabric, through a close and integrated approach of entities linked to the public and private sectors, with special emphasis on companies operating in the region, consolidating a strong network of partnerships. There are about 36 national and 87 international partners with

which it develops its R&DT activity.

The research team, with distinct institutional affiliations to universities and polytechnics, brings together skills, recognized and scientifically validated, at national and international level, in multiple areas of knowledge (engineering sciences and agronomy, economics and management, social sciences, education and technologies of information). VALORIZA has a set of analytical laboratories, as well as industrial laboratories where a set of pilot units is installed that allow the development of technological demonstration works.

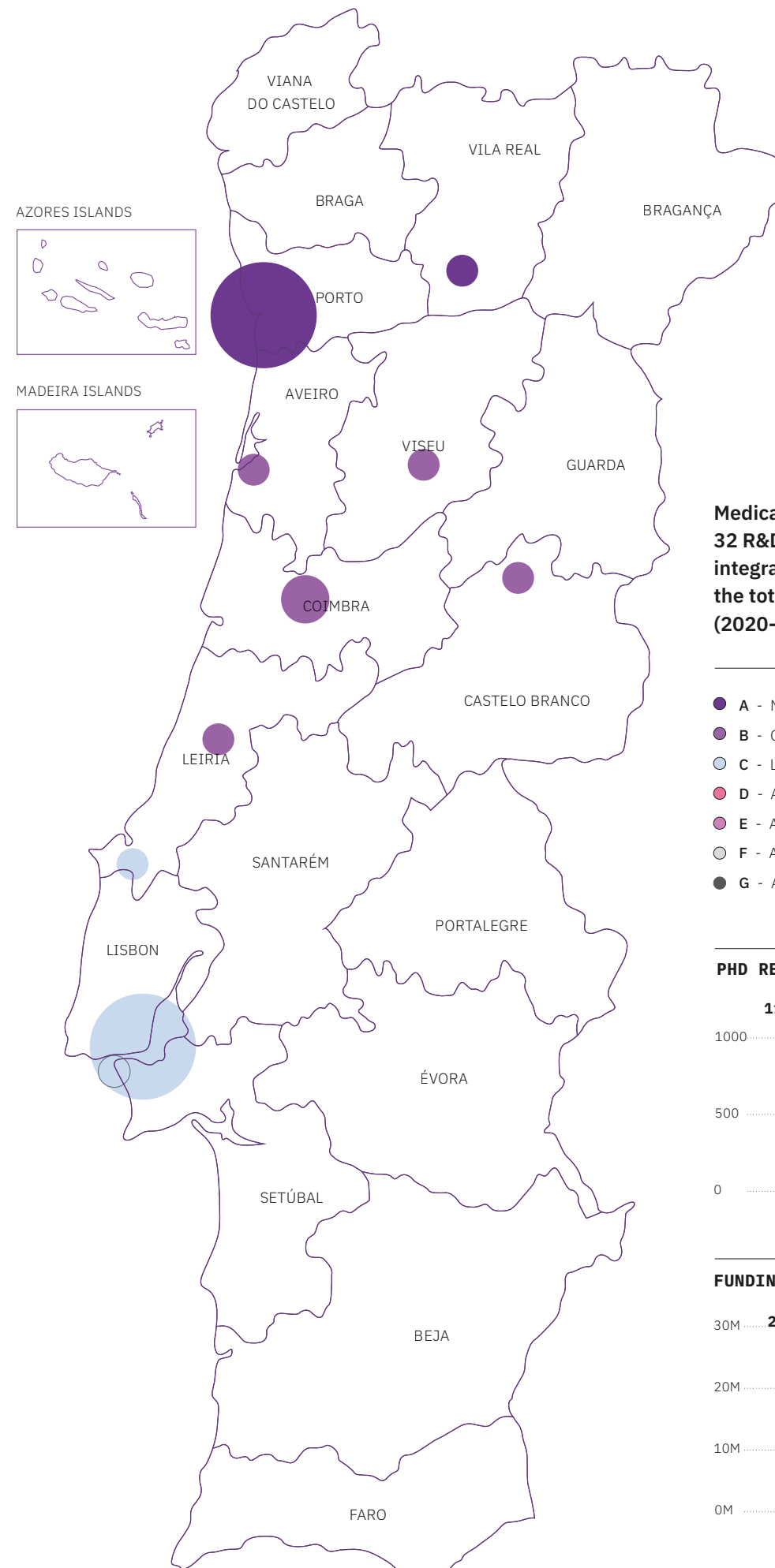
VALORIZA's achievements: 36 national partners and 87 international partners. 3 Strategic R&TD Partnerships (Co-LAB BIOREF, Laboratório Circular do Alentejo, Fórum da Energia e Clima).



# Medical and Health Sciences

# S.2.3

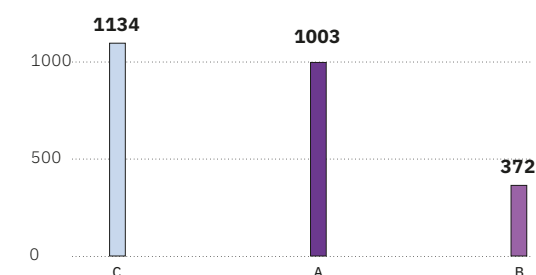
- CBIOS
- CCUL
- CHRC
- CIAFEL
- CIBIT
- CICS-UBI
- CIDAF
- CIDESD
- CIFI2D
- CIIEM
- CI-IPOP
- CIIS
- CINTESIS
- CIPER
- CIR
- CITECHCARE
- CR
- EPIUNIT
- GHTM
- H&TRC
- I3S
- IBIMED
- IGC
- IMED.ULISBOA
- IMM
- INOVA4HEALTH
- ISAMB
- MEDINUP
- TOXOMICS
- UICISA: E
- UMIB
- UNIC



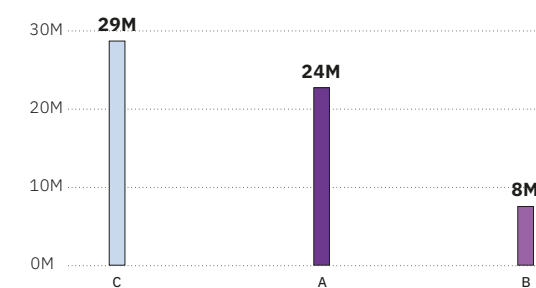
Medical and Health Sciences include 32 R&D Units (10.3% of the total) integrating 2509 researchers (13.5% of the total) and with a FCT funding of 61 M€ (2020-2023).

- A - NORTHERN
- B - CENTRAL
- C - LISBON METROPOLITAN AREA
- D - ALENTEJO
- E - ALGARVE
- F - AUTONOMOUS REGION OF AZORES
- G - AUTONOMOUS REGION OF MADEIRA

PHD RESEARCHERS



FUNDING (M€)



## Research Center for Biosciences & Health Technologies

CBIOS



| WEBSITE                   | DATE OF FOUNDATION |
|---------------------------|--------------------|
| http://cbios.ulusofona.pt | 2011               |
| RESEARCHERS               | FUNDING FCT        |
| 15                        | 0,66 M Euros       |

### KEYWORDS

- Pharmacology
- Phytochemistry
- Nutrition
- Drug delivery systems

### STRATEGIC AIMS

To support societal progress by improving advanced collaborative research, with translational potential in health sciences based on the development of local goods, the promotion of well-being, and the applied knowledge empowerment of researchers and health professionals. CBIOS has a unique vision resulting from being part of the Ensino Lusófona group, a dynamic institution of education, culture, and knowledge present in most of the Portuguese language speaking countries.

### RESEARCH UNIT DESCRIPTION

CBIOS, the Research Center for Biosciences & Health Technologies is a COFAC / Universidade Lusófonas' research unit created to develop Integrated Health Strategies. As a university-based unit, CBIOS is firmly committed to Diversity, Equity, and Inclusion. It is privileged to operate within a broad-minded, multidisciplinary environment essential to foster innovation, promote advanced learning, and attract dynamic young researchers from different backgrounds and cultures. CBIOS currently includes 23 integrated members, 23 PhD students, 15 collaborators, and a wide collaborative network, operating in five research domains: Natural Bioactives, Development of Delivery Systems, Pharmacology and Molecular Mechanisms, Modelling Systems, and Nutrition and Health Pro-

motion.

CBIOS strategies involve (i) research on goods from Portugal & South America with potential interest for health products (ii) investigation on local health determinants to implement new approaches and strategies (Portugal, Africa & South America) (iii) to share and transfer findings and knowledge to society including industry (iv) intertwining R&D with all levels of higher education (v) to host international students and provide a special support in advanced programs at all levels, promoting mobility (students and collaborators) and developing its collaborative network. CBIOS achievements: Aligned with FCT Thematic R&I Agendas, 17 SDGs and Horizon Europe in promoting societal science awareness. Full participation in numerous COST initiatives and Erasmus+ programs, well-established partnership with Alcalá de Henares University. Repeated recipient of and contributor to the Scientific Employment Stimulus program. Committed and competitive applicant to opportunities for funding, grants, and prizes.

## Cardiovascular Centre at the University of Lisbon

CCUL



| WEBSITE         | DATE OF FOUNDATION |
|-----------------|--------------------|
| http://ccul.pt/ | 1980               |
| RESEARCHERS     | FUNDING FCT        |
| 32              | 0,70 M Euros       |

### KEYWORDS

- Cardiovascular diseases
- Cardiovascular research
- Cardiovascular disease prevention
- Cardiovascular therapeutics
- Cardiovascular diagnosis

### STRATEGIC AIMS

CCUL's goals: To promote multidisciplinary science of excellence in the Cardiovascular field. To provide graduated teaching education and structured training programmes. To strength collaborations being more competitive. To increase worldwide scientific network to internationalize medicine, science and education, thus having global impact. To involve society promoting scientific literacy, educating people to prevent and reduce cardiovascular disease.

### RESEARCH UNIT DESCRIPTION

The Centro Cardiovascular da Universidade de Lisboa (CCUL) is a biomedical research institute committed to improve the understanding of cardiovascular disease (CVD) processes by following the standards of excellence in research, clinical care and medical education. CCUL's main goal is to translate cardiovascular research discoveries into the development of new strategies to prevent CVD and improve patient management. Since CVD is the world's leading cause of death, CCUL promotes scientific literacy, educating people to prevent and control CVD and conducting actions in schools. As a research centre of the Lisbon School of Medicine, Universidade de Lisboa (FMUL), CCUL integrates the Academic Medical Center of Lisbon, together with the Santa Maria

University Hospital (HSM-CHLN) and the Instituto de Medicina Molecular (iMM). It provides a vibrant environment to share both new ideas and research platforms (such as Cardiomics; Small Animal Echocardiography Unit; Bioimaging; Biobank; Histology and Comparative Pathology Lab; Rodent and Zebrafish Facilities; Flow Cytometry). In 2019, CCUL was evaluated by FCT, achieving a Very Good grade. In 2021, CCUL integrated the RISE, a consortium with CINTESIS, UnIC – Cardiovascular Research Unit and the CI-IPOP (IPO Porto Research Center – IPO-Porto). RISE was awarded with the title of Laboratório Associado. CCUL's achievements: Around 130 ongoing clinical studies (2020/2021). Educational resource/School Programs "For a Healthy heart" and several public events.

## Comprehensive Health Research Center - Research, Education, Training and Innovation in Clinical research and Public Health

CHRC



| WEBSITE             | DATE OF FOUNDATION |
|---------------------|--------------------|
| www.chrc.nms.unl.pt | 2020               |
| RESEARCHERS         | FUNDING FCT        |
| 125                 | 3,25 M Euros       |

### KEYWORDS

- Clinical research
- Public Health
- Wellbeing
- Research
- Education and training
- Innovation

### STRATEGIC AIMS

The CHRC aims to produce robust scientific evidence to improve current clinical practice, public health, and epidemiological research. In this way, we aim to create advanced teaching and training for researchers and students, provide community health services, and enhance population health literacy. We also seek to expand the international network of research, transfer knowledge and technology, and increase our ability to attract public and private funding.

### RESEARCH UNIT DESCRIPTION

CHRC is a holistic R&D unit aiming at responding to societal needs in a multidisciplinary way. We believe that research should not be closed in a lab but deemed to solve problems and issues with social impact. To that end, we are sure that the key to success is multidisciplinary groups that contribute and work towards the same goals. CHRC is not focused on single diseases but studies subjects as a whole, in their own environment, social and economic conditions, and integrating populations, society, and social and healthcare systems. It is fundamental to involve all sectors of society in solving practical health and wellbeing problems that impact global society. The need to increase citizen engagement, increase education and literacy, promote citizens' responsibility for their health and

wellbeing is therefore ineluctable.

Therefore, the CHRC integrates researchers from different institutions with distinct backgrounds and skills, who work together towards a common goal: improving the health and wellbeing of individuals and populations.

CHRC's achievements: In 2020, CHRC presented a total of 539 publications. About half of this number (262) corresponds to scientific articles published in high impact journals (Q1 or Q2 – SCOPUS index). The CHRC PhD integrated researchers are involved, as principal investigators or participants, in 124 funded projects, national and international. Integrated members of the CHRC are involved with a total of 48 networks and working groups, as well as 29 initiatives, actions, and activities in collaboration with international consortia, at European and global levels, related to all CHRC thematic lines. In 2020, CHRC researchers participated actively in 104 civil societies or scientific organizations, carried out 64 activities that contribute to the dissemination of scientific knowledge in civil society, and 60 provided services to the community. Finally, CHRC integrated members made more than 500 contributes to the mass media.

## Research Center in Physical Activity, Health and Leisure

CIAFEL



| WEBSITE                  | DATE OF FOUNDATION |
|--------------------------|--------------------|
| http://ciafel.fade.up.pt | 2004               |
| RESEARCHERS              | FUNDING FCT        |
| 30                       | 0,84 M Euros       |

### KEYWORDS

- Exercice
- Health
- Aging
- Population
- Behaviour
- Interventions

### STRATEGIC AIMS

The CIAFEL's scope is to promote and disseminate basic/applied research in the field of health-related physical activity; promote advanced academic training and development of human resources; develop community intervention programs for health prevention; and provide consultancy and services.

### RESEARCH UNIT DESCRIPTION

The CIAFEL is a Health Science Research Unit supported by the Fundação para a Ciência e a Tecnologia, hosted by the Faculty of Sport at the University of Porto, Portugal. The CIAFEL's scope is to (i) promote and disseminate basic/applied research in the field of health-related physical activity; (ii) promote advanced academic training and development of human resources; (iii) develop community intervention programs for health prevention; and (iv) provide consultancy and services.

CIAFEL is led by one Director who is responsible for the unit's activities management, and encompasses integrated and associated members from multiple backgrounds, from sport sciences to health sciences. Additionally, an external advisory board composed by international research experts advises the director and the board on policy and research-related issues. CIAFEL places a strong emphasis in multidisciplinary national and international

collaboration and partnerships, developing its activities in close cooperation with several researchers, individualities and stakeholder's exchanging knowledge and competencies; which has been translated into several international/national projects, activities and publications.

CIAFEL members published in scientific peer-reviewed journals, averaging over 3 articles per researcher per year, being 80% between 1st and 2nd Quartile. Funding from the European Commission. Between 2013 and 2017, researchers succeeded to secure 43 projects of which 9 International and funded by NIH and the European Commission for about 1,8 million Euros. The majority of the team has performed innovative research of recognized quality and merit at national and international level. CIAFEL comprise expert consultants in the development of global and national strategies, policies, and as office bearers and national representatives on international and national professional organizations. CIAFEL has implemented a number of very good community based programs as well as some clinical trials.

## Coimbra Institute for Biomedical Imaging and Translational Research

CIBIT



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.uc.pt/en/uid/cibit/">http://www.uc.pt/en/uid/cibit/</a> | 2009                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 44  | 1,35 M Euros              |

### KEYWORDS

- Brain Imaging
- Molecular imaging, PET/Ciclotrão
- Biomarker Research/ Data Mining
- Neurophysiology/Brain Computer Interfaces
- Magnetic Resonance and Multimodal Imaging
- Clinical and Translational Research

### STRATEGIC AIMS

CIBIT's mission includes basic, translational research and development and exploitation of new imaging Technologies driving development of and/or access to state-of-the-art imaging and physiological instrumentation (MRI, EEG, TMS, PET, CT, fNIR (and combined modalities)).

### RESEARCH UNIT DESCRIPTION

CIBIT is based at ICNAS, University of Coimbra which hosts an infrastructure of the National Roadmap, implemented after international evaluation. Our Research Unit - previously integrated in CNC. IBILI with international panel evaluation of Excellent - features a fully translational biomedical research effort, from design of new molecular probes to human imaging of structure, chemistry, and function with a focus on the human brain and biomarker research. ICNAS integrates multimodal facilities from Molecular Imaging using locally produced (in-house Cyclotron) probes to MR Imaging. We represent the Medical Imaging Branch of EU funded EuroBioimaging Network. Our leadership of initiatives such as the Brain Imaging Network are instrumental for the national scientific development and we focus on Clinical Neuroscience and Biomarker development approaches. Our participation in the National Roadmap, approved after international evaluation, is justified by the large set of modalities involved all

centralized at our central facility at the University of Coimbra, Portugal. The range of our activities cover all the Medical Imaging workpackages of Eurobioimaging, from translational research using Molecular and Functional Imaging techniques to basic and clinical research in neuroscience, including clinical trials in areas where functional and molecular imaging biomarkers are critical. The level of complementarity is very high also because of our specialized radiochemistry Unit that can synthesize new compounds for molecular imaging in humans. Moreover we have also the possibility of programming new MR imaging approaches taking advantage of the research collaboration with Siemens and interactions with centres such as John Hopkins Hospital, The Martinos Centre at Harvard Medical School and others. We share patient databases of a few hundred subjects. We do have several running clinical trial contracts, investigator driven trials and have research agreements with the industry.

## Health Sciences Research Centre

CICS-UBI



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.cics.ubi.pt/">http://www.cics.ubi.pt/</a> | 2003                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 67  | 1,16M Euros               |

### KEYWORDS

- Hormones and metabolism
- Oncobiology
- Health Biotechnology
- Biomaterials
- Neurosciences
- Drug research

### STRATEGIC AIMS

CICS-UBI's strategic aims are to characterize the molecular and cellular mechanisms underlying the onset and progression of neurological and neurovascular diseases, endocrine disorders, and cancer, for the identification of disease biomarkers and therapeutic targets. CICS-UBI also pursues the development of novel drugs, biopharmaceuticals, biomaterials, and improved drug delivery methods for diagnostic and therapeutic applications, with impact in clinical outcomes and quality of life.

### RESEARCH UNIT DESCRIPTION

The Health Sciences Research Centre (CICS-UBI) is a research unit of the University of Beira Interior (UBI), whose mission is to conduct basic biomedical research, pre-clinical, translational, and advanced training, stimulating innovation and transfer of knowledge and technology to society and industry. The unit is installed in a 2000 m<sup>2</sup> building on the Faculty of Health Sciences campus and includes laboratories with state-of-the-art equipment for proteomics, cell culture, electron microscopy, flow cytometry, electrophysiology, microbiology, chromatography, organic synthesis, and pharmaceutical technology. The fluorescence microscopy, nuclear magnetic resonance and genomic laboratories are nodes of the Portuguese Platform of Bioimaging, Portuguese Nuclear Magnetic Res-

onance Network, and Portuguese Platform of Genomics. CICS-UBI also has a licensed and equipped animal facility with exceptional conditions for pre-clinical studies.

The CICS-UBI team brings together researchers with scientific backgrounds in various fields such as biochemistry, biology, pharmaceutical sciences, chemistry, biomedical sciences, and medicine. Researchers are organized in research groups in the following areas: Biopharmaceuticals and Biomaterials; Biomedical Chemistry and Drug Research; Hormones and Metabolism and Neurologic and Neurovascular Disorders.

CICS-UBI's achievements: Development of methods to diagnose drug intoxications, and assay the consumption of drugs of abuse. Development of a patented product of natural origin to treat recurrent vulvovaginal candidosis. Development of biopharmaceuticals (proteins and nucleic acids) for the therapy of cancer and Alzheimer disease. Demonstration that the metabolic profile of prostate cancer is dependent on androgens. Development of microformulations with therapeutic actions in models of Parkinson's disease and stroke.



## Research Unit for Sport and Physical Activity

### CIDAF

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.uc.pt/fcdef/Investigacao/CIDAF">http://www.uc.pt/fcdef/Investigacao/CIDAF</a> | 1996               |
| RESEARCHERS   | FUNDING FCT        |
| 18  | 0,39 M Euros       |

#### KEYWORDS

- Auxology
- High-Performance Training
- Immunology
- Ageing
- Youth Sports

#### STRATEGIC AIMS

Sport as a social fact is visible in the contexts of training, exercise and leisure, once as it corresponds to emerging socio-professional domains that clearly claim for supervision. Statistics in competitive sports illustrate an impressive dynamics: 260.000 practitioners in 1996, and, currently, >500.000. Meantime, exercise reveals a remarkable strength in new jobs. Physical activity (occupational, mobility, leisure) and the limits of performance are the primary object of CIDAF.

#### RESEARCH UNIT DESCRIPTION

The University of Coimbra is in the pole position for the emergence of innovative and multidisciplinary projects combining CIDAF and other units: CIAS (Physical Anthropology), IBILI (Faculty of Medicine), ADAI (Development of Industrial Aerodynamics).

The physically educated citizen is the reference frame for the research and, in a social context often pointed as hypokinetic. Studies will be aimed to examine physical activity and fitness levels of the organic systems. Additionally, longitudinal (developmental) studies will be performed and it is believed that they would summarize the effects of training, growth and maturation including body composition on sports performance particularly physiological indicators of the metabolic pathways and neuromuscular

performance.

Recent research was successfully done mainly on field tests (motor tasks). Regarding the elite adult athletes, the best indicators will be sought to monitor the process of adaptation to progressively more extreme training loads. Studies dedicated to the immune response in long-term sports will be continued and will be added to the collection of data pertaining to cognitive processes that enable the maximum expression of the sport performance and prevention of injury, disease, demotivation, and dropout. The ageing @ Coimbra consortium, in partnership with foreign universities, represents an advance in the study of models aimed to understand the crucial elements for the promotion of quality of life associated to aging. The study of the adaptive response of the elderly athlete and the elderly former athlete will be considered. These research options will intermediate the institutional relationship with schools, local and national sport organizations (clubs, federations and associations), exercise academies and foundations dedicated to the areas of leisure and health.

## Research Center in Sports Sciences, Health and Human Development

### CIDESD



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.cidesd.utad.pt">http://www.cidesd.utad.pt</a> | 2007               |
| RESEARCHERS   | FUNDING FCT        |
| 64  | 1,41 M Euros       |

#### KEYWORDS

- Sports Sciences
- Physical Activity
- Exercise and Health

#### STRATEGIC AIMS

The mission of CIDESD is help developing human resources, capable of handling autonomous interventions under the domains of sports sciences, health and human development. This mission is particularly integrated in the goal 3 from the Sustainable Development Goals described in the 2030 agenda from the United Nations. CIDESD's goals are articulated in 3 major domains: Research (Creative-Lab; Geron; Strong); Community Intervention and Continuous Education.

#### RESEARCH UNIT DESCRIPTION

The CIDESD is a cross-institutional technical and scientifically multi-disciplinary unity of applied research hosted in the University of Trás-os-Montes and Alto Douro and is affiliated to the European College of Sports Sciences. CIDESD is a research consortium of ten higher education institutions. Currently, the unit consists in three research communities: CreativeLab, GERON e STRONG. This research unit has the mission of developing human resources, capable of handling autonomous interventions under the domains of sports sciences, health, and human development. This mission is integrated into the Sustainable Development Goals described in the 2030 United Nations agenda: Ensure healthy lives and promote well-being for all at all ages. The CIDESD reports described a funding of

11.6 M € for 2008-2017, has more than 500 publications and more than 80 doctoral theses.

Aligned with the 2030 agenda for sustainable development CIDESD is committed to promote physical and mental health and well-being for all and to contribute to reducing the burden of chronic diseases through prevention and treatment. The centre will continue to participate in the Director General of Health Priority Program for the Promotion of Physical Activity and in the European Innovation Partnership on Active and Healthy Ageing, as well as collaborations with key institutions such as the NIHR-Leicester Biomedical Research Centre, the National Centre for Sport and Exercise Medicine, the Department of Health Sciences and the NIH-National Institute on Ageing. CIDESD is currently engaged in the summer university entitled Geoparks, Sustainable Regional Development and Healthy Lifestyles.

CIDESD's achievements: Promotion of relevant research activity in the field of Sports Science. Leader in research and intervention in the community in some areas of Sports Science. Pedagogical intervention and knowledge transfer to society with impactful projects.

## Center of Research, Education, Innovation and Intervention in Sport

CIFID2



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.fade.up.pt/cifi2d/">http://www.fade.up.pt/cifi2d/</a> | 2006               |
| RESEARCHERS   | FUNDING FCT        |
| 24  | 0,38 M Euros       |

### KEYWORDS

- Sport, performance, health, education

### STRATEGIC AIMS

The CIFID2 develops its activity in the field of Sport Sciences and its interfaces and aims to carry out research and training of researchers in this field, as well as transfer and apply the existing knowledge for the different contexts and crafts of Sport. In this sense, it performs: research in several areas of Sport and related; training of postgraduate students, specialists and technicians; consulting, evaluation and diagnosis in several areas; and services and interventions in the community.

### RESEARCH UNIT DESCRIPTION

The CIFID2 is a research unit hosted in the Faculty of Sport of the University of Porto. Although its scientific framework is in the Sports Sciences, CIFID2 also uses other disciplines that can contribute to the enrichment of the multidisciplinary analysis of its research objects. In fact, recognizing Sport as a complex cultural and social reality, which requires systematic study to analyze problems with a multidimensional and multidisciplinary nature, CIFID2 considers it essential to promote the interaction and sharing of approaches from different but complementary perspectives and positions, benefiting to the effect of an extensive and diversified network of national and international collaborators. The interests of CIFID2 are diverse, ranging from cultural and social issues that shape Sport

in its scope, to structural and functional issues associated with the organization, management and evaluation of the specific teaching/learning processes of Sport in different contexts, not forgetting the interactions between the actors.

The CIFID2 is also concerned with issues related to the key players in the sports process, seeking to study the variables that allow maximizing the levels of performance, satisfaction and well-being of participants in the sports scene, but also the extent and depth of the benefits of such participation. To this end, CIFID2 will invest in strengthening the material and financial conditions for high-quality research and, in particular, human resources; it is also seen as crucial to increase the opportunities for scientific employment positions for the young people who are being graduated. In addition, CIFID2 considers it fundamental to strengthen and expand collaboration with prestigious colleagues and national and international institutions and disseminate the results of its scientific activity in the most important scientific journals, not forgetting, however, the transfer of knowledge to the community.

## Egas Moniz Interdisciplinary Research Center

CIIEM



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ciiem.egasmoniz.edu.pt">http://ciiem.egasmoniz.edu.pt</a> | 2013               |
| RESEARCHERS   | FUNDING FCT        |
| 43  | 0,75 M Euros       |

### KEYWORDS

- Environmental Health
- Microbiology
- Forensic Sciences
- Psychological Sciences
- Clinic
- Biomaterials

### STRATEGIC AIMS

CiiEM's strategic aims: Excellence: Promote high quality scientific work; Increase the number and quality of research projects; and Set up and participate in clinical Big Data databases. Dissemination: Open Science policy. Visibility: Increase the profile of areas such as Periodontology; Veterinary, Forensic services. Outreach: Empower Clinics and Services and creating an innovation and entrepreneurial culture by supporting the creation of startups and networking with regional startup incubators.

### RESEARCH UNIT DESCRIPTION

CiiEM is the Research Centre of Egas Moniz (EM). The Centre is one of the priorities of the Cooperative and represents a nucleus of innovation and knowledge creation. It aims to implement a paradigm of translational research and teaching in collaboration with other EM functional structures. It focuses strongly on community interactions in different contexts, including health, health-related sciences, and social services. Composition and organization: CiiEM is composed of 17 laboratories that also supply teaching and support services for EM. These operate research projects, providing the creation and dissemination of knowledge and advanced training in a research environment while positioning CiiEM between academic education, society, industry and clinical practice.

There are four main thematic areas of the CiiEM: Environmental Health; Clinical Research; Public Health Microbiology and Forensic Sciences and Psychology.

The CiiEM has a new area of Veterinary Sciences, thus complementing the professional training and development of Egas Moniz students in a biomedical field that is critical for economy.

CiiEM's achievements: Consolidation of CiiEM organization and procedures, including the implementation of an ISO 9001:2015. The CiiEM's research activity was leveraged through special research project calls (Egas Moniz/CiiEM Investiga); Training in translational scientific procedures and startup calls (Egas Moniz/CiiEM StartUP programme) and increasing the involvement of CiiEM in the training and research of PhD students and early students. CiiEM enhanced its connections and networking with National and International organizations and is actively increasing its participation in European calls.

## IPO Porto Research Center

### CI-IPOP



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.ipoportor.pt/centro-de-investigacao/">http://www.ipoportor.pt/centro-de-investigacao/</a> | 2004               |
| RESEARCHERS   | FUNDING FCT        |
| 45  | 1,24 M Euros       |

#### KEYWORDS

- Cancer Genetics
- Molecular Oncology
- Cancer Epigenetics
- Experimental Pathology
- Medical Physics and Radiobiology
- Clinical oncology and epidemiology

#### STRATEGIC AIMS

CI-IPOP long-term objective is understand pathobiologic mechanisms of tumorigenesis and enable Precision Oncology. Patient-centred translational and clinical research is focused on: Development of new diagnostic, prognostic & monitoring biomarkers using liquid biopsies; Identification of novel therapeutic targets to be tested in early phase clinical trials; Development of bioimaging, bioinformatics, and outcome assessment tools. Development of Precision Oncology Program at IPO Porto (POP-IPOP).

#### RESEARCH UNIT DESCRIPTION

CI-IPOP is hosted by Instituto Português de Oncologia do Porto, the largest specialized Portuguese cancer centre dedicated to patient care, training, and research in Oncology. IPO Porto is accredited by Organization of European Cancer Institutes as Comprehensive Cancer Center in consortium with Instituto de Investigação e Inovação em Saúde (I3S).

CI-IPOP is a FCT R&D unit since 2004, rated as Excellent in the last international evaluation. CI-IPOP includes 243 members.. Of CI-IPOP members, 152 are IPO-Porto staff, including 64 medical doctors, 33 laboratory health technicians and 18 researchers. Also, CI-IPOP includes 51 members with scholarships (4 postdocs, 28 PhD students and 19 research assistants) and 23 MSc students. CI-IP-

OP has 5 translational research groups (Cancer Biology & Epigenetics; Cancer Genetics; Experimental Pathology & Therapeutics; Medical Physics, Radiobiology & Radiation Protection; and Molecular Oncology and Viral Pathology), in addition to Cancer Epidemiology; the Management, Outcomes Research and Economics in Healthcare; and a Clinical Research Unit that has 141 active clinical trials. CI-IPOP activity is supported by IPO Porto's Biobank and by an Early phase clinical trials Unit dedicated to investigator-initiated trials.

CI-IPOP's achievements: Using liquid biopsies and making use of epigenetics we identified new cancer biomarkers for screening/detection and to assist in clinical management for the four-major malignancies, and in urological cancers. The applicability of an Extracellular vesicle derived miRNA profile was shown as prognostic biomarker in ccRCC. Next-generation Gene panel testing in ovarian cancer patients significantly increased the yield of clinically actionable germline variants beyond BRCA1/BRCA2. A comprehensive analysis of the sialyl-Lewis A antigen associated glycoproteome of gastric cancer cells identified nucleolin as a potential targetable biomarker for Precision Oncology.

## Center for Interdisciplinary Research in Health

### CIIS



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://ics.lisboa.ucp.pt/pt-pt/">http://ics.lisboa.ucp.pt/pt-pt/</a><br><a href="http://salivatec.viseu.ucp.pt/ciis/">http://salivatec.viseu.ucp.pt/ciis/</a> | 2015               |
| RESEARCHERS  | FUNDING FCT        |
| 40   | 1,01 M Euros       |

#### KEYWORDS

- Translational Precision Health and Care
- Molecular Mechanisms and Biomarkers
- Digital Health
- Multidata Integration
- Community Empowerment
- Vulnerable Individuals and Groups

#### STRATEGIC AIMS

CIIS is committed to R&I in specific Health sectors producing knowledge for evidence-based, translational, and health policy. Its goals are to generate knowledge on Precision Health namely on chronic diseases and vulnerable groups; to explore digital technology and innovation for diagnostics, monitoring and healthcare solutions, build scientific support for innovation in Health training and use digital media design to promote overall Health and Health Literacy.

#### RESEARCH UNIT DESCRIPTION

Solutions in Health are needed, CIIS makes it happen. CIIS exists in Lisboa, Porto and Viseu, it involves 4 academic units and includes Medicine, Dental Medicine, Biomedicine, Neurosciences and Nursing researchers. What makes CIIS unique—Biomedical, Clinical and Translational Research. CIIS focuses on the comprehension of disease mechanisms and health determinants, targeting disease prevention, treatment, and efficient management, as well as the promotion of health and life conditions. CIIS produces molecular, clinical, and quality of life multidata with the potential to generate new solutions in Health and Care. CIIS and knowledge transfer—Solutions for a Participated and Preventive Health. CIIS collaborates with technology-based companies (including digital technologies),

creating an ecosystem for the design of eHealth solutions to support clinical decision and intervention; diagnostics with a personalization potential (including non-invasive solutions); intervention in health policies and promotion of health literacy.

CIIS is organized in platforms: Translational Neuroscience - Lisboa e Porto; Nursing Research – Porto e Lisboa; CatólicaMed- Lisboa; SalivaTec- Viseu; Precision Dental Medicine- Viseu. Other Infrastructures: University Dental Clinic, Laboratory for COVID19 diagnosis, Portuguese Observatory for Palliative Care, Nursing Care Centres.

CIIS's achievements: Development of COVID-19 detection in saliva and laboratory certification for service to the community. Molecular and cellular mechanisms by which HDAC inhibitors act on myeloid neoplasms. Patent application for thermal-tactile stimulation sleeve. OeHMP for multi-data collection and integration, creating solutions for Precision Dental Medicine.

## Center for Health Technology and Services Research

### CINTESIS

#### WEBSITE

<http://cintesis.eu/>

#### RESEARCHERS

198

#### FUNDING FCT

3,32 M Euros

#### KEYWORDS

- Preventive Health & Societal Challenges
- Clinical and Translational Research
- Health Data, Decision & Information Technologies
- Ageing & Neurodegenerative Diseases
- Primary Health Care
- Nursing

AgentScape, Gnomon), research services (e.g. Health Cluster Portugal, Novartis) and academic entrepreneurship (e.g. U.Porto Spin-Off seal).

Briefly, CINTESIS has a majority of Integrated PhD researchers performing innovative and high-quality R&D activities, being a national reference in the fields of health information technologies, ageing, primary care and nursing, and an international reference in fields such as gastrointestinal oncology, inflammatory bowel disease and asthma.

#### STRATEGIC AIMS

CINTESIS's address keys on Health and Societal Challenges: Preventive Medicine & Societal Challenges, Clinical & Translational Research and Health Data and Decision Sciences & Information Technologies.

#### RESEARCH UNIT DESCRIPTION

CINTESIS, Center for Health Technologies and Services Research, is currently hosted by the Faculty of Medicine of the University of Porto (FMUP) and relies on a decentralized and flexible management structure involving nearly 500 researchers and 46 partner institutions (29 HEI, 12 hospitals/healthcare institutions and 5 health companies), of which 8 are management institutions from 5 Universities and 1 polytechnic.

It comprises 23 research groups that address key Health and Societal Challenges and are clustered in 3 main thematic lines: TL1 Preventive Medicine & Societal Challenges, TL2 Clinical & Translational Research and TL3 Health Data and Decision Sciences & Information Technologies. Between 2015 and 2017, the number of CINTESIS researchers increased from 382 to 485. CINTESIS members launched 7 spin-offs and implemented strategic actions to promote knowledge transference. As a result, CINTESIS achieved research partnerships with private and public sectors (Glintt, Promptly, Marand, Veratech, Euroscm,

## Interdisciplinary Center for the Study of Human Performance

### CIPER



#### WEBSITE

[www.ciper.fmh.ulisboa.pt](http://www.ciper.fmh.ulisboa.pt)

#### DATE OF FOUNDATION

1999

#### RESEARCHERS

60

#### FUNDING FCT

1,36 M Euros

#### KEYWORDS

- Sports Practice
- Physical Activity, Sedentary Behaviour and Health
- Bio-behavioral interventions
- Exercise Physiology
- Neuromuscular Biomechanics
- Exercise and Sport Psychology

#### STRATEGIC AIMS

The mission of CIPER is to generate and promote knowledge of human performance to improve the quality of life of individuals and society, and to improve sports performance. For that interdisciplinary research is focused on the social increase in sedentary behaviour, and its impact on health and well-being; and lifelong sport participation. CIPER aims translate research into health policies and sport practices tailored for the individual and community approaches.

#### RESEARCH UNIT DESCRIPTION

The Interdisciplinary Centre for the Study of Human Performance (CIPER) was classified as "Very Good" and is located at the Faculty of Human Kinetics, University of Lisbon. CIPER has promoted interdisciplinary research synergies by applying multidimensional and bio-psychological models for the understanding of human behaviour and performance determinants and their optimization in different contexts, taking into account the lifespan and human diversity, including disability. Human development, motor behaviour, self-regulatory processes, and aging mechanisms have been studied in order to promote health and well-being, as well as performance improvement within the contexts of family, community, education, health, work and sport. CIPER's four research groups re-

search on: BIOLAD – Experimental and analytic models of performance analysis, training monitoring, and tracing and explaining expertise; Neuromechanics– experimental and modeling methodologies for the evaluation of mechanical load and musculoskeletal adaptation; Self-Regulation - processes regulating the adoption of healthy lifestyles and development of motivational behavioural interventions; Healthy Weight - Diagnostic methods, identification of mechanisms, and design of intervention models and strategies for the prevention and treatment of non-communicable chronic diseases through improved physical activity, and reduced sedentary behaviour

Achievements: Key developer of cutting-edge science, innovation and technological advances in sport and physical activity. Obtained several European funded projects to research physical activity and health. Develops advanced research capacity on human kinetics among young, middle-career and senior researchers.





## Research for Rehabilitation Center

CIR

**WEBSITE**

<http://cir.ess.ipp.pt/>

**DATE OF FOUNDATION**

2017

**RESEARCHERS**

17

**FUNDING FCT**

0,33 M Euros

**KEYWORDS**

- Rehabilitation
- Biomechanics
- Human Movement
- Motor Control
- Psychosocial
- Neurocognition

**STRATEGIC AIMS**

Develop and/or test interpretive, explanatory and predictive models and strategies, processes, products/technologies for assessment, measurement and intervention in the (Re)habilitation Sciences.

**RESEARCH UNIT DESCRIPTION**

The Center of Rehabilitation Research is a research and development (R&D) unit dedicated to the field of rehabilitation sciences, in motor, cognitive and psychosocial perspective, throughout the life cycle and its complications and interrelationships with activities and participation, CIR is composed by 17 Ph.D. integrated researchers and 61 collaborators (22 with a Ph.D. and 36 Ph.D. students). The Unit englobes two main areas, one dedicated to the study of the Human Movement System (Re)habilitation and another dedicated to the study of Psychosocial Rehabilitation.

In 2020, the CIR was involved in 1 prototype (VirtualTherapy) and several international projects (p.ex. Safe Health Elderly Monitoring (SAFHE), MASSIVE, Digital Diagnostic Device for post-stroke motor recovery (3D's-Stroke).

## Center for Innovative Care and Health Technology

CITECHCARE

**WEBSITE**

<http://sites.ipleiria.pt/citechcare/>

**DATE OF FOUNDATION**

2013

**RESEARCHERS**

26

**FUNDING FCT**

0,40 M Euros

**KEYWORDS**

- HealthCare
- Health Promotion
- Technology and Quality of Life
- Rehabilitation and wellness
- Clinical Engineering
- Nutrition and Food Innovation

**STRATEGIC AIMS**

ciTechCare's goals: promote healthy behaviours and increase health literacy; design and patent disease monitoring devices, computer aided early-diagnosis systems and digital technologies adapted to target real needs experienced by patients; prototype innovative systems to promote functionality and independent living in patients with reduced autonomy; conduct clinical trials to validate the developed products and assure its rapid translation to clinical practice and to the society.

**RESEARCH UNIT DESCRIPTION**

ciTechCare presents itself as an innovative research and development unit, differentiated from others by its multidisciplinary and inter-professional combination of expertise, to promptly deliver state-of-the-art solutions for health promotion and illness prevention, particularly regarding cardiovascular, respiratory, and metabolic diseases.

Our mission is to excel the development of technologies to help physicians attain faster early diagnosis and therapy, to deliver healthier nourishment solutions and to empower patients and caregivers with incremental life quality tools, in a broad preventive perspective of what healthcare should be. Our vision relies on a multidisciplinary and inter-professional collaboration, to deliver better

and faster solutions to improve health, prevent illness and circumvent current difficulties that patients, caregivers, and healthcare practitioners face on a daily basis. Combining the expertise of physicians, nurses, health therapists, physiologists, nutritionists, microbiologists, statisticians, epidemiologists, and engineers, ciTechCare maintains a privileged relation with Leiria Central Hospital, with primary healthcare institutions and with local food and product development industries that will be paramount for the success of our translational research strategy, a goal to which all members are highly committed.

The pre-established interinstitutional network with healthcare providers, municipalities, schools, and product development companies supports the expansion of a regional value chain that will allow researchers to easily identify questions that concern the surrounding community. With this, ciTechCare will assure a practice-based approach to deliver solutions in partnership with local industry stakeholders.

## Champalimaud Research Programme

CR

Fundação  
Champalimaud

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://research.fchampalimaud.org/en/research/">http://research.fchampalimaud.org/en/research/</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 93  | 1,69 M Euros       |

### KEYWORDS

- Systems neurosciences
- Behaviour
- Neural Circuits
- Brain-Body Interactions
- Organismic Biology

### STRATEGIC AIMS

CR groups study higher-order cognitive functions, such as decision-making, working memory and learning, as well as universal functions such as motor control, sensory perception and sensory-motor integration, and social behaviour, a major driver of brain evolution. In parallel, studies on the interplay between neurons, glia and lymphocytes, cellular interactions during regeneration upon brain damage, and competition between cells in healthy and tumour tissues will make up some of the goals of CR.

### RESEARCH UNIT DESCRIPTION

The Champalimaud Research programme (CR) aims to conduct unconventional high-risk/high-gain research in Neuroscience and Physiology, contributing to the mission of the Champalimaud Foundation (CF) to make pioneering scientific discoveries and to translate them into solutions that improve life quality.

CF started its ambitious research endeavour by launching an innovative Neuroscience Programme that strives to understand brain function using a systems approach to study neural circuits and behaviour. The research groups of this internationally-recognised programme lead independent curiosity-based research on various topics from locomotion to higher order cognitive functions and social behaviour. As the brain lives in a body with which it interacts, to

fully understand its function CR includes researchers that study these interactions i.e. how the brain interfaces with other systems, such as the digestive system. This unique approach is integrated within the broader context of physiology in health and disease. The Physiology and Cancer programme, currently with 6 research groups, explores cellular and molecular approaches to organismic biology, from immunophysiology to ageing and cancer. Importantly, these research topics will promote CF's societal impact by strengthening ties between CF's clinical and research activities that will positively contribute to clinical care and bring novel insights in neuropsychiatry, mental health and cancer.

CR has successfully attained ERC grants (FP7/H2020): 6 Starting, 8 Consolidator, 2 Advanced and 3 Proof of Concept.

## Epidemiology Research Unit Institute of Public Health, University of Porto

EPIUNIT



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ispup.up.pt/research/epi-unit/">http://ispup.up.pt/research/epi-unit/</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 70  | 1,51 M Euros       |

### KEYWORDS

- Epidemiology
- Public Health
- Outcomes research
- Life course

### STRATEGIC AIMS

The Epidemiology Research Unit (EPIUnit) covers the population as a whole, clinical and translational aspects of epidemiology, within a strong metric and qualitative research environment. We envision excellence and innovation in epidemiologic research to cover all the phases of the public policies cycle: we contribute to identify specific problems with social relevance, formulate a health policy response, select and implement the preferred solution, and finally evaluate the policy.

### RESEARCH UNIT DESCRIPTION

The EPIUnit includes 180 integrated researchers. It is organized into 7 research groups intended to cover the major epidemiological fields of inquiry. We deliberately blend a group of medical doctors trained as physician-scientists, who keep clinical tasks together with scientific research, with scientists with varied backgrounds (nutrition, mathematics, psychology, sociology, pharmacy, health technologies). Researchers are mostly young with formal training in epidemiologic reasoning and methodologies.

We want to elucidate preventable causes of non-communicable diseases. In particular, we study the occurrence of such common scourges as obesity, diabetes, heart failure, cancer, musculoskeletal pain and psychiatric and neurological diseases. Infectious diseases are also a focus of

our research, namely, HIV, tuberculosis, and the dynamics of emerging pathogens. We want to understand how socioeconomic, demographic, psychological, behavioral and environmental characteristics intertwine in producing health experiences and health outcomes of individuals and populations and to explore diverse modes of governance, health regulation and clinical practices based on new public health concepts, such as solidarity, public engagement and literacy. The follow-up of our research cohorts supports a life course perspective and allows identifying critical and sensitive etiological periods and a better understanding of ageing.

EPIUnit's achievements: Consolidation of unique epidemiological research infrastructures: Population cohorts and Biobank. Design and coordination of the first National Dietary and Physical Activity Survey. Scientific evidence for socioeconomic position as a major determinant of health and mortality. Community stakeholders in a participatory framework-HIV in Portugal: Establishment of Checkpoint-LX. Production of more than 250 publications/year in international scientific journals.

## Global Health and Tropical Medicine

GHTM



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://ghtm.ihmt.unl.pt/">http://ghtm.ihmt.unl.pt/</a> | 2013                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 84  | 2,19 M Euros              |

### KEYWORDS

- Neglected and (re)emerging Tropical Diseases
- Malaria, Tuberculosis and HIV
- Diagnosis, Drug discovery and new therapies
- Epidemiology of infection and drug resistance
- Human Resources for Health and Universal Coverage
- Health Services Management, Policy and Planning

### STRATEGIC AIMS

Global Health and Tropical Medicine (GHTM) is a R&D centre with a unique multidisciplinary expertise on international public health and biomedical sciences, whose main goal is to improve Global Health through generation of knowledge, translational research, and capacity building.

### RESEARCH UNIT DESCRIPTION

GHTM organizational framework consists of four research groups, each embracing researchers with expertise in different areas. These are the following: Vector Borne Diseases, Tuberculosis, HIV and Opportunistic Diseases, Population Health, Policies and Services and Individual Health Care. To achieve cutting-edge outputs, the Centre operates in a transdisciplinary context in which relevant data and materials are exchanged between scientists in the different groups.

Thus, we have identified and defined five “crosscutting issues”, which we consider as “the major research areas that are of shared interest, allowing for the best integration possible between all groups, towards output optimization”. These crosscutting issues constitute the guiding principles of our forthcoming working model and are the following: a) Global pathogen dispersion and population mobility, b) Drug discovery & resistance, c) Diagnosis, d) Fair research partnerships, and e) Public health informa-

tion. When considering “global pathogen dispersion and population mobility”, we will address global dispersion of infectious diseases using multidisciplinary and integrated research approaches in collaboration with local partners in endemic settings, especially across Portuguese-speaking countries. Concerning “Drug Discovery & Drug Resistance” we will implement innovative strategies, mainly Computer-aided Drug and Insecticide Discovery and Big Data.

Our focus on “Diagnosis” will take advantage of our technical, scientific, and medical expertise to generate and validate point-of-care, multi-pathogen diagnostic tools for early detection of TB, MDR-TB, and *P. jirovecii*. To advance “Public Health Information”, we will respond to the demand for more sophisticated information management tools to support public health decision-making.

## Health and Technology Research Center

H&amp;TRC



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="https://www.estesl.ipl.pt/investigacao/centro-de-investigacao-em-saude-e-tecnologia-cist-estesl">https://www.estesl.ipl.pt/investigacao/centro-de-investigacao-em-saude-e-tecnologia-cist-estesl</a> | 2020                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 23  | 0,46 M Euros              |

### KEYWORDS

- Health Technologies

### STRATEGIC AIMS

The primary question of the H&TRC is the study of the determinants of human health, disease and well-being and the study of different factors (Environmental, nutritional, exercise and genetic) that can affect them. Moreover, the aim is to develop health technologies that can improve diagnostic technics or therapeutic technics.

### RESEARCH UNIT DESCRIPTION

H&TRC is organized in 4 research areas: Environmental Health Genetics and metabolism, Gerontology and Geriatric Health; Radiation and Health. The majority of the researchers are full-time professors at ESTeSL, and some of them have developed their Ph.D. thesis in the existing research groups. Moreover, the H&TRC includes students in all the research projects which is a strength of the center. The H&TRC researchers are involved in several undergraduate courses and Master courses, all in the Health and Technology field. H&TRC is headed by a Unit Coordinator who, along with the coordinating commission of 4 researchers, is responsible for the organization of the unit. The coordinating commission is supported by a Research Office which links with the national support structures. The scientific committee of H&TRC meets at least 4 times per year, to approve the activities plan and progress reports, new members and discuss projects. Due to interdis-

ciplinary approaches and methodologies, H&TRC is highly competitive thanks to: i) the multidisciplinary background of its members; ii) laboratory conditions, well equipped and trained team; iii) the undergraduate and postgraduate courses that attract new researchers mainly young investigators; and iv) internationalization, that permits the exchanging of resources, knowledge and technology.



# Institute for Research and Innovation in Health

i3S



**WEBSITE**  
http://www.i3s.up.pt/

**DATE OF FOUNDATION**  
2015

**RESEARCHERS**  
431

**FUNDING FCT**  
12,51 M Euros

## KEYWORDS

- Cancer
- Host Interaction and Response
- Neurobiology and Neurologic Disorders
- Cell Biology
- Infection and Immunity
- Bioengineering

## STRATEGIC AIMS

As a hub for research in the Life and Health sciences with a focus on neurobiology, cancer, immunity/infection and bioengineering, i3S develops research at the highest international level while promoting an environment favoring entrepreneurship and knowledge/technology translation. i3S is also committed to training a new generation of post-grads and young researchers.

## RESEARCH UNIT DESCRIPTION

A diverse institution able to cover the full cycle of innovation, from the molecule to the patient, i3S is a rich ecosystem transforming Health through excellence in scientific research, promotion of technological development, advanced training, knowledge transfer, and by improving how health sciences are communicated to the general public. To foster the emergence of new multidisciplinary discoveries and to address major societal challenges in the health sciences, our research groups are organized into three thematic lines: Cancer; Host Interaction and Response; and Neurobiology and Neurologic Disorders. An active environment that favors the pursuit of basic research, i3S also enables a more effective translation of outputs from the laboratory to the clinic. As such, economic valorization is highly encouraged and bolstered through a dedicated office, as is a direct connection to the

clinic, namely through our three clinical initiatives: molecular genetic diagnostic and pathology of cancer; molecular genetics diagnostic and genetic counselling of neurodegenerative diseases; and a molecular diagnostic centre for SARS-Cov-2. Our commitment to training new generations of scientists is ever-present at i3S, not only through our participation in doctoral programs and hosting students, but also through heavy involvement in the dissemination and public understanding of science, running open lectures, seminars, school student activities and teacher training events. The pursuit of the institute's ambitious goals is supported by key public decision-makers in the region, as well as by a highly dynamic structure.

I3S's achievements: Between Ipatimup Diagnostics, CGPP and i3S Diagnostics, over 50 000 diagnoses are performed per year. i3S now manages 24 active patents, 23 licensing agreements, 26 R&D contracts with the industry, 5 spin-offs, and 5 marketed products. Investment in training actions providing highly qualified scientific knowledge and fundamental transversal skills.

# Aveiro Institute of Biomedicine

IBIMED



**WEBSITE**  
www.ua.pt/ibimed

**DATE OF FOUNDATION**  
2014

**RESEARCHERS**  
46

**FUNDING FCT**  
1,37M Euros

## KEYWORDS

- Biomedicine
- Systems Medicine
- Translational
- Clinical Research

## STRATEGIC AIMS

The Institute of Biomedicine of Aveiro - iBiMED aims at contributing to improve the quality of life and the continuous education of the health institutions through biomedical and clinical research, in particular in the aging and chronic diseases fields, in partnership with the hospitals and health centers of the Egas Moniz Health Alliance clinical centre, which involves hospital centers of the Aveiro, Sta Maria da Feira and Vila Nova de Gaia region.

## RESEARCH UNIT DESCRIPTION

The iBiMED was created in 2014 to implement a Health Sciences Program capable of improving the quality of life and health care provision through biomedical and clinical research and advanced training. iBiMED researchers are making important contributions to understand Lewy bodies dementia, Parkinson's, Alzheimer's, immunological, genetic, and infectious diseases, antibiotic resistance, the benefits of physical exercise on cardiovascular diseases, the relevance of protocolized exercise-related interventions during hospitalization and the effects of family participation during pulmonary rehabilitation processes. The French Centre National de la Recherche Scientifique - CNRS, and the private Foundation Ilidio Pinho recognized these achievements by awarding iBiMED the title of International Associated Laboratory. New knowledge is trans-

ferred to patients through a Systems Medicine (SYSMED) Research Program that will introduce Predictive, Preventive, Personalized and Participatory Medicine (P4 Medicine) in the Aveiro region. The objectives of this Systems Medicine Research Program are to: develop new technologies and tools for the detection of the first signs of disease in healthy individuals; implement corrective pharmacological and/or lifestyle measures to reverse such physiological dysfunctions; and develop highly specific diagnostics and personalized therapeutics to improve quality of life.

iBiMED and its partner Hospitals and Health Centers created a multidisciplinary team, including clinical scientists and the infrastructure to launch the necessary initiatives to support and promote P4 Medicine. SYSMED data will be made available to partner Hospitals and Health Centers and clinicians will be trained to use such data to improve diagnostics, therapeutics, and disease and patient management.

| WEBSITE               | DATE OF FOUNDATION |
|-----------------------|--------------------|
| www.igc.gulbenkian.pt | 2015               |
| RESEARCHERS           | FUNDING FCT        |
| 122                   | 4,28 M Euros       |

#### KEYWORDS

- Cell and developmental biology
- Immunobiology
- Host-microorganism interactions
- Evolution
- Homeostasis
- Social Biology

#### STRATEGIC AIMS

The IGC is an R&D unit in biology and biomedicine with two main thematic lines: 1) the cellular and molecular physiology of organisms and 2) their interactions with the environment. Strategic aims include the recruitment and training of promising, multidisciplinary, quantitative, and collaborative scientists, as well as the reinforcement of facilities and technologies that support research, thus, promoting discovery for the benefit of humankind.

#### RESEARCH UNIT DESCRIPTION

The IGC is part of the Fundação Calouste Gulbenkian, being devoted to biological and biomedical research and the transformation of society through science to promote a more sustainable planet. Researchers from this institute are empowered to pursue important scientific questions in the life sciences that help solve tomorrow's challenges. Ranked at the top of the best R&D units in the country, according to the 2014 and 2018 evaluations by the National Agency for Science and Technology, the IGC stands out for its originality, innovation, and diversity, incubating high-quality and relevant research activities that reinforce the country's international affirmation. In the last 60 years, the IGC has significantly contributed to the development of the life sciences research ecosystem in Portugal, through the training and incubation of scientists that

are now national leaders, the incubation of renowned research institutes, and the availability of its technological infrastructures to users across the country.

The IGC is an independent R&D unit, having 28 research leaders organized in 12 groups. In total, the IGC brings together 254 researchers. With 10 active ERCs grants, 9 EMBO members, and more than 155 ongoing projects, at the moment, researchers are working in a multidisciplinary, international, and collaborative environment, supported by a large array of scientific platforms and services. The IGC is known for promoting a stimulating and broad-minded culture, where values of integrity, ethics, scientific excellence, generosity, and responsibility thrive. IGC's achievements: Reinforcement of the position in the host-microorganism interactions field with multiple findings in the areas of infectious diseases. Expanding studies on disease tolerance revealed new mechanisms and protective effects of drugs in sepsis. Development of a serological test for COVID-19 used by several scientific institutions.

| WEBSITE                 | DATE OF FOUNDATION |
|-------------------------|--------------------|
| http://imed.ulisboa.pt/ | 2007               |
| RESEARCHERS             | FUNDING FCT        |
| 115                     | 2,15 M Euros       |

#### KEYWORDS

- Precision therapies and technologies
- Biomarkers and diagnosis
- Genetics, immunology and neurosciences
- Medicinal chemistry and protein engineering
- Pharmaceutical technology
- Pharmacology, pharmacy and regulatory science

#### STRATEGIC AIMS

iMed supports basic and translational science, offering a cross-cutting, integrative view of biology, chemistry, and pharmaceutical sciences for patient benefit. We aim to establish an organic environment where experts in their fields, young curious minds and public health champions share knowledge, resources and breakthroughs in health sciences. Our vision is to perfect the integration between science, technology, translation and people to advance health sciences and benefit everyone.

#### RESEARCH UNIT DESCRIPTION

Our formula to develop trailblazing drugs and advance health sciences is based on extreme collaboration between three hubs: ambitious scientific research, ever-evolving technological innovation and a constant translational effort of carrying our breakthroughs from bench to bedside.

Scientific. We alleviate the societal burden of complex human diseases by engaging in continuous innovation that integrates chemistry, biology, and pharmaceutical sciences. Multidisciplinary teams collaborate daily to develop pioneering tools and techniques to prevent, detect and treat cancer, neurodegenerative, metabolic, and infectious diseases.

Technological. We are highly engaged in translating our

advanced scientific knowledge and technologies into breakthrough healthcare solutions that empower societies to live better and healthier. A vibrant network based on strong partnerships between our scientific community, distinct players within pharmaceutical and biotechnology companies and the healthcare sector.

Translational. We are deeply committed to move pharmacological research into the patient's context by developing disruptive translational innovations to benefit human health. This is driven by the joint efforts of our institute with multiple players within the Healthcare sector (including international health policymakers and clinicians) as well as the permanent dialog with professional and patient associations.

iMed's achievements: Developing innovative new chemistries for bioactive and fluorescent bioimaging applications. Targeted nanoplatfoms to induce a strong and long-lasting immunity against melanoma. Discovery of new chemicals to reduce liver injury, inflammation and fibrosis in NAFLD. Development of innovative therapeutic strategies for patients with CNS associated disorders. Designing innovative antibodies and protein immunogens for viral inhibition and immunizations.

# Institute of Molecular Medicine

IMM



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://imm.medicina.ulisboa.pt/pt/">https://imm.medicina.ulisboa.pt/pt/</a> | 2002               |
| RESEARCHERS   | FUNDING FCT        |
| 193   | 6,08 M Euros       |

#### KEYWORDS

- Development, Ageing and Systems Physiology
- Neurosciences and Behaviour
- Infection and Immunity
- Chemical Biology and Biophysics
- Molecular and Cellular Biology
- Oncobiology and Clinical Sciences

#### STRATEGIC AIMS

iMM's overarching mission is to nurture innovative ideas in basic, translational and clinical Biomedical Research, towards maximizing their impact on society. The strategic aims are: to promote scientific excellence; to nurture advanced training and career development; to galvanize translation for human health. Finally, we aim to share our discoveries and enthusiasm, contributing constructively to public debate about the direction, purpose and implications of biomedical research.

#### RESEARCH UNIT DESCRIPTION

iMM is a leading private non-profit research institute that nurtures innovative ideas in basic, clinical and translational biomedical research. Translational potential of iMM discoveries is streamlined through the Lisbon Academic Medical Centre (CAML), a privileged strategic partnership with the Faculty of Medicine (University of Lisbon) and the Hospital Santa Maria, which aims at innovative medical education and facilitated translation of research findings from bench to the bedside. iMM's vision is to achieve a world-class research portfolio focusing on innovative conceptual niches from the molecule to the bedside, in the institute where science meets medicine. iMM's mission is to improve human health through the study of disease mechanisms and the development of novel diagnostic tests and

therapeutic approaches. iMM's overall strategy has been defined by promotion of excellence, attracting world-class ingenious scientists with an ambitious research portfolio and providing them with state-of-the-art technology and flexible resources to maximize creativity towards discoveries without boundaries. iMM research activity is led by 34 laboratories with 550 researchers and 150 technical and administrative staff. iMM runs an international PhD and MD/PhD programs with circa 140 students providing excellent scientific and complementary training together with a continuous career development framework for young researchers. The entire iMM community spans over 25 different nationalities.

iMM's achievements: International Prestigious Awards such as La Caixa Foundation, Gates Foundation, Leducq Foundation, HFSP. Biobanco-iMM is the leader node for the national research infrastructure – Biobanco.pt. Innovation: 22 active patent families, 8 spin-off companies, 104 agreements with industry.

# iNOVA4Health Programme in Translational Medicine

INOVA4HEALTH



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.inova4health.com">www.inova4health.com</a> | 2015               |
| RESEARCHERS  | FUNDING FCT        |
| 162  | 3,86 M Euros       |

#### KEYWORDS

- Translational Medicine,
- Healthy Ageing

#### STRATEGIC AIMS

The aim of the four partners of iNOVA4Health (iN4H) is to achieve excellence in translational research to improve precision medicine clinical practices based on increasing knowledge of the mechanisms of disease and its translation to the bedside.

#### RESEARCH UNIT DESCRIPTION

The iN4H partners are linked to NOVA University of Lisbon and comprise a) biomedical researchers searching biological mechanisms of disease, pre-discovery of leads and biopharmaceuticals; b) scientists developing technologies and engineering the production of biopharmaceuticals; c) clinicians applying the mechanistic knowledge for improved diagnosis, treatment and first in man clinical trials. The programme is managed by iBET (Experimental Biology and Technology) a private not-for-profit institution developing and transferring knowledge in biopharmaceuticals production. CEDOC/NMS (Chronic Diseases Centre), research arm of NOVA Medical School brings in fundamental and clinical research, including selected clinicians from the 10 hospitals academically linked with NMS: ITQB-NOVA, covering biophysics and biochemical molecular basis for drug design, IPOLFG, the largest cancer Hospital in Portugal, performing clinical work and translational research in Oncology.

Biopharmaceuticals for translational work (phase I/II clinical trials), may be manufactured at GenIBET Biopharmaceuticals, an iBET spin off producing under cGMP certification. The partners created this Unit iN4H in 2015 when a 2-phase implementation was proposed: a) bottom-up projects launched initially to ensure that groups would break interfaces. b) for the 2018-2022 phase, we decided to focus on 3 Thematic Lines which emerged during the first phase, Neurological and Vision Disorders, Cardio-Metabolic Disorders and Cancer, to coordinate projects into synergistic programmes of research. As from its inception, in 2015, over half of iN4H requested public funding is used to train researchers, new group leaders, post-docs and junior scientists, who reinforce the translational projects/programmes. Public funding has been complemented by companies (ABBVIE, BAYER, BIAL, BOEHRINGER INGELHEIM, GLAXOSMITHKLINE, MERCK KGaA, SANOFI) and competitive international research grants (EUROPEAN RESEARCH COUNCIL, H2020 ERA-NET, MIT PORTUGAL) for projects.

## Environmental Health Institute

ISAMB



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://isamb.medicina.ulisboa.pt/">http://isamb.medicina.ulisboa.pt/</a> | 2014               |
| RESEARCHERS   | FUNDING FCT        |
| 50  | 0,78 M Euros       |

### KEYWORDS

- Environmental Health
- Health Promotion
- Prevention / health-supporting environment
- Non-communicable diseases
- Eco-genetics

### STRATEGIC AIMS

The Environmental Health Institute (ISAMB) is a multidisciplinary research centre devoted to scientific research and training in the realm of Environmental Health (EH). Since its establishment in 2014, ISAMB has been working to become a well-established national and international reference for EH research, innovation, education-training, and outreach.

### RESEARCH UNIT DESCRIPTION

Its scientific contributions go beyond the health impact of natural environments and have been broadened to also include artificial environments. ISAMB assumes a translational and applied research perspective by involving academic and non-academic organizations in strategic consortiums. For the upcoming years, ISAMB will focus on three core and, at the same time, intertwined activities: research, training, and outreach. Projects for the upcoming years are based on four key research areas that meet the interests of Research Groups within ISAMB: cumulative effect of exposure to environmental pollutants, integration of human biomonitoring indicators with health indicators, perinatal physical and mental health associated with environmental stressors, and digital health-supportive environments. Briefly, ISAMB has been working in proximity with World Health Organization (WHO) and is in

good position to become a WHO collaborating centre for EH activities.

Since ISAMB is a multidisciplinary research centre, the creation of a truly integrated cluster of researchers in EH is on the way, and the establishment of a digital environmental health research line is also a priority. Moreover, basic, and advanced training activities focusing on EH-related contents are envisaged as a core activity of ISAMB, and members are encouraged to propose and conduct training activities. These simultaneously promote the interplay between health and environment, and between applied and translational research in the field of EH, while further developing the interaction academia-societal stakeholders. Finally, ISAMB is developing strategies to promote the continuous engagement of members by valuing their research, training, and outreach activities in different sectors of environmental health.

## Center for Drug Discovery and Innovative Medicines

MEDINUP



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.medinup.pt">www.medinup.pt</a> | 2003               |
| RESEARCHERS  | FUNDING FCT        |
| 20   | 0,43 M Euros       |

### KEYWORDS

- Cell signalling and bio-imaging
- Biomarkers and translational medicine
- Drug discovery and innovative medicines

### STRATEGIC AIMS

The mission of the Center for Drug Discovery and Innovative Medicines - MedInUP - at the University of Porto is: - to translate discoveries made in the laboratory into bedside therapies and - to mentor the next generation of researchers devoted to drug discovery.

### RESEARCH UNIT DESCRIPTION

The MedinUP is a research center of fundamental, translational-oriented, and clinical pharmacologists aimed at fostering the development of better and safer medicines by exploring novel drug targets, unravelling new metabolic pathways, and studying their interactions with living systems, grounded in pharmacogenomic and pharmacogenetic diversity, to boost pharmaceutical innovation and a personalized medicine. Strategically placed at the intersection of established academic and industrial resources and expertise, MedInUP is designed to fulfil both scientific and entrepreneurship objectives. Within the framework of MedInUP we aim to foster the interaction of scientists from a broad spectrum of Fundamental Biomedicine and Clinical Sciences towards the discovery of Innovative Drug Targets. The mission of the MedInUP team of basic scientists, which includes doctorates graduated in medicine, veterinary medicine, pharmaceutical sciences, biochemistry, and biology, is to identify putative therapeutic targets

of human diseases with high socio-economic impact that may translate into novel medicines with impact upon the clinical practice. On-going and future research is oriented on the prediction that cell-to-cell communication may be a key to control organ (dys)function. The pathophysiological role of previously unpredicted cell interactions has been recently highlighted.

Our research encompasses 3 major interconnected areas: Inflammation and tissue regeneration, Neuropsychiatric therapies, and Cardio-metabolic therapies. Altogether, the MedInUP constitutes a highly complementary unit that combines a basic science approach with clinical expertise to address fundamental questions on human diseases. A major strength is the close interaction with major local hospitals (Centro Hospitalar São João and Centro Hospitalar do Porto / Hospital de Santo António), the Institute of Public Health of University of Porto, and a network of clinical research groups PtCRIN (Portuguese Clinical Research Infrastructure Network).



## Centre for Toxicogenomics and Human Health

TOXOMICS



|  |                                    |
|--|------------------------------------|
| <b>WEBSITE</b><br>http://cigmh.fcm.unl.pt/ | <b>DATE OF FOUNDATION</b><br>1994  |
| <b>RESEARCHERS</b><br>17                   | <b>FUNDING FCT</b><br>0,45 M Euros |

### KEYWORDS

- Toxicology
- Cancer
- Mutagenesis
- Proteomics
- Genome

### STRATEGIC AIMS

The strategic objective of the Center for Toxicogenomics and Human Health (ToxOmics), is the evaluation of genetics as a determinant of health, that is, the interaction between genes, exogenous factors, and disease, aiming at a more accurate disease identification and prevention.

### RESEARCH UNIT DESCRIPTION

The ToxOmics has its activity focused on the mechanisms and effects on human health of the lesion of the primary genetic molecule, DNA. Multiple physical agents or chemicals can alter our DNA. What we are studying are mechanisms of DNA aggression by toxic agents in the environment, how they are transformed/metabolized in the body and what enzymatic systems biotransform them, what role do the changes introduced in DNA have in diseases such as cancer, particularly in breast, thyroid or blood cells, what genetic variants may increase susceptibility to these cancers, and how the repair mechanisms of our DNA seek to cope with the lesions introduced by these agents. As these DNA lesions have consequences on the effector proteins of cellular functions, proteomics in addition to genomics plays an important role and are also object of study in this Center. This point may help understand how and why cancer cells may become resistant to cancer treatments, which is of paramount importance in cancer

survival, and may help achieve the goal that is precision medicine. Given that precision medicine, clinical exome and genome sequencing, genome editing, the interaction of genomics and the environment raises questions for ethical reflection, ToxOmics has constituted a focus group on ethics in genetics to allow trans-disciplinary dialog and mass critic analysis in the ethical issues associated with genetics.

Our extensive internationally recognized knowledge on genetic toxicology, human genetics, genomics, and proteomics has led to the development of an innovative strategy. The implementation of the research objectives of the strategic plan is based on the application of our expertise in integrated approaches focused on specific research targets, made of ongoing, refocused projects, as well as several new targets. Strategic partnering with national and international research institutions is actively pursued.

## Health Sciences Research Unit: Nursing

UICISA: E



|   |                                    |
|---|------------------------------------|
| <b>WEBSITE</b><br>http://www.esenfcm.pt/pt/uicisa | <b>DATE OF FOUNDATION</b><br>2002  |
| <b>RESEARCHERS</b><br>131                         | <b>FUNDING FCT</b><br>2,58 M Euros |

### KEYWORDS

- Evidence-informed nursing
- Nursing science and development
- Health promotion and health education
- Nursing care innovation and effectiveness
- Researcher's training

### STRATEGIC AIMS

The UICISA: E develops (a) research in priority health topics to contribute with relevant scientific inputs to reach high-value health care; (b) experimental and applied research in healthcare technologies; (c) R&D activities aimed to synthesize and implement the best available evidence; (d) training for researchers, from initiation to advanced research.

### RESEARCH UNIT DESCRIPTION

The Health Sciences Research Unit: Nursing (UICISA: E) conducts research in the area of nursing and allied health sciences. Its mission is to develop interdisciplinary research activities to produce, synthesize, implement, and disseminate relevant scientific knowledge. This knowledge contributes to providing a sustainable and socially responsible response to complex problems related to health promotion, disease prevention, and care delivery to sick, disabled, or end-of-life patients.

Hosted by the Nursing School of Coimbra, the main management institution, the UICISA: E was created in 2002 and was assessed and funded by the FCT since 2004. The UICISA: E integrates Ph.D. and non-PhD researchers from more than 20 academic and clinical institutions.

The UICISA: E built an original crosscutting model of integrated and consistent action which is based on 3 key

pillars: the strength of the team; the focus of the projects on priority health research topics; and the development strategic axes, a combination of specific measures and specialized resources.

The increase and diversification of funding sources contributed to the intensification of laboratory activities; the innovative production and implementation of technology; the development of Synthesis and Implementation of Science, promoting evidence-informed nursing care; the researchers' training from initiation to advanced research, endorsing the link between research and education; and the increase of international recognition.

## Unit for Multidisciplinary Research in Biomedicine

UMIB



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www1.icbas.up.pt/umib/">https://www1.icbas.up.pt/umib/</a> | 1985               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 55          | 0,95 M Euros |

### KEYWORDS

- Translational Medicine
- Personalized Medicine
- Multidisciplinary Research
- Mechanisms of disease
- Targeted therapies
- Prognostic biomarkers

### STRATEGIC AIMS

UMIB is a unit dedicated to research applied to clinical medicine. UMIB ultimate main aim is to achieve innovation and scientific progress to improve human health, focusing on the study of high impact diseases and disorders based on its prevalence, morbidity or mortality. UMIB research is mostly triggered by the need to find answers to questions arising from every day clinical practice and uses a translational approach to unravel the unknowns towards improved health-care outcomes.

### RESEARCH UNIT DESCRIPTION

UMIB is based at the School of Medicine and Biomedical Sciences (ICBAS), University of Porto and the Centro Hospitalar da Universidade do Porto (CHUP). UMIB researchers are either based on laboratories or clinical departments depending on their expertise and activities conducted. UMIB is dedicated to translation and clinical research on epidemiology, disease mechanisms, identification of biomarkers and targeted therapies for human diseases grounded on four main pillars: Hereditary and Genetic Diseases; Metabolic, Cardiovascular and Endocrine Disorders; Immunity, Infection and Inflammation; Oncology and Oncobiology. UMIB researchers are organized into teams lead by a Senior Principal Researcher dedicated to more specific topics that derive from the

unit research pillars, which comprise: human genomics, autoimmunity and neurosciences, haematology, oncology, cardiovascular disorders, nephrology, endocrinology and reproduction. Despite each research team is dedicated to the study of diseases of epidemiological relevance in their specific area of interest, there is a considerable overlap and some research projects result from a more transversal approach that feeds from various disciplines and benefits from the collaboration of the different research teams within the unit. As a whole, UMIB covers a broad spectrum of medical conditions through a translational approach dedicated to speeding the process clinical refinement.

UMIB's achievements: Identification of novel diseases or new insights into rare disorders. Identification of pathological pathways and mechanisms of disease. Identification of biomarkers of disease towards a more precise diagnosis. Identification of biomarkers for targeted therapies into precision medicine. Identification of personalized treatment approaches leading to improved clinical outcomes.

## Cardiovascular Research and Development Center

UNIC

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://unic.med.up.pt/">http://unic.med.up.pt/</a> | 1994               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 49          | 1,33 M Euros |

### KEYWORDS

- Cardiovascular Diseases
- Heart Failure
- Cardiovascular pathophysiology and therapeutics
- Clinical and translational research
- Medical and Postgraduate Education

### STRATEGIC AIMS

UnIC's aims to continue leading the national cardiovascular research and to reinforce its position as an international partner in cardiovascular research networks. We will increasingly direct our basic science and translational research towards highly relevant clinical points, knowledge-transfer and partnerships with industry, promoting innovation and technological developments in medical devices and cardiovascular intervention.

### RESEARCH UNIT DESCRIPTION

The Cardiovascular R&D Center (UnIC), classified as Excellent, was established in 1994 to fill the gap in translational research on cardiovascular disease (CVD). CVD is a highly relevant medical and socio-economic research topic since it is the first cause of death globally and one of the main causes of impaired quality of life, particularly amongst the elderly. Since its inception, UnIC contributed substantially to research and to scientific and technological development in CVD, namely by randomized controlled clinical trials and prospective clinical studies, as well as further technological development and biotechnology application in translational research to optimize patient care. UnIC includes researchers from several Departments of FM/UP and Centro Hospitalar e Universitário de São João (CHUSJ), combining basic and clinical sciences to

achieve a solid translational and integrative perspective, in a "bench to bedside and back again" approach. UnIC is also devoted to scientific initiation of young students and advanced education, hosting several post-graduation courses, as well as a Doctoral Programme in Cardiovascular Sciences and a Master Degree in Cardiovascular Pathophysiology. To improve population awareness on CVD and cardiovascular research, UnIC is committed to outreach and scientific dissemination actions, through its participation in educational projects directed to the public and partnerships with local authorities.

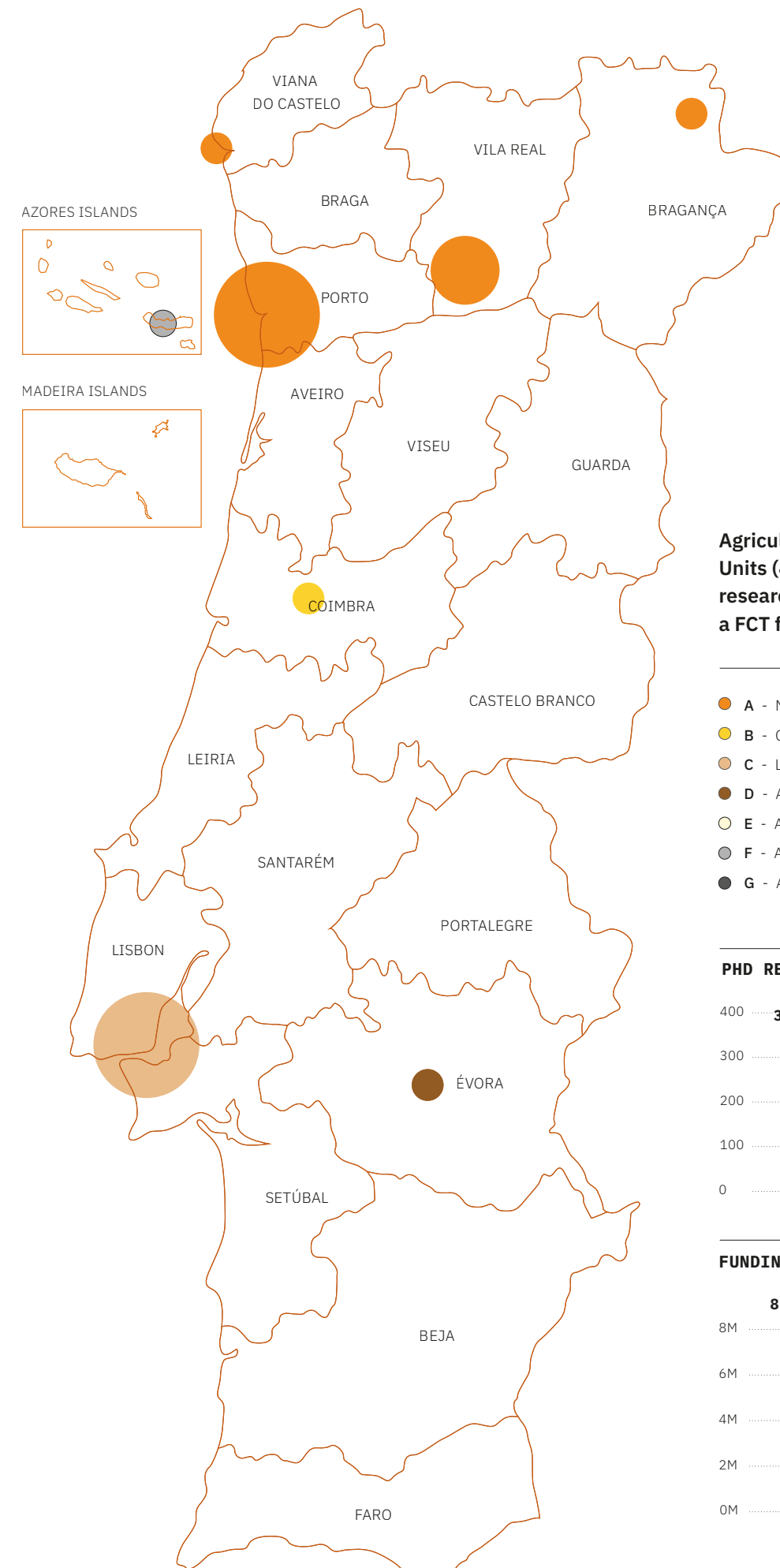
UnIC's achievements: Animal and human Cardiobank implementation for high-throughput molecular CVD studies. Development of randomized controlled clinical trial on cardiovascular topics. Establishment of small and large animal models for cardiovascular research and surgical training. Development of personalized medicine attained by laboratorial studies.

# Agricultural Sciences

## S.2.4

CBA  
CBQF  
CECA  
CECAV  
CEF  
CERNAS  
CIISA  
CIMO  
CISAS

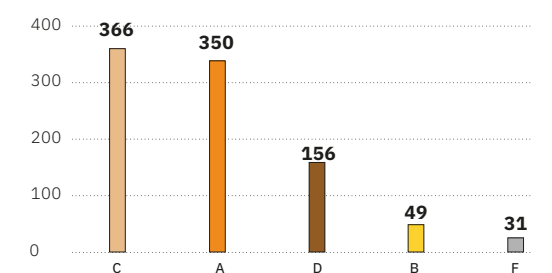
CITAB  
GREEN-IT  
GREENUPORTO  
IITAA  
LEAF  
MED



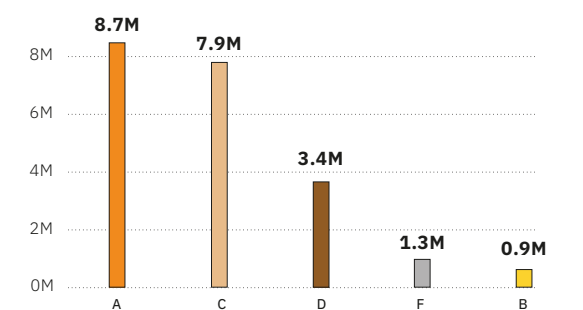
**Agricultural Sciences include 15 R&D Units (4.8% of the total) integrating 952 researchers (5.1% of the total) and with a FCT funding of 22 M€ (2020-2023).**

- A - NORTHERN
- B - CENTRAL
- C - LISBON METROPOLITAN AREA
- D - ALENTEJO
- E - ALGARVE
- F - AUTONOMOUS REGION OF AZORES
- G - AUTONOMOUS REGION OF MADEIRA

**PHD RESEARCHERS**



**FUNDING (M€)**



## Biotechnology Centre of Azores

CBA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cba.uac.pt/">http://cba.uac.pt/</a> | 2003               |
| RESEARCHERS   | FUNDING FCT        |
| 14  | 0,68 M Euros       |

### KEYWORDS

- Plant Biotechnology
- Plant Health
- Innovation in Biopesticides
- Azorean Natural Resources
- Molecules from Extreme Environments
- Landscape Genetics

### STRATEGIC AIMS

CBA strategic aims are: Develop advanced scientific and technological research in Biotechnology; Foster training of qualified human resources; Build-up networks and research projects with international and national research groups; Develop innovative products and services, and its integration in the agricultural, environmental and bio-industrial sectors; Disseminate the CBA results and contribute to the diffusion of scientific culture, as a means of promoting social well-being and valuing citizens.

### RESEARCH UNIT DESCRIPTION

The Biotechnology Centre of Azores (CBA) is a strategic R&D unit in the area of Biotechnology, and its interaction with Agricultural and Biological Sciences, having as main research target the natural resources of the Azores as a source of competitive research, innovative products and solutions applicable not only locally, but also at the global level. Through the pluridisciplinarity of its members, the CBA presents skills capable of developing and implementing advanced technology in order to transform these resources into socio-economic added value, with a special focus on the agricultural, environmental and bio-industrial sectors.

CBA's scientific activity rely on the integration of two main interrelated research themes: 1) Sustainable manage-

ment and biotechnological exploitation of Azorean natural resources (Development of bioactive molecules formulations in nanomaterials for new applications; Exploitation of recombinant enzymes and bacterial consortiums in bioremediation and deconstruction of wastes; Genomics, landscape genetics and plant tissue culture as tools for the preservation and valorization of natural resources as well as for the sustainable management of ecosystems; Biobanks and microbial collections of bacteria from extreme environments in Azores); 2) Plant health and biointeractions (Study and development of biopesticides, biocompounds and parasitoids for pest control; Molecular plant pathogen identification and interactions studies.).

CBA main achievements include: Development of bio-insecticides based in peptide sequences encoded by an entomopathogenic nematode; Mining metagenomes of marine bacteria in Azores for biocatalysis in circular economy; Contribution for the conservation, restoration and management of Azorean native plants and ecosystems; Study of plant virus diversity and diagnosis through new high-throughput sequencing technologies; Recovery and improvement of traditional crops.

## Centre of Biotechnology and Fine Chemistry

CBQF



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.cbqf.esb.ucp.pt/en/">www.cbqf.esb.ucp.pt/en/</a> | 1990               |
| RESEARCHERS  | FUNDING FCT        |
| 63   | 1,55 M Euros       |

### KEYWORDS

- Bioproducts
- Biotechnology
- Food and Nutrition
- Environment and resources
- Biomedical products
- Bioanalytics

### STRATEGIC AIMS

The main mission of CBQF is to contribute towards a sustainable Bioeconomy. CBQF aims to continue to develop solutions for health and resource-based problems, and creating conditions to expand its scientific impact with international positioning and cooperation, in the Environment, Food, and Biomedical sectors.

### RESEARCH UNIT DESCRIPTION

CBQF is an Associate Laboratory since 2004, being the only non-state-owned in Portugal. CBQF activities are supported by ten Thematic Research laboratories structured in three research groups: Environment and Resources; Food and Nutrition; Biobased and Biomedical Products. CBQF's mission is to contribute to a sustainable, healthy planet by tackling challenges spanning environment, food, health and nutrition. CBQF has proven international excellence in very important fields: work on listeriosis generated a unique collection of over 5000 isolates, putting CBQF on the frontline of surveillance of *L. monocytogenes*; CBQF's skills on biodegradation and aerobic granular sludge technology is recognized internationally; novel automatic and miniaturized methods for monitoring water quality have been developed; CBQF has been an international reference on probiotics research, pioneering the impact assessment of foods and bioactives on gut

health; byproduct valorization on wastes/byproducts from agrofood industry is recognized; CBQF provided contributions to demonstrate that antibiotic resistant bacteria and antibiotic resistance genes are serious environmental contaminants and a danger to health.

CBQF has also applied this knowledge to better society, transferring awareness and technology to create new mindsets and business; it promoted activities for scientific initiation of young students, and organized conferences, and seminars; it worked to disseminate results, and cementing partnerships worldwide. CBQF's Research Agenda Roadmap, takes into account that future food production will have to be improved. Consumers are increasingly informed and aware of their choices, with a greater demand for foods that meet the requirements of nutrition, food safety and sustainability. The value of products, materials and resources needs to be kept in the economy, and waste must be minimized. CBQF aims to help implement Circular Economy Action Plans, which include actions at the production, waste management, and from waste to resources level.



## Center for the Study of Animal Science

CECA

| WEBSITE         | DATE OF FOUNDATION |
|-----------------|--------------------|
| www.iceta.up.pt | 1993               |
| RESEARCHERS     | FUNDING FCT        |
| 29              | 0,93 M Euros       |

### KEYWORDS

- Biotechnology of the Animal Reproduction
- Experimental Surgery and Regenerative Medicine
- Emergent Zoonosis
- Helminth infections induced cancers
- Antibiotic Resistance

### STRATEGIC AIMS

To advance into the comprehension of biological systems by accelerating biomedical research discoveries, improving new tools for diagnosis and therapeutic control of animal and human diseases, expanding the scientific knowledge base, and improving medical education in order to enhance public health efficacy.

### RESEARCH UNIT DESCRIPTION

A multidisciplinary unit that integrates the ICETA at the University of Porto. CECA was founded in 1993, as the first unit integrating ICETA-UP, to protect public health by developing activities aiming the integration of Human Medicine and Veterinary Medicine according to the One Health Initiative. Activities related to bovine neosporosis, a reproductive disease; salmonellosis, or toxoplasmosis, as zoonosis; antibiotic resistance; nerve, vascular, muscle and bone regeneration, combining innovative biomaterials with autologous/allogeneic cell-based therapies; cancer associated with helminths infection or inherited metabolic diseases beneficiate of specific domains of expertise in Microbiology, Immunology, Pathology, Oncology, Genetics, Gene Cloning & Expression allocated into four Research Groups and six thematic lines.

ICETA main achievements include: How some Trematodes act as biological and chemical insults, chemical carcino-

genesis promoters, in malignancy associated to those infections?; Innovative methods for the detection of environmental oocysts of *Toxoplasma gondii*; Innovative tool for mobile-based analysis of Malaria-infected thin blood smears: automated species and life cycle stage determination (MalariaScope); Establishment of cell/animal models and development of genetic based therapies for inherited metabolic diseases; Antioxidant active packaging incorporating an extract of aromatic plant.

## Veterinary and Animal Science Research Centre

CECAV



| WEBSITE                   | DATE OF FOUNDATION |
|---------------------------|--------------------|
| http://www.cecav.utad.pt/ | 2002               |
| RESEARCHERS               | FUNDING FCT        |
| 39                        | 0,93 M Euros       |

### KEYWORDS

- Public and animal health
- Meat, quality, safety

### STRATEGIC AIMS

The main objective of CECV is the development of research in animal and veterinary science aiming to generate new knowledge in animal health and welfare and in the production, safety and quality of meat and meat products. To this end, its activity focuses on the following aspects: (1) developing research projects and thematic networks; (2) disseminate knowledge in sound scientific journals; (3) support postgraduate training; (4) promote the transfer of knowledge to society.

### RESEARCH UNIT DESCRIPTION

CECAV is hosted by the University of Trás-os-Montes and Alto Douro (UTAD) at Vila Real and its research is focused on two research topics: i) Integrated Meat Quality in an approach “From farm to fork” and ii) Veterinary Public Health One Health concept. The main objectives of activities in Integrated Meat Quality topic are to develop research focused on (1) the use of in vivo non-invasive techniques as tools to evaluate body composition and to estimate carcass composition and quality of farm and wild animal species; and (2) assess factors that may affect sensory and chemical characteristics of meat and meat products and evaluate feasible and cost-effective strategies to control spoilage and pathogenic microflora. The research in Veterinary Public Health is focused on: (1) diagnostic and

prognostic of factors related to biologic issues and use of biomaterials for tissues regeneration, using animal models and contributing to animal and human health and welfare, and (2) prevalence and epidemiological studies on zoonosis affecting animals and foodborne pathogens from food of animal origin contributing for their monitoring and evaluation of strategies for its mitigation under One Health concept. In 2021, CECV has 52 integrated members and 32 PhD students. Since 2021, CECV has been part of the Associated Laboratory of Animal and Veterinary Science (AL4AnimalS) together with CECA (Porto) and CIISA (Lisbon) whose status of “Associated Laboratory” was approved in 2021.

CECAV main achievements include: Increased profitability and sustainability of meat production. Mitigation of its environmental impact; Correct assessment of the value of the animal and the carcass applying low-cost imaging techniques; Control and reduce the impact of zoonoses and zoonotic agents on human health; Reduction of potentially carcinogenic substances in cured and dried meat products by natural additives; Contribution to a better understanding of animal and human cancer from a “one health” perspective.

## Forest Research Centre

CEF



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www.isa.ulisboa.pt/en/cef/about">https://www.isa.ulisboa.pt/en/cef/about</a> | 1976               |
| RESEARCHERS   | FUNDING FCT        |
| 75  | 1,58 M Euros       |

### KEYWORDS

- Forest ecosystem management
- Landscape-scale fire management
- Riparian ecosystems
- Agroforestry systems
- Ecosystem services
- Forest products, bioenergy and biorefineries

### STRATEGIC AIMS

CEF strategic aims include: To promote doctoral education to foster innovative research, high-impact scientific outputs and inter-institutional cooperation, namely within the TERRA Associated Laboratory; To strengthen our already substantial interaction with private and public stakeholders, co-developing knowledge relevant for improved forest management, preservation of natural resources, and development of bio-based products; To provide scientific support to the formulation and evaluation of public policies.

### RESEARCH UNIT DESCRIPTION

CEF was founded in 1976 at the School of Agriculture, University of Lisbon. CEF develops research and post-graduate tutoring activities, and currently has a team of about 100 researchers and collaborators and over 40 doctoral students. CEF is committed to an international perspective on research issues and fosters a diverse academic community. Most of experimental research is located in Portugal, but it extends to the Mediterranean region and to tropical and sub-tropical regions, and encompasses global approaches.

CEF has four main research areas: Forest Ecology (ForEco), Protection, Restoration and Services in Forests and Agroecosystems (ForProtect), Forest Ecosystem Man-

agement under Global Change (ForChange), and Forest Products and Biorefineries (ForTec). ForEco deals with the analysis of ecosystem structure and function, modeling energy fluxes, carbon and water cycles responses to global change drivers as environmental stresses (e.g. drought), and disturbances (e.g. fire). ForProtect addresses the valuation, protection, vulnerability assessment and adaptive management of forest and semi-natural ecosystems, and their market and non-market environmental services; ForChange focuses on sustainable resource management, including cork and timber production, silviculture, forest policy and forest economics. ForTec develops research on wood and non-wood forest products, including product and process innovation, green chemistry and biorefineries. CEF main achievements include: Cork was identified as a source of valuable antioxidants that have been recognized as promising Alzheimer's treatment agents. Montado shrub clearing was found to enhance cork oak tree growth and resilience to extreme droughts; Development of forest growth forecasting and management scenario simulators (@ FCTools website); Species dispersal abilities were used to design optimal spatial layouts for ecological restoration; Elucidating the impact of alternative fuel management strategies on fire hazard in central Portugal.

## Research Center in Natural Resources, Environment and Society

CERNAS



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.cernas.org/">http://www.cernas.org/</a> | 2003               |
| RESEARCHERS   | FUNDING FCT        |
| 49  | 0,89 M Euros       |

### KEYWORDS

- Agriculture lato sensu
- Food science and engineering
- Rural development
- Sustainable development
- Competitiveness and ecoefficiency
- Knowledge transfer

### STRATEGIC AIMS

CERNAS vision, mission and strategy aim at the development of innovative approaches, based on circular economy, nature base solution, eco-efficiency, technical developments and knowledge transfer to improve sustainable development, productivity, competitiveness and livelihood in the agriculture and food processing sectors. In addition, CERNAS is striving to contribute to the greening and more liveable urban areas.

### RESEARCH UNIT DESCRIPTION

CERNAS aims at excellence in the field of the Agricultural Sciences and its correlated areas, promoting sustainable development on a regional basis as part of a global intervention by cultivating and disseminating science and technology. The mission aims to create and disseminate new scientific and technological knowledge, formulating and promoting research programs and quality training with an integrated understanding of the relationship between social welfare, natural resources and environmental quality, assessing the impact of their planning and management on the sustainability of the development.

CERNAS focus on regional issues, providing a multidisciplinary response to global issues by applying the capacity of its human and material resources to solve concrete problems.

CERNAS strategy towards sustainable development, maximizes its competences in pivotal areas, fundamental to the resilience and wellbeing of local and regional communities in the Centre of Portugal. To increase its role in the development of local and regional societies, CERNAS established three Research Groups that provide vertical profoundness and economical and societal relevance: Agriculture Science; Food Science and Engineering; Environment and Society.

These merge into transversal strands, focused on: a) knowledge transfer, b) adding knowledge to the value chains and c) implement circular economy and eco-efficient solutions; to maximize the impact on the Centro Region territory and productive matrix.

## Centre for Interdisciplinary Research in Animal Health

CIISA

| WEBSITE                  | DATE OF FOUNDATION |
|--------------------------|--------------------|
| www.ciisa.fmv.ulisboa.pt | 1992               |
| RESEARCHERS              | FUNDING FCT        |
| 97                       | 2,31 M Euros       |

### KEYWORDS

- Animal Health, One Health
- Animal Science
- Food Technology and Safety
- Veterinary Medicine
- Translational Medicine
- Medical Biotechnology

### STRATEGIC AIMS

CIISA develops high impact cutting-edge fundamental and applied multidisciplinary research in different areas of animal, veterinary and biomedical sciences. At a national level, CIISA provides an organization platform that leads and integrates research performed at the major Portuguese institutes and research centers acting in the Animal Sciences and Animal Health fields.

### RESEARCH UNIT DESCRIPTION

CIISA's labs are organized in two major research groups: "Animal Science and Food Safety" and "Animal Health, One Health". CIISA's research is tuned with Europe's increasing concerns with animal health related issues that have considerable impact in the global economy and in public health and also with the general claims for the development of novel environmentally sustainable systems for animal production and agriculture. Within the two research groups, CIISA develops internationally renowned multi-institutional and multidisciplinary research under the concepts of "Sustainable Animal Production" and "One Health". The "Sustainable Animal Production" line relevantly includes nutritional biotechnology, quality and safety of animal products, biodiversity conservation (world-wide and native genetic resources), and animal welfare and wellbeing (in intensive and extensive produc-

tion systems). The "One Health" approach mainly considers emergent infectious diseases and zoonosis, such as vector-borne diseases, translational medicine, such as oncobiology, and antimicrobial resistance (AMR). These contributions to improve animal and human quality of life have brought impacts on animal, veterinary and biomedical sciences at a scientific, economic and social level. The Faculty Teaching Hospital provides an invaluable source of clinical cases of companion and farm animals, allowing research in a reference clinical asset. In addition, recently CIISA animal facility was completely renovated and supports biomedical research using different animal models, a major tool in collaborative networks with medical and pharma schools, hospitals (human and veterinary), and the biotech and pharma industry. Animal handling and experimentation is subjected to EU and national legislation and good-practice codes, executed by certified personnel, and advised and monitored by an institutional Animal Welfare Body. Support to internationalization, post-graduation studies and advanced training and mobility of students has been a master pillar of CIISA's research policy.

## Mountain Research Center

CIMO



| WEBSITE     | FUNDING FCT  |
|-------------|--------------|
| cimo.ipb.pt | 1,90 M Euros |
| RESEARCHERS | FUNDING FCT  |
| 77          | 1,90 M Euros |

### KEYWORDS

- Mountain Ecosystems and Biodiversity
- Agrofood and Forest Systems
- Product and Process Engineering
- Biobased Ingredients and Products

### STRATEGIC AIMS

CIMO is a R&D unit in "Mediterranean studies" based in the Polytechnic Institute of Bragança, focused in Mediterranean mountain research, combining natural, social and engineering sciences to promote sustainable development based on endogenous resources and creation of value chains, turning Mediterranean mountains specificities into central elements of science, increasing the regional impact of R&I.

### RESEARCH UNIT DESCRIPTION

CIMO is organized in 2 research groups: "Socio-Ecological Systems", dealing with managed ecological systems (agriculture, forests, pastureland) from a coupled socio-economic and ecological perspective and comprising the Topics "Socio-Ecological Resilience" and "Sustainable Agriculture and Innovative Agro-food Chains", and "Sustainable Processes and Products", dealing with the development of innovative processes and products seeking functionality, performance, and sustainability, comprising the Topics "Processes and Products Engineering" and "Natural and Biobased Ingredients".

CIMO is supported by a participative governance structure where researchers are actively involved in the decision-making processes of the Centre. With distinguished publishing track records, CIMO researchers are also

leaders in knowledge and know-how sharing, stimulating business opportunities and socio-economic development. CIMO research relies on high quality facilities including CIMO own labs, Brigantia EcoPark pilot scale labs, and labs and experimental farms at IPB and IPVC, to be complemented with a mountain observatory and an experimental watershed. CIMO strategic plan include: i) extending its research scope (from nature to products); ii) expanding its geographic area of influence; iii) implementing collaborative research with the industry, associations and entrepreneurs, ensuring knowledge, technology and innovation transfer; iv) upgrading research capabilities, increasing funding and recruitment of leading researchers; v) increasing training, grants and contracts for young researchers, PhD students and PhDs. With this strategy and plan, team, structure, and governance, CIMO will be a leading mountain research centre in Portugal and within the Mediterranean region, in particular in fields such as efficiency, resilience, ecosystem services, mountain products, sustainable engineering tools, biobased ingredients, and innovative products. CIMO is socially committed at enhancing opportunities and income for and in mountain areas, by turning regional challenges into opportunities and extending their socioeconomic impact to national and international levels.







## Center for Research and Development in Agrifood Systems and Sustainability

CISAS




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**WEBSITE**

<http://cisas.ipvc.pt>

**RESEARCHERS**

17

**FUNDING FCT**

0,55 M Euros

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**KEYWORDS**

- Authenticity
- Food
- Safety
- Endogenous resources
- Sustainability
- Agrosystems

**STRATEGIC AIMS**

CISAS is a multidisciplinary research and development unit, based at the Polytechnic Institute of Viana do Castelo, which is focused on agri-food systems in the Mediterranean and sustainability issues. With an interdisciplinary approach combining research, development and innovation into an applied science strategy, CISAS is heavily involved in promoting a balanced approach between food science, landscape, agriculture and sustainability studies.

**RESEARCH UNIT DESCRIPTION**

CISAS is organized in two main axes: Agri-Food Systems and AgroSystems Resource Management and Sustainability. Related to “Agri-food Systems”, CISAS main research lines are food products, endogenous resources valorisation, economic empowerment and consumer-driven development. CISAS will contribute to the development of (new) products and processes, in order to foster the valorisation of agri-food, forestry, aquaculture and fisheries industries. Concerning the valorisation of endogenous resources, CISAS aims to protect and promote endogenous food products, linked with the Mediterranean diet, adding value and protecting their origin, production methods and market approach. New strategies and policies to promote the commercialization, marketing and internationalization are essential to foster the development of the local eco-

nomie framework and, therefore, are defined as a key priority in CISAS activities. Considering that food product development needs to be based on consumers’ behaviours to be successful, CISAS aims to evaluate the relationship of the sensorial, physical, chemical and microbiological properties of foods with consumption habits and trends towards product valorisation and process optimizations. Agrosystems characterization, smart farm systems and health and sanitary systems are the main research lines in the axis “Agrosystems Resource Management and Sustainability”. Regarding agrosystems characterization, CISAS aim to contribute to the valorisation of the regional agrosystems (especially the Vinho Verde terroir) through the characterization and optimization of the territory and the valorisation of the product quality and through the implementation of precision farming in agriculture and livestock Pest and disease control, animal welfare, agro-biodiversity and sustainable production are crucial for healthy and safe products. CISAS intends to develop products, processes and methods with emphasis in the quality, productivity and sustainability of animal and vegetable products, particularly organic.

## Centre for the Research and Technology of Agro-Environmental and Biological Sciences

CITAB




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**WEBSITE**

[www.citab.utad.pt](http://www.citab.utad.pt)

**DATE OF FOUNDATION**

2007

**RESEARCHERS**

102

**FUNDING FCT**

1,87 M Euros

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**KEYWORDS**

- Climate change adaptation
- Agro-industry co-products valorization
- Technological and intelligent systems
- Socio-ecological systems

**STRATEGIC AIMS**

CITAB’s core activities focus on interdisciplinary research on agri-food, forestry and the environment, with input from engineering technologies to enhance the development of these production chains in Portugal. The Unit is organized under the 4 I’s policy: Interdisciplinary activities, Internationalization, Innovative solutions and Increase links to industry.

**RESEARCH UNIT DESCRIPTION**

CITAB research activity is divided into 2 thematic strands i) Sustainability of Agri-Food and Forestry Ecosystems in a changing environment and ii) Technology & innovation in Agri-food and Forestry chains for a more competitive bio economy in agri-food and forestry chains were introduced into management structure. Each TS comprises two Tasks: T1.1 Integrated monitoring of climate and environmental impacts, T1.2. Sustainability in agri-food and forestry ecosystems; T2.1 - Innovative technologies and processes, T2.2. Valorization of bio-based products and co-products, headed by a Task Leader. Focusing research into Thematic Strands encourages more integrative research and strengthens established partnerships. This structure will also lead to the development of new cooperation strategies with stakeholders and other research institutions in order to enhance CITAB’s global strategy.

## Bioresources for Sustainability

GREEN-IT



### WEBSITE

<http://www.itqb.unl.pt/green-it>

### RESEARCHERS

66

### FUNDING FCT

1,88 M Euros

### KEYWORDS

- Shaping Plant Development - mechanisms & pathways
- Plant Stress - sensing, response and management
- Healthier plant nutrition in food security/quality
- Germplasm diversity, selection and breeding
- Hightech., technological & bioinformatic platforms
- Education, outreach and technology transfer

### STRATEGIC AIMS

GREEN-IT Bioresources for Sustainability R&I Unit aims to contribute for a better quality and sustainable use of plant resources, ensuring food security for a growing human population in a climate change scenario. By uncovering the basic mechanisms of plant development and plant-environment interactions, and in close contact with the farmers, the GREEN-IT looks to translate basic knowledge into application through a farm-to-lab-to-farm approach, and contribute to environmental sustainability.

### RESEARCH UNIT DESCRIPTION

GREEN-IT R&D Unit focuses mainly on Mediterranean relevant crops and increasing threats imposed by climate change to agricultural production, aiming to improve yield and quality of plant products and reduce the ecological footprint. It aims specifically to uncover the genetic and molecular landscape of traits of resistance, resilience, productivity and quality, while targeting the molecular and physiological mechanisms behind the interactions that embody the ecosystem and its response to the environment.

The GREEN-IT Unit gathers five Institutes, four in the Oeiras Campus (ITQB, iBET, IGC, INIAV) and one in Lisbon (INSA), with complementary expertise in plant development, biotechnology, (a)biotic stress biology and integrat-

ed pest management, plant nutrition, soil microbiome, breeding and product/food quality. The Unit integrates 63 PhD holders, 44 PhD stud. and 25 MSc stud. and technicians, and 40 collaborator researchers (30 from other R&I Units and 10 from the private sector). GREEN-IT is organised in four Research (A) and four Infrastructural (B) Groups: A1) Shaping Plant Development: mechanisms and pathways; A2) Plant Stress: sensing, response and management; A3) Healthier Soils for Sustainable Food Security and Quality; A4) Germplasm diversity, selection and breeding; B1) High throughput/technological platforms, B2) Bioinformatics platform & Biostatistics, B3) Education at technical and Post-graduation levels, and B4) Science Funding, Tech transfer & Outreach.

GREEN-IT main achievements include: Uncovering conserved key components of developmental processes in the evolution of land plants; Discovering mechanisms of regulation of plant growth and plant-soil interactions; Insight on the molecular and genetic landscape of plant resistance; Comprehensive study of mechanisms and interactions in the fight against pests and pathogens; Development of new biotech tools to target crop improvement and sustainable agriculture.

## Research Center in Sustainable Agri-food Production

GREENUPORTO



### WEBSITE

<https://www.fc.up.pt/greenuporto>

### RESEARCHERS

23

### DATE OF FOUNDATION

2020

### FUNDING FCT

0,94 M Euros

### KEYWORDS

- Horticulture,
- Biotechnology,
- Environment quality

### STRATEGIC AIMS

GreenUPorto strategic aims include: To contribute for the transition to sustainability of the agri-food sector under instable climatic conditions and to the need to protect natural resources (soil, freshwater, and biodiversity); To promote the growth of intellectual capital and smart specialization of the agri-food sector; To contribute to the emergence of new economic activities and to respond to market demands for healthy and sustainable food; To contribute to a circular economy by increasing the valorization of agri-food by-products.

### RESEARCH UNIT DESCRIPTION

The GreenUPorto mission is to contribute to the scientific and technological development and to the knowledge transfer in the field of agronomy, food and environmental sciences, promoting innovation and a sustainable growth of the agrifood sector. GreenUPorto is the first Research Unit in Portugal mainly focused on the Horticulture value chain (i.e. including herbaceous and ornamental horticulture, fruticulture, viticulture and oliviculture) and on the protection of soils and agroecosystems. In the context of a smart specialization and a “climate-smart” agriculture, this research area was set as a key priority of GreenUPorto due to the specificities and comparative advantages of the Portuguese Northwest region (favourable edapho-climatic

conditions, small field area and labor force), as well as the know-how existing at the University of Porto and the high relevance of the horticultural sector at local and national level.

Benefiting from excellent infrastructures (research laboratories, plant growth chambers, sensory analysis rooms, greenhouses and agricultural fields) located in two poles of the Faculty of Sciences – Vairão and Campo Alegre – GreenUPorto joins a multidisciplinary team of integrated researchers with complementary expertise’s in plant physiology, plant nutrition, molecular biology, postharvest, biotechnology, human nutrition, consumer perception, soil and water ecotoxicology and ecology - both at fundamental and applied level.

## Institute of Agricultural and Environmental Research and Technology

### IITAA

#### WEBSITE

<http://iitaa.uac.pt/>

#### RESEARCHERS

17

#### FUNDING FCT

0,65 M Euros

#### KEYWORDS

- Agricultural Science
- Food Science
- Environment and Sustainability
- Probiotics
- Meteorology and Climate Change
- Global Change: Causes and Effects

#### STRATEGIC AIMS

IITAA is focused on combining fundamental and applied sciences with the aim of contributing with added value to society. IITAA's strategic objectives lie on using islands as laboratories for a sustainable world, while modernizing agriculture and animal production, increasing its efficiency, improving food quality and searching probiotic and bioactive compounds, and characterizing and predicting climate and the effects of global change on biota from the island tops to the open ocean.

#### RESEARCH UNIT DESCRIPTION

IITAA is an organic unit within the University of the Azores, performing multidisciplinary research to help find solutions for pressing societal challenges: assuring the sustainability of the agro-food chain within the framework of global climate change and analysing / mitigating the impact of global change on environmental, animal, and human health. IITAA's work is subdivided in 3 main areas:

1) Agricultural and animal production- the aim is to increase the existing scientific knowledge and promote sustainable, increased-value, production modes with focus on animal reproduction, animal nutrition, dairy cattle and meat, pedology, horticulture and nutrient cycling.

2) Food science and health- address the potential of microorganisms and bioactive compounds isolated from

traditional foods, extreme environments (terrestrial and marine) and other sources (seaweeds) for improving the quality and safety of dairy products and/or developing innovative nutraceuticals and materials with industrial application.

3) Climate, meteorology and global change- the main goal is to investigate reliable prediction climate models as well as to unravel the consequences of global change to island communities and societies. IITAA's is engaged with the optimization of a small scale model that is being used to determine the effects of global change on insular populations as well as on agronomy practices while defining strategies to adjust to global change and studying its effects on organisms and ecosystems.

IITAA main achievements include: Creation of labs: Nutrition, Soils, Reproduction, Biochemistry, Microbiology, Climate, Ocean, Coastal A.; Celebration of protocols with the government and farmers to monitor soils, forages and reproduction; Expertise in bioactive compounds and autochthonous microbiota of Azorean foods and environments; Coordination of Eastern North Atlantic (ENA) atmospheric observatory at Graciosa.

## Linking Landscape, Environment, Agriculture and Food

### LEAF



#### WEBSITE

<https://www.isa.ulisboa.pt/en/leaf>

#### RESEARCHERS

128

#### DATE OF FOUNDATION

2013

#### FUNDING FCT

2,10 M Euros

#### KEYWORDS

- Sustainable Agriculture
- Agri-Food Value Chains
- Land Use Planning
- Agrobiodiversity
- Circular Economy
- Climate Change

#### STRATEGIC AIMS

LEAF Strategic aims are to lead research and innovation on sustainable biosystems for the wellbeing of humankind, creating transformative knowledge linking landscape, environment, agriculture and food. LEAF strategy is completely aligned with the 17 SDG and Farm to Fork strategy of the European Green Deal and Portuguese PRR, aiming to reconcile conservation of resources with sustainable increase of food production and quality, under the perspective of circular economy on the food value chain.

#### RESEARCH UNIT DESCRIPTION

LEAF research covers the whole food chain and influences one-health. It combines theoretical and applied disciplines, from cellular to landscape planning scales. LEAF promotes knowledge and effective solutions, to reconcile resources conservation with sustainable food production, with a positive impact on well being. Driven by a pyramidal dynamics with Territory/Land/Landscape at its basis LEAF's activity extends along the whole value chain, up to Societal Needs. Steps are Landscape Planning; Soil & Water Management; Plant, Animal & Food Sciences, Food & Feed Processing. Pyramid 4 faces are Bio-economy, Climate Neutral, Smart and Digital, and Strategic Design Thinking. LEAF has a holistic view of the agri-food systems and environmental concerns and is aware of the value of

natural resources and how multifunctional landscapes can reconcile agricultural production with ecosystem conservation, improve health, profit and resilience against unexpected shocks. LEAF has 3 complementary research Groups: G1- Natural Resources & Landscape Architecture; G2- Plant Biology & Crop Production and G3- Food & Feed. Competences are integrated in 4 Transversal thematic lines: TL1- Grapevine & Wine; TL2- Olive & Olive Oil; TL3- Tropical Agriculture & Agri-Food Value Chains; TL4- Green & Blue Infrastructures, aiming at support planning, recommendations to better manage green infrastructures and to preserve environment and cultural heritage, while guaranteeing a more sustainable food supply chain.

LEAF main achievements include: Access free webGIS platform with research results, to knowledge-based decision and policy making; Olives FAO 56 irrigation schedules guidelines & climate change adaptation update by 20 yrs research; Grapevine polyclonal selection & novel signatures for wine authenticity assessment; Clean label functional food prototypes, including industry by-products, for the food industry; Piglets and broilers nutrition and growth impact of using Microalga Spirulina, Chlorella and Tetraselmis as feedstuffs.

# Mediterranean Institute for Agriculture, Environment and Development

MED




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**WEBSITE**

www.med.uevora.pt

**DATE OF FOUNDATION**

2021

**RESEARCHERS**

156

**FUNDING FCT**

3,37 M Euros

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**KEYWORDS**

- Sustainability in the Mediterranean
- Resource efficiency
- Food Safety and Added Value
- Landscape and ecosystem integrity
- One Health
- Global Change

**STRATEGIC AIMS**

Improving resource use efficiency and competitive agriculture; Improving sustainability of food system while preserving the Mediterranean Diet; Assuring biodiversity conservation and landscape multi-functionality; Promoting organizational capability and governance mechanisms; Identifying pathways towards resilience and adaptation under known climate change scenarios.

**RESEARCH UNIT DESCRIPTION**

The Mediterranean Institute for Agriculture, Environment and Development (MED) is a large and highly multidisciplinary R&D unit focused on the sustainability of ecosystems and food systems in the Mediterranean context.

MED is therefore positioned at the core of research needs to comply with the Sustainable Development Goals (SDGs) of the United Nations as well as with the Green Deal of the European Union. We are a key and dynamic partner in Western Mediterranean, triggering new approaches to research while matching societal expectations.

MED researchers work with the ambition to find solutions to questions from the real world. Research outcomes support the optimization of management to enhance the resilience, productivity and profitability of the Mediterranean production systems and value chains, while delivering environmental and social benefits. Outcomes also support

the preservation of nature and landscape, and rural vitality, under Mediterranean conditions.

MED is built on a forward looking concept of a research unit, where integration of knowledge and systems approach are key. A systemic approach is adopted to the formulation and analysis of the problems. Co-learning and co-construction of knowledge, with a diverse set of stakeholders, is central to the positioning of MED.

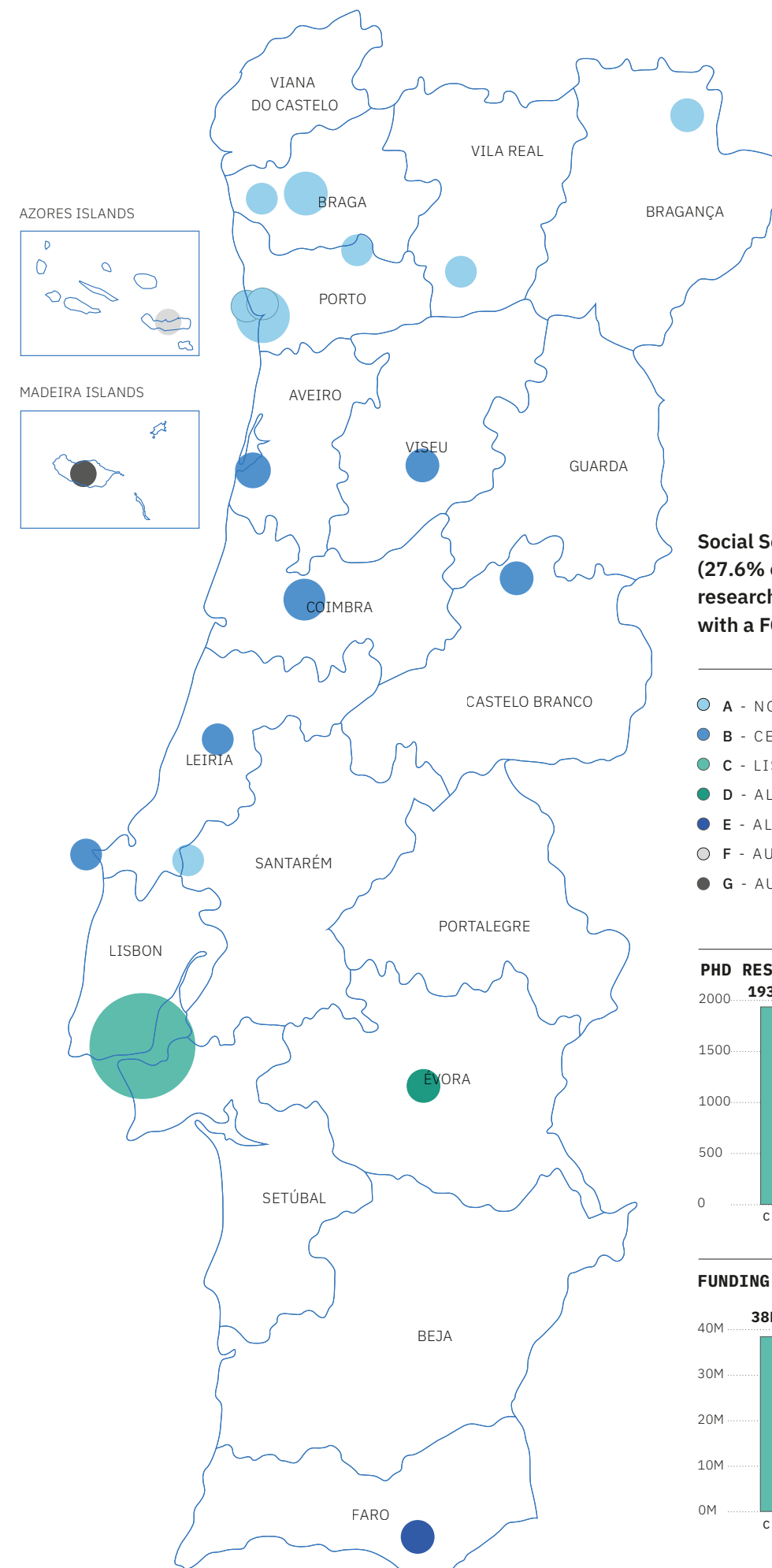
Our location, embedded in an agricultural region with high nature values and strong dynamics of change, triggers our involvement with practice.



# Social Sciences

# 5.2.5

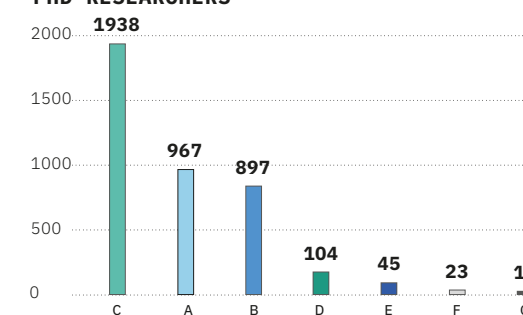
- |            |           |          |                  |           |
|------------|-----------|----------|------------------|-----------|
| APPSY      | CEJEA     | CIED     | CITUR            | IPRI-NOVA |
| CAPP       | CEOS.PP   | CIEG     | CLISSIS          | IS-UP     |
| CARME      | CES       | CIE-ISPA | COMEGI           | JUSGOV    |
| CEAD       | CETRAD    | CIEP-UCP | CPUP             | LABCOM    |
| CEBER      | CI&DEI    | CIEP-UE  | CRIA             | LE@D      |
| CECS       | CIAS      | CIEQV    | CSG              | NECE      |
| CEDH       | CICANT    | CIES-IUL | CUBE             | NIPE      |
| CEDIS      | CICF      | CIICESI  | DIGIMEDIA        | NOVA SBE  |
| CEEAPLA    | CICP      | CIIE     | DINAMIA'CET -IUL | REM       |
| CEF.UP     | CICPSI    | CIJE     | GOVCOPP          | REMIT     |
| CEFAGE     | CICS.NOVA | CINEICC  | HEI-LAB          | UIDEF     |
| CEG        | CIDEEFF   | CINTURS  | ICNOVA           | UNIAG     |
| CEGE       | CIDP      | CIP      | ICPOL            | UNIDE     |
| CEG-IST    | CIDPCC    | CIPD     | ICS-ULISBOA      | WJCR      |
| CEGOT      | CIDTFF    | CIPES    | IJ               |           |
| CEID-CRCFL | CIE       | CIPSI    | IJP              |           |
| CEIED      | CIEB      | CISED    | INED             |           |
| CEI-IUL    | CIEC-UM   | CIS-IUL  | IO               |           |



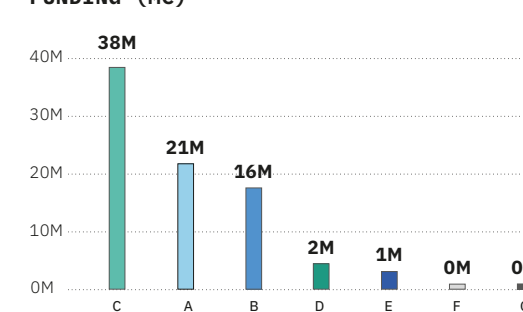
Social Sciences include 86 R&D Units (27.6% of the total) integrating 3990 researchers (21.5% of the total) and with a FCT funding of 79 M€ (2020-2023).

- A - NORTHERN
- B - CENTRAL
- C - LISBON METROPOLITAN AREA
- D - ALENTEJO
- E - ALGARVE
- F - AUTONOMOUS REGION OF AZORES
- G - AUTONOMOUS REGION OF MADEIRA

PHD RESEARCHERS



FUNDING (M€)



## Applied Psychology Research Centre Capabilities & Inclusion

APPSY



| WEBSITE     | DATE OF FOUNDATION |
|-------------|--------------------|
| www.ispa.pt | 2018               |
| RESEARCHERS | FUNDING FCT        |
| 32          | 0,50 M Euros       |

### KEYWORDS

- Human Diversity
- Social Inclusion
- Mental Health Promotion
- Capabilities
- Empowerment
- Self-Determination and Well-Being

Federation of Psychology Associations; European Psychology Associations; and several APA Divisions).

The APPSyCI focuses on the involvement of undergraduate, and master students in the research and intervention projects, including ERASMUS and special protocol with Brazil for international research & practice entailed with a consolidated network of organizations. The APPSyCI promotes technological training opportunities for members, collaborators and partners, based on open science premises. APPSyCI most notable recent achievements include: contributing to the improved effectiveness in the technical support in Housing First programs in response to the pandemic; increase in the individualized support for migrants and training for cross-cultural support teams; within the scope of open science, the EAHIL Award obtained for the best oral communication; and the fundraising of 3 new projects: two FAMI and one EEAGRANTS.

### STRATEGIC AIMS

APPSy aims at increasing the capacity to (in)form national/international public policies for a response to social groups with high risk and vulnerability; deepening educational development platforms/partnerships through civic involvement in service-learning programs; creating new opportunities for doctoral students, and young researchers for the development of Master works; influencing scientific communication skills and encouraging publication.

### RESEARCH UNIT DESCRIPTION

APPSyCI was founded by ISPA - Instituto Universitário, in 2018, and funded by the FCT since the beginning of 2020. The APPSyCI is coordinated by Professor José Ornelas and aims to contribute for the development of solutions to concrete societal and complex problems, through collaborations amongst the public, private and non-profit sectors. The specific research clusters cover: migrations, mental health, and community integration; organizational and innovation development; human potential, creativity, cognition and psychological well-being; civic and educational development and identity-based violence prevention (e.g., gender, ethnic or sexual orientation). All the clusters develop research and intervention anchored in national and transnational consortia or research organizations/networks (e.g., Horizon Europe National Panel; European

## Centre for Public Administration and Public Policies

CAPP



| WEBSITE                      | DATE OF FOUNDATION |
|------------------------------|--------------------|
| http://capp.iscsp.ulisboa.pt | 2001               |
| RESEARCHERS                  | FUNDING FCT        |
| 67                           | 1,46 M Euros       |

### KEYWORDS

- Public Policies
- Public Administration
- Governance
- Organizational Behaviour
- Sustainable Communities
- Lusophony/Lusosphere

### STRATEGIC AIMS

CAPP's main objectives are: the production of scientific knowledge in the areas of Public Administration, Government and Social Sciences, marked by Science for Public Policies; to contribute to the training of researchers on processes and tools for the design, implementation and evaluation of public policies; to foster collaboration in national and international networks for the production and sharing of knowledge in the fields of administration and public policies.

### RESEARCH UNIT DESCRIPTION

The Centre for Public Administration and Public Policies (CAPP) is the leading research centre on public policies of the University of Lisbon, the largest university in Portugal. CAPP was founded in 2001 to advance knowledge and support decision making regarding the design, implementation, analysis and evaluation of public policies. Its applied research has a focus on improving the quality in governance, which will in turn also bear results to the quality of life of people.

CAPP has consolidated its membership throughout the years to become the research centre with larger critical mass in this scientific area. As the flagship research centre of the School of Social and Political Sciences (ISCSP) of the University of Lisbon, most of CAPP members come

from this host institution. However, it also attracts leading scholars and practitioners from other universities (national and international), public and private sector organisations, bringing together academics, policymakers, senior officials, street-level bureaucrats, and advocates, and positioning itself as a public policy knowledge hub of more than 150 PhDs.

## Centre of Applied Research in Management and Economics

CARME



|                       |                           |
|-----------------------|---------------------------|
| <b>WEBSITE</b>        | <b>DATE OF FOUNDATION</b> |
| www.carme.ipleiria.pt | 2018                      |
| <b>RESEARCHERS</b>    | <b>FUNDING FCT</b>        |
| 16                    | 0,40 M Euros              |

### KEYWORDS

- Regional economics and development
- Business Administration
- Marketing
- International Business
- Human Resources and Organizational Behavior
- Sustainable development

### STRATEGIC AIMS

CARME strategic aims are: to contribute to the advance, application and dissemination of knowledge; to contribute to regional development; and to increase the degree of internalization.

### RESEARCH UNIT DESCRIPTION

Centre of Applied Research in Management and Economics (CARME) is a research and development (R&D) unit, originated from the Department of Management and Economics of Polytechnic of Leiria. CARME mission is to contribute to regional development and innovation, through integration between basic and applied research in management and economics, strongly oriented towards professional practice and engaging researchers, students, industry and non-profit organizations in a collaborative manner.

Our vision is to play a central role as a platform of knowledge co-creation between R&D, higher education, industry and social partners, creating an inspiring environment for multidisciplinary research with impact on companies and non-profit organizations and a valuable benefit for society at large. In 2020, the number of publications increased 150%, CARME researchers led and participated in 10 research projects, and supervised 24 Master's theses, as well as co-supervised 4 PhD theses to be completed in 2021.

## Research Centre on Adult Education and Community Intervention

CEAD



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| Under construction | 2020                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 10                 | 0,15 M Euros              |

### KEYWORDS

- Adult education
- Community intervention
- Learning in formal and non-formal contexts
- Formation and training of adults
- Social inclusion and citizenship
- Lifelong education

### STRATEGIC AIMS

CEAD aims at contributing to innovation and cooperation through the research on the education of adults and community intervention in the European context; stimulating the scientific culture in the Portuguese and European societies (beyond the scientific community), through the dissemination of scientific knowledge, the training of young researchers, and the initiation of young students in scientific practices; building partnerships with civil society organisations and other community social actors.

### RESEARCH UNIT DESCRIPTION

CEAD is the first research centre in Portugal specialized in adult education and community intervention. It is a small-scale unit, but with a very significant level of internationalization, and it is committed to providing conditions for young PhDs so that they can develop their own careers and, at the same time, learn from more experienced researchers.

CEAD researchers create scientific knowledge mainly in four sub-areas: adult education policies; gender, education and citizenship studies; non-traditional students in higher education; education and learning of older adults. Our researchers are concerned with the phenomena of social exclusion, pursuing the principles of equality and equity, social justice and the construction of a democrat-

ic citizenship. At CEAD we believe that research results should be shared, not only in the scientific community, but also in public spaces, contributing to improve the levels of scientific literacy of the population. Support for the initiation of scientific activity is done through the integration of students in research projects, and through an advanced training program (which includes lectures, seminars and courses). Given its interest in community intervention, CEAD is organizing a network of civil society institutions, which will work in cooperation with the researchers, to be close and involved in the social reality around us.

CEAD main recent achievements include: 43 publications in 2020, while a small-scale unit (5 Books, 22 book chapters, 16 papers); the participation of its members in 12 funded research projects, in 2021; and the organization of 9 events in the advanced training program, in 2021.

## Centre for Business and Economics Research

CEBER



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.uc.pt/en/uid/ceber">http://www.uc.pt/en/uid/ceber</a> | 2016               |
| RESEARCHERS   | FUNDING FCT        |
| 33  | 0,70 M Euros       |

### KEYWORDS

- Management
- Economics
- Operational research / management science
- Quantitative methods
- Sustainability
- Health and wellbeing

### STRATEGIC AIMS

CeBER seeks to advance science, while pursuing benefits to society and training of new researchers. It focuses on developing and applying quantitative models and methods to address emergent research questions in Management and Economics, as well as addressing societal challenges through truly cross-disciplinary projects. These challenges include innovation and innovative organizations, health and well-being, inequality, and sustainability.

### RESEARCH UNIT DESCRIPTION

CeBER is an R&D Unit in the areas of Management, Economics and Operational Research. CeBER is part of the University of Coimbra, hosted by the Faculty of Economics. It therefore benefits from the experience and infrastructure of one of the main universities in Portugal.

CeBER's research is currently organized into three thematic clusters: Organizational Innovation and Development; Institutions and Policies for Sustainable Development; and Health Decisions and Policy. These application areas are built upon a basis of quantitative modelling expertise. The research team has diverse backgrounds, including Economics, Management, Finance, Mathematics, Psychology and other.

Scientific outputs are disseminated in international scientific journals and books, through participation in confer-

ences, and through the CeBER Working Papers series. The Unit also manages the scientific journal *Notas Económicas*. CeBER contributes also to education in Management and Economics, particularly at the postgraduate level, namely PhD programmes in Economics, Management and Management Science (Decision Aiding Science), as well as Master's programmes in Economics and Management. CeBER recent main achievements include: authorship or edition of 24 books in 2018-2020, five of which in international publishers; leadership or participation in projects funded by the European Commission, FCT and other agencies; 201 papers in international scientific journals indexed by Scopus in 2018-2020; and 19 doctoral dissertations defended in 2018-2020.

## Communication and Society Research Centre

CECS



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.cecs.uminho.pt">www.cecs.uminho.pt</a> | 2001               |
| RESEARCHERS  | FUNDING FCT        |
| 68   | 2,10 M Euros       |

### KEYWORDS

- Communication
- Media
- Society
- Culture
- Public policies
- Literacy

### STRATEGIC AIMS

CECS's mission is to conduct cutting-edge research in media and communication; to contribute to social and cultural development; to encourage the growth of sustainable societies; and to promote communication as a pivot in developing welcoming, inclusive and peaceful communities. It also aims to enhance scientific publishing and encourage scientific publishing and support young researchers. These objectives are developed closely aligned with the European Science Agenda.

### RESEARCH UNIT DESCRIPTION

CECS is the leading research unit in Communication Sciences in Portugal. Internationally recognised, the unit focuses on the following scientific domains: media literacy; communication and culture policies; visual and sound culture; intercultural communication; cultural studies; organisational and strategic communication; science communication; social challenges; media; digital languages; and journalism.

The unit is mainly motivated to: discuss the media's role in the configuration of modern and multicultural societies; promote media literacy for engaged citizenship; debate journalism's social responsibility in information societies; uphold intercultural relations based on communication flows within the Portuguese speaking space; analyse me-

dia's shaping of social representations; examine technology and communication practices in outlining the aesthetic experience and lifestyles; survey social change produced by strategic communication; and improve communication for social development and innovative and reflexive societies.

The group invests in collaborative activities, developing strong links with some of the most relevant global research networks, task forces and associations and promoting partnerships with a series of relevant regional, national and international actors.

Some of CECS's notable achievements include: support for six Intervention platforms and study of the social and communicational effects of the pandemic; development of funded projects, recruitment of new researchers and organisation of scientific events; publication, in open access, of dozens of books and scientific journals; and the organisation of hundreds of activities for students and invested in the Open Science policy.



## Research Centre for Human Development

CEDH



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.fep.cedh.porto.ucp.pt/">http://www.fep.cedh.porto.ucp.pt/</a> | 2013               |
| RESEARCHERS   | FUNDING FCT        |
| 23  | 0,26 M Euros       |

### KEYWORDS

- Human Development
- Mental health: assessment and intervention
- Vulnerabilities and reintegration pathways
- Technological innovation and neurosciences
- Organizational development and human capital

### STRATEGIC AIMS

For 2018-2022, CEDH presents 6 strategic goals: to strengthen the organization and infrastructure; to empower the research team; to increase funding; to increase the scientific activity on technological innovation; to improve the quality and international impact of research outputs; to improve the communication of research findings to the overall society.

### RESEARCH UNIT DESCRIPTION

CEDH takes a multidimensional perspective on human development, giving relevance to its individual, organizational, cultural, and political levels. At the same time, CEDH views human development as including all stages of the life cycle, considering and analysing the different transitions that guide life trajectories in the context of contemporary societies.

CEDH's mission is to contribute to the scientific community and to the general Community in 4 dimensions of human development: (1) Health: researchers study risk factors for mental health, the relationship between demographic changes (e.g., aging, migration) and mental health, and develop and validate tools for psychological assessment and intervention. (2) Justice, equity, and human rights: researchers study specific conditions of contemporary societies that increase vulnerabilities in human lives (e.g.,

forced migration or other demographic changes that result in the stigmatization of specific groups) and provide tools to foster reintegration and inclusion. (3) Education: researchers are focused on producing knowledge that contributes to the individual, professional, organizational, and territorial development in educational contexts. (4) Work: researchers analyse the ways organizations perceive, develop and involve their human capital. Specific aspects of contemporary societies (e.g., aging, technological improvement) are analysed to determine how they impact the organization of work and, consequently, how they impact Human Development.

CEDH recent main achievements include: growing internationalization of postgraduate training, though the International Joint PhD in Applied Psychology; an increasing capacity to attract competitive funding, with 19 funded projects between 2017-2020; a consistent increase in publications in SCOPUS indexed journals, with a total of 80 papers published from 2017 to 2020; and a strong insertion in the community, with strategic partnerships and several practices of knowledge transfer.

## Law and Society Research Center

CEDIS

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cedis.fd.unl.pt/">http://cedis.fd.unl.pt/</a> | 2003               |
| RESEARCHERS   | FUNDING FCT        |
| 36  | 0,61 M Euros       |

### KEYWORDS

- Law and Society
- Dynamics of lusophone juridicity
- Economics, law and legal pluralism
- Legal systems and Socio-historical juridicity
- Law, Politics and Security
- Private Law, Public Law and Social Law

### STRATEGIC AIMS

CEDIS strategic aims are to promote the highest academic quality and innovation in research in the field of socio-legal studies. This will be carried out via the publication of scientific legal books, book chapters, peer reviewed articles in International and national journals, legal reports, working papers and organizing events (seminars, workshops, conferences, etc.), most of which to be available with open access, and other events in which the entire the scientific community may participate

### RESEARCH UNIT DESCRIPTION

CEDIS is a research centre on Law and Society that reflects the approach of NOVA School of Law to legal studies. Adopting a pluralistic vision of law in contemporary societies, CEDIS approaches legal research in an interdisciplinary and innovative way.

The Centre promotes the creation of an international network with European and other Portuguese-speaking research communities, supporting researchers with diverse backgrounds and embracing open access to research. CEDIS also hosts a number of laboratories and knowledge centres.

CEDIS research areas are organised as follows: Criminal Law, Equality Law, Law and History, Law and Politics, Law and Religion, Law and Security, Law, Interculturality and

Lusophony, Private Law, Procedural Law and Alternative Dispute Resolution, Transitional Justice, and Tax and Social Security Law. CEDIS contributes to enrich and update the library of NOVA School of Law, it enables free access to legal bibliography, and to support the creation and development of interfaces between research activities and community services. It has had outputs at the level of the publication of scientific articles, promoted conferences, etc., in topics as varied as the functions of fintech and the intersection of new technologies and criminal law, arbitration and law of the sea, as well as in areas ranging from security to History, Political Science and International Relations.

CEDIS main achievements include: distinction "Friends of the Navy of Brazil" to Armando Marques Guedes (2021); UN Regional Forum, Business and Human Rights, Latin America Caribbean Claire Bright, Speaker, 2021; and the publication of 91 books, 50 articles in international journals and 25 in national journals.

## Center of Applied Economic Studies of the Atlantic

CEEAPLA



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.ceeapla.uac.pt/index.php?static=ceeapla">http://www.ceeapla.uac.pt/index.php?static=ceeapla</a> | 2003                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 23  | 0,47 M Euros              |

### KEYWORDS

- Tourism economics and management
- Economic and environmental Sustainability
- Regional economics
- Corporate finance

### STRATEGIC AIMS

CEEApIA seeks to contribute to the development of scientific research and to the implementation of national policy in its specific area; to conduct research programs and projects; to collaborate with other Universities and Higher Education establishments in research activities and post-graduate teaching; to contribute to the scientific exchange between research-related organisms and departments; to provide R&D services to the community.

### RESEARCH UNIT DESCRIPTION

CEEApIA (Centre of Applied Economics Studies of the Atlantic) is the result of a partnership between the University of the Azores and the University of Madeira. It constitutes a permanent structure, which aims to promote fundamental and applied scientific research, based on the human and material resources available in both Universities, promoting R&D projects and services in the areas of Economics and Management Sciences, with emphasis on the Regional, Public and Labor Economics, Tourism Economics and Development, Finance, Marketing and Organizational Behavior.

Its purpose is to create a stimulating environment, to enhance the scientific quality of its outputs and its members. Its biggest challenge is based on a management capable of promoting a research environment that boosts and re-

wards its researchers, to publish in journals with international visibility regularly and consistently. Between 2019 and 2021, the following scientific production indicators stand out: 38 publications in journals with impact factor; 5 international event organizations; 12 book publications; 4 R&D services provided to the community.

## Center for Economics and Finance at the University of Porto

CEF.UP



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://cefup.fep.up.pt">http://cefup.fep.up.pt</a> | 2009                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 57  | 1,20 M Euros              |

### KEYWORDS

- Economics
- Microeconomia
- Macroeconomics
- Finance
- Management
- Methods

### STRATEGIC AIMS

Cef.up strategic aims are to push the frontier of knowledge by generating breakthrough theoretical, applied and methodological research on Economics and Management, recognized by its high innovative nature; to have a significant impact in academia and society by disseminating the results of the research in academic settings, political decision arenas and to a wider audience in the private and public sectors; and to educate and give state-of-the-art competencies to a new generation of young researchers.

### RESEARCH UNIT DESCRIPTION

Cef.up is an independent research center located in the Faculty of Economics, University of Porto (FEP). Its mission is to carry out theoretical and empirical research in the fields of economics, finance and management. Cef.up was established in 2009 through the merger of CETE and CEMPRE – both FCT UIDs established in early 1990s.

Cef.up's members activities are organized in four research sub-groups: i) Macroeconomics and Growth, ii) Markets and Industrial Organization, iii) Theory and Methods and iv) Organization and Management. Each research groups is led by a principal investigator in charge of defining and implementing the research agenda and actions of its group. The central aim of Cef.up is to support high quality publications. A crucial pillar for this is the management of a

repository of macro and microdata that stimulates highly relevant research in areas such as applied research on firms' strategic behavior and dynamics, the determinants and impacts of credit decisions regarding firms' performance, and the evaluation of public policies, both at a micro and macro levels.

Another key pillar is the support of FEP's PhD Programs – providing research grants and inviting top international scholars – and the hosting of post-docs and visiting scholars. Together with the support of conferences, workshops and seminars, these promote a highly favorable research environment.

Cef.up main achievements include: the management of the Data center and the rankings' website (jointly with NIPE, University of Minho); the organization of conferences, workshops and advanced training open to the general public; the organization of four seminars series – ECO, FIN, MaR and WiP – and of a working papers series; and several publications in international scientific journals (around 50 papers per year).

## Center for Advanced Studies in Management and Economics

CEFAGE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.cefage.uevora.pt/">http://www.cefage.uevora.pt/</a> | 2006               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 48          | 0,82 M Euros |

### KEYWORDS

- Strategy, entrepreneurship and operations
- Industrial, labour and spatial economics
- Finance
- Macroeconomics, growth and development

### STRATEGIC AIMS

The strategic aims of CEFAGE are the following: promoting high-quality scientific research in Management and Economics; creating a stimulating research environment; supporting MSc and PhD students in their research projects; contributing to societal challenges; organising scientific meetings, such as seminars, conferences, workshops and others; offering its members the means to produce high-quality research publishable in well-regarded scientific international journals.

### RESEARCH UNIT DESCRIPTION

CEFAGE brings together researchers in Economics and Management from various institutions. It has a main office at the University of Évora and branches at the University of Algarve, University of Beira Interior and the Lisbon Accounting and Business School. CEFAGE is led by an executive board of 4 members: a director, two vice-directors and a scientific coordinator. CEFAGE has a Scientific Council composed by full researchers and a Research Advisory Board to provide scientific advice.

The research activities of CEFAGE are organised in 4 research groups: Strategy, Entrepreneurship & Operations; Finance; Industrial, Labour & Spatial Economics; Macroeconomics, Growth & Development. In addition, there are 4 thematic strands transversal to the research groups: Tour-

ism; Agrifood & Forestry; Education & Health; Sustainability & Performance.

To promote the publication of research on top Management and Economics journals, an incentive scheme and a journal ranking were developed with a pyramidal structure based on well-known international rankings (ABS & CNRS). CEFAGE finances the research expenses of individual researchers, including PhD students and common resources, such as a server, databases and software licenses. CEFAGE organises regular research seminars, conferences, an annual Doctoral Consortium, and promotes short technical courses and workshops. To encourage the publication of preliminary work CEFAGE holds, since 2007, the CEFAGE Working Papers Series.

CEFAGE main achievements include: publication of more than 1000 articles in international scientific journals; publication in leading journals such as J OPER MANAG, REV ECON STUD and STRATEG MANAGE J.; coordination and participation in 140 projects involving more than 100 million euros in funding; supervision of more than 100 doctoral theses and 500 master's theses; and the organization of over 300 scientific events including seminars, conferences and workshops.

## Centre of Geographical Studies

CEG

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ceg.ulisboa.pt/">http://ceg.ulisboa.pt/</a> | 1993               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 75          | 1,29 M Euros |

### KEYWORDS

- Geography
- Spatial Planning
- Environmental Changes
- Socio-spatial Dynamics

### STRATEGIC AIMS

CEG's mission is to foster geographical research, to promote and disseminate geographical knowledge, and to contribute to social inclusion and development, sustainable use of environmental resources, and to the mitigation of climate change effects and territorial cohesion through the lens of spatial justice.

### RESEARCH UNIT DESCRIPTION

The CEG is organized in 6 Research Groups (RG), whose work is global in scope and addresses cutting-edge topics of contemporary Human and Physical Geography and Planning. The Research Groups conduct internationally oriented research on: climate change and environmental systems (Zephyrus), risk assessment and management (RISKam), modelling and spatial management and planning (MOPT), urban and regional change and policies (ZOE), migration, spaces and societies (MIGRARE), and tourism, culture and space (TERRITUR).

The high-quality research environment and facilities of CEG include a specialized library, vast map and photo archives, the Environmental Monitoring LAB (EarthLAB), and the GEOMODLAB, a laboratory for spatial modelling and remote sensing. CEG provides high quality mapping and monitoring services across the globe, with experience in Europe, Africa, North and South America, the Arctic and

Antarctica.

At the core of its publication strategy, the CEG edits continuously since 1965 the journal Finisterra, which is indexed in the Emerging Sources Citation Index – Core Collection Web of Science, SCOPUS and ERIH.

CEG activity focuses on innovation, technology, spatial modelling and theorization resulting in valuable knowledge for public policies on land use management, city transformation and regional development.

Some of CEG notable achievements include: planning and development policies for inclusive and sustainable territories; climate change adaptation plans at regional (AML, Oeste, Alentejo Central) and municipal scales; coordination of Propolar – Portuguese Polar Program, with research in the Arctic and Antarctica.



## Research Center in Management and Economics

CEGE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www.catolicabs.porto.ucp.pt/en/cege-about-us">https://www.catolicabs.porto.ucp.pt/en/cege-about-us</a> | 2003               |
| RESEARCHERS   | FUNDING FCT        |
| 28  | 0,70 M Euros       |

### KEYWORDS

- Service Management and Performance
- Markets and Policy
- Sustainability and Ethics

### STRATEGIC AIMS

CEGE's mission is to contribute to the advancement of knowledge in management and economics, promoting a culture of excellence in research and disseminating its research results to the scientific community and society in general.

### RESEARCH UNIT DESCRIPTION

Founded in 2003, CEGE is the research center that frames the academic research conducted within the Católica Porto Business School (CPBS). The key research areas of CEGE are: (a) Markets and Policy; (b) Service Management and Performance; and (c) Sustainability and Ethics. Members of the center have produced research of excellent quality published in top journals in these areas, while also engaging in ongoing activities that convert research results into impact in business and society through applied laboratories within CPBS, such as the Service Management Laboratory (SLab), and the Leadership Laboratory (LEAD. lab). This expertise is also used by the Centro de Estudos de Gestão e Economia Aplicada (CEGEA), the consultancy unit of CPBS. CEGE is unique in the national scientific system in the way it combines Management and Economics (typically separate fields of knowledge) and bridges academic outputs and real society through its interdisciplinary key research areas.

Some of CEGE's main achievements are: the contribution to understanding the impact of key world trends on service activities, by providing key insights into the design and delivery of technology-enabled services; the understanding of antecedents and consequences of effective and ethical leadership, focusing on how conveyed/expressed leader strengths and virtues influence team performance, with several papers published on this topic in journals as the Journal of Management, Leadership Quarterly or Journal of Business Ethics; and the paper "Portugal bailout and the crisis of the European Union from a capability perspective", published in Cambridge Journal of Economics.

## Centre for Management Studies of Instituto Superior Técnico

CEG-IST



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://fenix.tecnico.ulisboa.pt/investigacao/ceg-ist">https://fenix.tecnico.ulisboa.pt/investigacao/ceg-ist</a> | 1995               |
| RESEARCHERS   | FUNDING FCT        |
| 35  | 0,66 M Euros       |

### KEYWORDS

- Operations and Supply Chain Management
- Decision and Risk Analysis
- Environmental and Sustainability Assessment
- Entrepreneurship and Innovation

### STRATEGIC AIMS

CEGIST's organizational structure and research strategy promotes multi and inter-disciplinary research, acknowledging the existence of five research areas – DECISING, MOSAIC, SEI, OpLog, and SENSU. CEGIST strategy encourages cross-fertilization of the five areas, promoting transversal research, and engaging researchers with distinct backgrounds and interests.

### RESEARCH UNIT DESCRIPTION

CEGIST is a research centre hosted by IST-ID that explores and reinforces the links between management science and engineering approaches to stimulate creativity in problem-solving.

CEGIST has five research areas: (1) DECISion science and management engineerING (DECISING); (2) systems modelling and Methods of Operations reSearch And analytICs (MOSAIC); (3) Strategy, Entrepreneurship and Innovation (SEI); (4) Operations, Logistics and Supply Chain Management (OpLog); and (5) Strategic approaches to ENvironment and SUSTainability (SENSU).

This systemic view is the distinctive character of CEGIST, promoting research opportunities associated with the development of knowledge, processes, tools, and methods required to make decisions and to shape public policies, to configure organizational structures and normative sys-

tems, to design engineering systems in sustainable patterns, and to solve problems associated with the information-intensive technology-based economy.

Some of CEGIST main achievements include: award of the 2017 Gold Medal of the International Society on Multiple Criteria Decision-Making to one of CEGIST researcher; strong engagement in the development of strategic and operational solutions in emerging areas, including sustainable supply chains, and advanced smart production and logistics systems; leading role in international advanced education and research programs like the Carnegie Mellon-Portugal program; award of the 2015 Lifetime Achievement Award of the International Association for Impact Assessment (IAIA) to one of CEGIST researcher.



## Centre of Studies in Geography and Territorial Planning

### CEGOT

|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.cegot.pt/pt/">http://www.cegot.pt/pt/</a> | 2008                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 65                 | 0,96 M Euros       |

#### KEYWORDS

- Urban and Territorial Development
- Spatial Planning
- Ambiente
- Health and Well-being
- Tourism
- Climate Change and Risks

#### STRATEGIC AIMS

CEGOT's main strategic goals are: to increase scientific productivity and its impact; to increase coordination and participation in relevant national and international research projects; to develop advanced education programs; to enhance the collaboration with practitioners and policy-makers, and the participation in the development of public policies.

#### RESEARCH UNIT DESCRIPTION

CEGOT is a R&D unit that results from the cooperation between research-teachers and researchers from the Geography Departments of the University of Coimbra and the University of Porto. CEGOT has a growing internationalization, with the addition of members from several countries, especially from Brazil and Spain. Most members of CEGOT have a Ph.D. in Geography but the center has been attracting a growing number of researchers from other scientific areas, reinforcing its multidisciplinary character. The combination of research with education also underlies the growing presence of Ph.D. students and early career Ph.D. researchers.

This unit is a collaborative space, in which individual research interests are connected with collective objectives, gathered around a vision of territorially-based sustainable development. It is organized into 3 research groups: i) Na-

ture and environmental dynamics; ii) Cities and territorial development; iii) Tourism, heritage and territory.

Its research has stood out in the areas of geomorphology, climatology and hydrological dynamics; ecological dynamics of the landscape; natural risks; spatial planning; urban geography and planning; economic geography, competitiveness and innovation; geography of health; tourism, heritage and leisure.

CEGOT has 159 members, 64% of whom hold a PhD. The combination of research with education underlies the presence of a high number of Ph.D. students and early career Ph.D. researchers.

## Católica Research Centre for the Future of Law

### CEID-CRCFL



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.direito.ceid.porto.ucp.pt/en/about-en-ceid">http://www.direito.ceid.porto.ucp.pt/en/about-en-ceid</a> | 2013                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 53                 | 0, 95 M Euros      |

#### KEYWORDS

- Internationalization
- Interdisciplinarity
- Innovation
- Inclusion
- Technology
- Regulation

#### STRATEGIC AIMS

CEID -CRCFL aims to promote and support collaborative, interdisciplinary and transnational research focused on specific themes of Law, in order to contribute to the deepening and exchange of knowledge, to pay close attention to the problem of citizens' protection in a digital society and in the context of relentless technological change, to conduct applied research and provide services to the community and promote the success of all students, at all levels: undergraduate, masters and PhD.

#### RESEARCH UNIT DESCRIPTION

The Católica Research Centre for the Future of Law is a generalist research unit at Católica Law School, which was born with the aim of enacting a profound change in the traditional paradigm of legal research in Portugal. Since its inception, the Centre has been a common setting for legal academics committed to innovative and prospective research grounded in three mainstays' teamwork, interdisciplinary research, and a transnational focus. Its mission is to promote key changes to the traditional paradigm of legal research in Portugal. The Research Centre aims to set Católica apart from other Portuguese law schools in its way of thinking about and carrying out legal research. We are committed to a paradigm that stresses teamwork, interdisciplinary research, and a transnational focus.

It is an expression of the inclusive vocation of the Research Centre that it houses not only the faculty and doctoral candidates at the Lisbon and Oporto branches of Católica Law School and the Global School of Law but also law professors and researchers with an outstanding record willing to join research teams or produce research in accordance with the spirit that pervades the Centre.

CRFL has created the EU Law Observatory (Competition Law Enforcement; Special Vulnerable Victims), the Católica Law Review (CLR) and Market and Competition Law Review (M&CLR) and also is a founder of Mare Startup.

## Interdisciplinary Research Centre for Education and Development

CEIED



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.ceied.ulusofona.pt/pt/">http://www.ceied.ulusofona.pt/pt/</a> | 2013               |
| RESEARCHERS   | FUNDING FCT        |
| 39  | 0, 46 M Euros      |

### KEYWORDS

- Education
- Culture
- Territory
- Human Development
- Social Justice

### STRATEGIC AIMS

CeiED aims to create conditions for the construction of solid and sustained collective interdisciplinary knowledge for which it has established 4 main goals: intensify public science and co-creative action for human and social development in a fair and solidary way; give a boost on internationalization- extension of scientific networks and capacitation in competitive national and international competitions, strengthen the teaching-research relationship; strengthen research in the lusophone countries.

### RESEARCH UNIT DESCRIPTION

The Center for Interdisciplinary Studies in Education and Development is an R&D unit established at the Lusófona University for the fields of education, territory, memory and human development. CeiED has been carrying out its scientific activities according to three guiding lines: cognitive justice, co-creation and public science. These principles are embraced by researchers that have different backgrounds but are mutually linked to the common purpose of building knowledge that promotes interdisciplinary dialogue to strengthen research and advanced training. CeiED has an extensive work at the national and international level through several partnerships and bilateral agreements, contributing to the development and dissemination of science within and outside academia. Is

also the founder of the networks RIAIPE - Education Policies in Latin America - and CYBERPARKS, European network for sustainable urban development.

Some of CeiED main achievements include the creation of Citizen Science Doctoral College – EMU; of two Labs – LEME and L3EP – link between research and public science; the creation of an Observatory in Education and Training – OP-Edu (partnership with CES -U.Coimbra) and the assignment of an UNESCO Chair “Education, Citizenship and Cultural Diversity”.

## Center for International Studies

CEI-IUL



| WEBSITE   | FUNDING FCT  |
|---|--------------|
| <a href="http://cei.iscte-iul.pt/">http://cei.iscte-iul.pt/</a> | 1,02 M Euros |
| RESEARCHERS   | FUNDING FCT  |
| 54  | 1,02 M Euros |

### KEYWORDS

- International studies
- African studies
- Security and Defense studies
- Development studies
- Globalization studies

### STRATEGIC AIMS

CEI-IUL strategic objectives are the development of in-depth research on institutions, governance and international relations; societal and developmental challenges; economy and globalization. The research will focus on four regional areas, defined as priorities: Africa; Europe & Transatlantic Relations; Asia & the Middle East; Latin America & the Caribbean. CEI-IUL intends to broaden its research team, to focus on internationalization, maintain the link between research and teaching, and reinforce articulation with civil society.

### RESEARCH UNIT DESCRIPTION

The Centre for International Studies has as its core mission developing academic research, thinking and intervention in a range of complex social, political and economic phenomena that go beyond national and regional borders. CEI-IUL is committed to producing research of excellence addressing the most critical 21st Century international developments and societal challenges, as well as the consequences of globalisation. CEI-IUL develops its research agenda and activities in close articulation with different graduate programs at ISCTE-IUL, combining interdisciplinary research with a broad public-oriented activity, promoting research dissemination and public awareness of science and engaging in public debates.

CEI-IUL combines researchers' expertise on regional contexts with comparative research approaches of global relevance and theoretical approaches arising from political science, international relations, sociology, history, security studies, anthropology, and economics. Each research group, as well as each regional line, has its principal researcher, responsible for coordinating and improving the group's productivity. All researchers are assigned to a thematic region and participate in at least one research group. CEI-IUL has given particular attention to gender issues in its research by developing the international project Multi-sectorial Academic Program to prevent and combat Female Genital Mutilation, coordinated by Clara Carvalho, funded by the EC, in partnership with universities from Spain, Italy, Belgium, it is also a partner of Amitié-Code, a European Commission funded project that involves Universities, Public Authorities and NGOs operating in 6 different European Countries and 8 European Cities. CEI-IUL has also organized a training course for civil servants, with the aim of raising awareness and sensitivity to issues related to Migrations, Development and Human Rights and to encourage participants to act, in their daily life and within the different professional activities.

## Centre for Legal, Economics and Environmental Studies

CEJEA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cejea.ulusiada.pt">http://cejea.ulusiada.pt</a> | 2005               |
| RESEARCHERS   | FUNDING FCT        |
| 31  | 0, 32 M Euros      |

### KEYWORDS

- Public law
- Political theory
- Private law
- Labor law
- Environmental law
- Economic law

### STRATEGIC AIMS

Objectives to achieve and ways to follow: develop activities of scientific research, in interchange with other unities and institutions, in the national and in the international framework; contribute to the improvement of the conditions of the country, promoting competitiveness and internationalization; promote post-graduate formation in the second and third study cycles, connecting the lines of research of CEJEA with the topics developed in the PhD courses.

### RESEARCH UNIT DESCRIPTION

CEJEA, with its 5 groups, aims to promote and disseminate research in the main areas of Law, also bearing in mind the legal implications of economic activity and the intervention or absence of environmental intervention. CEJEA, until now and increasingly in the future, seeks to promote the articulation of the research it carries out with researchers linked to other institutions, in Portugal and abroad. In this sense, CEJEA members are frequently invited to participate in initiatives of other institutions, national and international, and many CEJEA activities have had the participation of invited academics, Portuguese and of other nationalities.

The coordination of CEJEA is made by Manuel Porto, with José Domingues as deputy coordinator, GI1Public Law and Political Theory coordinated by Ricardo Leite Pinto,

GI2 Private Law and Labour Law coordinated by José Gonzalez, GI3 Legal and Environmental Research coordinated by Alberto Ribeiro de Almeida, GI4 Legal and Economic Sciences coordinated by Vasco Guimarães and GI5 Criminal Law and Criminology coordinated by Candido da Agra. Some of CEJEA research highlights are on portuguese constitutional History, a study on “self-ownership”; several studies in the field of intellectual property (articles, book chapters and legislative comments), an “International Electoral Observatory” and a study on “Driving violations: the jointly contribution of personality traits, driving anger and passion for driving”.

## Center of Organizational and Social Studies of Polytechnic of Porto

CEOS.PP



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://iscap.pt/ceos/">http://iscap.pt/ceos/</a> | 2017               |
| RESEARCHERS   | FUNDING FCT        |
| 41  | 0,76 M Euros       |

### KEYWORDS

- Information-based organization
- Entrepreneurship and Innovation
- Management and development of human capital
- Digital strategies for marketing and communication
- Information and knowledge for decision making
- Multilingual communication in organizations

### STRATEGIC AIMS

CEOS.PP's strategic aims are to promote competitive multidisciplinary research with national and international impact and relevance through R&D and innovation activities and by supporting highly specialized consultancy and innovative advanced training. Thus, in line with continuous advancement, our strategic aims contribute to the dissemination of new knowledge, the quality of the scientific activity, and strengthening collaboration with society.

### RESEARCH UNIT DESCRIPTION

The Centre for Organisational and Social Studies of the Polytechnic of Porto promotes strategic, competitive and multidisciplinary research from a wide range of distinct areas such as Entrepreneurship, Marketing, Information systems and technologies, Communication and Languages in organizational contexts, Social and Organizational Development through Innovation; Enterprise, Social and Learning Analytics, Social Economics, Human Resources, Accounting and Auditing, with the aim of developing and promoting digital skills and solutions that enable the digital transformation of organizations, as well as their internationalization and sustainability. In this regard, CEOS.PP's contribution is manifested through projects and activities which aim to create value, promote operational efficiency, generate knowledge and develop human capital,

oriented towards problem solving, with an active impact on the life of organisations.

CEOS.PP researchers' outputs represent a significant number of indexed reference publications and partaking in national and international projects, as well as in the establishment of partnerships between different HEIs, scientific networks, local administration and enterprises. In terms of an action research logic, CEOS.PP has contributed to conveying and sharing acquired knowledge, not only with the R&D community, but also with society in general. CEOS.PP is accredited in Digital services - social, cultural, economic or public administration and integrates the digital innovation hub – CONNECT 5, as a representative of IPP/ISCAP.

## Centre for Social Studies

CES

**WEBSITE**

www.ces.uc.pt

**DATE OF FOUNDATION**

1978

**RESEARCHERS**

180

**FUNDING FCT**

3,97 M Euros

**KEYWORDS**

- Interdisciplinarity and Epistemological Innovation
- Democratizing knowledge
- Public science
- Critical theory and contemporary societies
- Human Rights
- North | South relations

**STRATEGIC AIMS**

CES strategic aims are to foster innovative epistemologies and methodologies, contributing to critical thinking; to stimulate an ecology of knowledges, acknowledging cultural diversity and knowledge produced by citizens and by social movements; to promote research on culture and the arts and boost new ways of reflecting and self-reflecting on science, knowledge and society; to strengthen relations with the Global South; to boost science in society and for society and support the formulation of public policies.

**RESEARCH UNIT DESCRIPTION**

The Centre for Social Studies of the University of Coimbra is a scientific institution focused on research and advanced training within the Social Sciences and the Humanities, through an inter and transdisciplinary approach. The Ministry of Science granted CES the status of Associated Laboratory in 2002, recognizing its contribution to public policies, advanced training and the dissemination and sharing of knowledge it is also a founder of CoLABOR Colaborative Laboratory for Labour, Employment and Social Protection. Since its foundation, in 1978, CES has been conducting research with and for an inclusive, innovative and reflexive society by promoting creative critical approaches in the face of some of the most urging challenges of contemporary societies. Its goal is to continue engaging

generations of exceptionally talented researchers and students in the field of Social Sciences and the Humanities. CES scientific strategy aims to democratize knowledge, revitalize human rights and to contribute to the establishment of science as a public commodity. We pursue this mission by continuously reshaping our research fields in a response to the needs of the society, as for example URBiNAT Living Labs: Nature Based Solutions and citizen participation driving urban regeneration or Gender Equality: Tools for the development of Gender Equality Plans in Academia and in Municipalities.

Our work covers a wide range of scientific activities and scope, at the national and international level, with particular focus on the North-South and South-North dialogues, contributing to the development, dissemination and application of cutting-edge science and to an advanced research and training of excellence.

## Centre for Transdisciplinary Development Studies

CETRAD

**WEBSITE**

https://cetrad.utad.pt/

**DATE OF FOUNDATION**

2002

**RESEARCHERS**

45

**FUNDING FCT**

0, 70 M Euros

**KEYWORDS**

- Rural development
- Valorisation of endogenous resources
- Territory and social cohesion
- Organisations and competitiveness

**STRATEGIC AIMS**

CETRAD objectives are to rethinking development models for low density regions in the light of social transformations triggered by green and digital transitions; advancing knowledge frontier for inter- and transdisciplinary approaches; steering participative and collaborative approaches to support social capital building in LDR and excelling, as a reference, in the design of integrative conceptual and analytical frameworks supportive of scientific advance and application of the place-based development.

**RESEARCH UNIT DESCRIPTION**

CETRAD is an interdisciplinary research unit in social sciences focused on smart sustainable inclusive territorial development in low density regions. CETRAD is based at the Universidade de Trás-os-Montes e Alto Douro (UTAD), located in the Northeast of Portugal. It gathers a multidisciplinary and highly-skilled team of around 100 researchers, including senior and junior researchers, postdocs, Ph.D. students, and visiting research fellows. CETRAD's team includes social scientists from different backgrounds, such as sociology, economics, management, history, anthropology, agro-social studies, or rural and regional studies. It is organised into four highly connected research groups: Socioeconomic Dynamics and Inequalities; Innovation and Market Ecosystems; Agrifood and Social-Ecological

Systems; and Tourism and Sustainability. CETRAD hosts two Ph.D. programmes: Agribusiness and Sustainability; Development, Societies and Territories, involving more than 70 Ph.D. national and international students. DATA4LOWDENSity is a place-based territorial intelligence laboratory, which is being developed by CETRAD. Its main aim is to co-create usable knowledge based on systematised and contextualised data at a territorial scale. Supported in a smart living laboratory, it involves local actors in knowledge co-creation processes, aiming at the flourishing of innovative ecosystems based on the knowledge of place and the holistic measurement of collective well-being.



## Centre for Studies in Education and Innovation

CI&amp;DEI



|                          |                           |
|--------------------------|---------------------------|
| <b>WEBSITE</b>           | <b>DATE OF FOUNDATION</b> |
| http://www.ipv.pt/cidei/ | 2018                      |
| <b>RESEARCHERS</b>       | <b>FUNDING FCT</b>        |
| 75                       | 1,04 M Euros              |

### KEYWORDS

- Pedagogical innovation
- Didactics and teacher training
- Education in non-formal contexts
- Entrepreneurial education
- Inclusive education

### STRATEGIC AIMS

The CI&DEI strategic guidelines are: approach to the community; increase indexed scientific production; improvement of the quality of teaching and the training/research articulation. It is a fundamental strategic objective to reinforce the proposed research lines with a comprehensive focus on the great contemporary debates of education regarding pedagogical innovation, education for equity and inclusion, academic success, and promotion of citizenship in a lifelong learning context.

### RESEARCH UNIT DESCRIPTION

The Centre for Studies in Education and Innovation is a R&D Unit, whose mission is to develop research in education, assuming itself as an organizational structure of coordination and support to research and socio-educational intervention projects developed by the Polytechnic Institute of Viseu, Main Management Institution, the Polytechnic Institute of Guarda and the Polytechnic Institute of Leiria, in an integrated view of collaboration between higher education institutions.

In pursuit of its mission, CI&DEI intends to encourage interdisciplinary network research activities using various information and communication technologies in order to develop the integrated cooperation of its researchers, establish an interface of knowledge and technology transfer-

ence, promote science and culture, as well as the provision of services to the community. The objectives are: develop research activities in the various domains of education; promote inter-institutional cooperation and interchange; foster pedagogical innovation and quality in education; contribute to the updating of the training processes of education agents; support the development of entrepreneurial skills; promote the knowledge and the integration of Information and Communications Technology (ICT) in teaching-learning; produce knowledge that can generate educational and social changes; increase the scientific production of CI&DEI; promote the student participation in R&D projects; promote scientific employment.

## Research Centre for Anthropology and Health

CIAS

|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| http://cias.uc.pt/ | 1994                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 20                 | 0, 41 M Euros             |

### KEYWORDS

- Biological Anthropology
- Bioarcheology
- Genetics and Health
- Health
- Obesity
- Paleopathology

### STRATEGIC AIMS

CIAS is the only biological anthropology research unit in Portugal and is engaged in research that improves the citizen's lives. CIAS's multidisciplinary research ensures a holistic and transdisciplinary view of health and well-being and its biocultural determinants in past and living populations. Our research programme is designed to reinforce internationalisation and networking, and attract national and international researchers.

### RESEARCH UNIT DESCRIPTION

The Research Centre for Anthropology and Health, housed at the University of Coimbra (UC), aims to study the determinants of human health, disease, and well-being both in past and living societies from a biocultural perspective. Strong emphasis is placed on cultural, societal, familial, and politico-economic circumstances and on the understanding of our evolutionary background. CIAS is the only institution in Portugal in the field of Biological Anthropology and unique in the realm of Social Sciences and Humanities through its perspective on human variation, considering our evolutionary past. The unit has contributed excellently to Portuguese scientific research and to public outreach highlighting key societal topics.

CIAS is organized in three multidisciplinary groups: 1) Human Biology, Health and Society: develops research

into one of our society's most problematic issues: the childhood obesity epidemic; 2) Genes, Populations and Disease: assesses populational human genetic variation, in both normal and disease phenotypes, focusing on the heredity of haematological disorders and obesity; 3) Past Cultures and Populations: provides a large scale diachronic perspective on human health, disease, and sociocultural organization by analysing skeletal remains from different chronological and geographical contexts during the last 8000 years.

CIAS researchers participate in the Non-Communicable Diseases Risk Factor Collaboration (NCD-RisC), a worldwide network of health scientists working closely with the World Health Organisation, who provide rigorous and timely data on risk factors for non-communicable diseases. CIAS has made a main contribution in human genetics, in the areas of obesity, haematology, antisocial behaviour, and Y-chromosome variation and developed innovative approaches and new methods to be used in bioarchaeological and forensic contexts. CIAS is the editor of Antropologia Portuguesa, the oldest Portuguese anthropological journal.

## Centre for Research in Applied Communication, Culture and New Technologies

CICANT



|   |                                    |
|---|------------------------------------|
| <b>WEBSITE</b><br>http://cicant.ulusofona.pt/ | <b>DATE OF FOUNDATION</b><br>2004  |
| <b>RESEARCHERS</b><br>33                      | <b>FUNDING FCT</b><br>0,59 M Euros |

### KEYWORDS

- Communication
- Mediatization
- Media
- Technology
- Society
- Art and Culture

### STRATEGIC AIMS

Theoretical and applied research in the area of media, society, literacies, arts, culture and technologies and the creation of research-oriented knowledge and organised in 2 Research and Learning Communities: Media, Society and Literacies dedicated to the area of Media with theoretical, empirical and methodological contributions and Media Arts, Creative Industries and Technologies which deals with applied research of media technologies at the intersection with creative industries.

### RESEARCH UNIT DESCRIPTION

CICANT results from the combination of synergies of researchers from Universidade Lusófona (Lisbon and Porto), with the aim of creating an autonomous research unit that will allow the integration and the exploitation of the research activities carried out in the centre. It promotes theoretical and applied research at the intersection of media, society, literacies, arts, culture and technologies, distinguished by the solid theoretical and applied nature of its research activities and knowledge transfer oriented towards teaching and research activities.

The Centre's work is based on innovative and interdisciplinary research in its main thematic areas: Media, Society and Literacies (MSL) and Media Arts, Creative Industries and Technologies (MACIT), and on the work developed

by its 3 Laboratories: MovLab - Interaction and Interface Technologies Laboratory, Ancient Visual Media Laboratory and MeLCi Lab - Media Literacy and Civic Cultures Laboratory, responsible for organizing scientific initiatives, always with the premise of involving PhD and, whenever possible, MA students.

Created in 2004, CICANT has been the leader of more than 40 national and international projects supported by several European funding programmes, such as Erasmus +, FP7, ISF, H2020, Media Programme, FCT, the Calouste Gulbenkian Foundation and EEA Grants.

## Research Centre on Accounting and Taxation

CICF



|   |                                     |
|---|-------------------------------------|
| <b>WEBSITE</b><br>http://www.cicf.ipca.pt | <b>DATE OF FOUNDATION</b><br>2007   |
| <b>RESEARCHERS</b><br>15                  | <b>FUNDING FCT</b><br>0, 36 M Euros |

### KEYWORDS

- Accounting
- Taxation

### STRATEGIC AIMS

CICF's objectives are the development of R&D activities in the areas of accounting and taxation based on strategic partnerships with national and international institutions; the promotion of the interdisciplinary nature of scientific and applied research; reduction of the gap between theory and practice in accounting and tax systems and the dissemination of results and knowledge obtained through the publication of scientific research papers, participation and organization of scientific events.

### RESEARCH UNIT DESCRIPTION

The CICF's mission is to contribute to knowledge in the scientific areas of Accounting and Taxation, through the production of scientific and applied research with quality and the dissemination and transfer of knowledge to society.

Aiming to promote the interdisciplinary nature of research in partnership with other institutions, the CICF is composed of a multidisciplinary team, comprising permanent members with a PhD in the scientific domains of the centre, with institutional affiliation with the IPCA and nine other higher education institutions. The North, Centre and Lisbon regions are represented in the Centre. This collaboration allows for the creation of synergies and competitive advantages for the business fabric of the regions

and for national and international research in the fields of Accounting and Taxation, promoting partnership relationships with local, national, and international agents, and improving the effective rationalization of resources for the continuation of CICF's mission and strategic objectives.

In order to promote applied research and deepen knowledge on the most relevant and emerging themes of Accounting and Taxation, adding value to the CICF's core areas, it is structured into four research groups: Public Accounting; Accounting and Social Responsibility; Financial and management accounting; and Taxation.

## Research Center in Political Science

CICP



| WEBSITE                | DATE OF FOUNDATION |
|------------------------|--------------------|
| www.cicp.eeg.uminho.pt | 2014               |
| RESEARCHERS            | FUNDING FCT        |
| 34                     | 1,01 M Euros       |

### KEYWORDS

- Global Dynamics
- Governance
- European Union Studies
- Public Policies

### STRATEGIC AIMS

The Research Center in Political Science general objectives are to maintain the production of quality research; to promote/coordinate research projects; to promote the transfer of knowledge and dissemination of results to the civil society; to offer and support advanced training; to promote seminars, conferences, and other initiatives within the scope of CICP's activities; and to develop community service activities within the scope of its research groups and thematic lines.

### RESEARCH UNIT DESCRIPTION

The Research Center in Political Science was created in 2015 and results from the merger of two research units (NEAPP and NICPRI). This merger was intended to create synergies and concentrating human capital in the complementary subfields within the scope of political science. The CICP is a research center in political science and related areas, based at the School of Economics and Management (EEG) of the University of Minho (its Proponent Institution) and at the Institute for Advanced Research and Training of University of Évora (Participating Institution). The aim of the Center is to promote scientific research, ongoing training, and activities to provide specialized services to the community in its fields of research.

CICP, following the application for Evaluation and Funding

of R&D Units in 2018, and as the result of the evaluation by the international panel, obtained the classification of Excellent. Thus, the Center maintains the highest grade awarded by FCT, ensuring its position as one of the best research centers in the fields of Law and Political Science in Portugal.

The CICP Team is composed by 34 Integrated Members and more than 66 Collaborative Members. The researchers are distributed across several research areas from Public Policy and Management, Governance and Democracy, Organizations and International Relations, to Society, Europe and Global Dynamics. CICP provides high-quality research in political science addressing relevant questions in the field such as modeling of public policies and behavior of political agents.

## Research Center for Psychological Science

CICPSI



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| http://www.psicologia.ulisboa.pt/investigacao/centro-de-investigacao/ | 2013               |
| RESEARCHERS   | FUNDING FCT        |
| 52  | 1,41 M Euros       |

### KEYWORDS

- Lifelong learning and adaptation
- Evidence-based interventions
- Cognitive and neural mechanisms in Context
- Individual, family and organizational resilience
- Cognitive and memory illusions
- Healthy families, schools and organizations

### STRATEGIC AIMS

The objectives of CICPSI are to advance and consolidate the scientific excellence of CICPSI research, to offer high-quality advanced training and to expand scientific dissemination to expert and non-expert audiences. These goals are developed to address the H2020 priority research domains (e.g. Lifelong Learning & Healthy Ageing) and Lisbon 2020 regional strategy (e.g. employment, education, reducing poverty and social exclusion), as well as the 2030 Agenda for Sustainable Development.

### RESEARCH UNIT DESCRIPTION

Founded in 2013, CICPSI is devoted to fundamental and translational research in Psychological Science with a special focus on psychological and neural mechanisms of adaptation to context in lifelong learning and development. Two groups conduct research in a concerted way: the COgnition in COntext group (CO2) focuses on basic, cognitive mechanisms; the Adaptation PROcesses in Context group (ProAdapt) focuses on the applied spheres of work, education, family, and clinical psychology. Our fundamental research aims to probe the cognitive and neural bases of memory and learning, literacy acquisition, voice and speech perception, judgment and social cognition.

CICPSI's applied research provides pioneering contributions in temporary employment and leadership;

self-regulation in socio-educative contexts; cyberbullying; individual and familial psychological assessment and interventions. Our findings contribute to the development of healthy contexts that enhance individual, team, and family adaptation and contribute to theoretically-driven solutions to major economic and societal challenges (e.g. literacy acquisition; decent work; quality of life in patients and their families).

CICPSI aims to become an internationally-recognized research centre with state-of-the-art research facilities and an outstanding workforce. Our strategy is grounded on 3 pillars: excellence in research; high-quality advanced training; strong impact in society and active dissemination of knowledge.

## Interdisciplinary Centre of Social Sciences

CICS.NOVA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.cics.nova.fcsh.unl.pt/">http://www.cics.nova.fcsh.unl.pt/</a> | 2015               |
| RESEARCHERS   | FUNDING FCT        |
| 138   | 1,90 M Euros       |

### KEYWORDS

- Societal challenges
- Socio-spatial dynamics
- Sustainability
- Human development
- Public policy-oriented research

### STRATEGIC AIMS

To consolidate and expand its reach as a national and international reference within the production of scientific knowledge, both from theoretical and/or epistemological questions and from real-world social problems. To undertake research that addresses main themes and challenges established in the national and international agendas. To encourage the development of emerging scientific approaches within its scope and within the broader framework of knowledge and scientific areas it encompasses.

### RESEARCH UNIT DESCRIPTION

CICS.NOVA's mission is to conduct interdisciplinary research in social sciences, to promote critical thinking and disseminate the acquired knowledge within the communities it entails, both at a national and international level. CICS.NOVA assigns a particularly relevant role to teaching and advanced training, through the coordination and participation in several doctoral programs, master's and open courses, and by welcoming researchers in academic training.

An equally important contribution is the co-creation and knowledge transfer alongside policymakers, companies and other civil society organisations, particularly through the activities developed within the Observatories and Laboratories. CICS.NOVA also fosters the dissemination

and communication of science and knowledge through a strong presence in the scientific community and in the public space. These priorities are guided by the interdisciplinary study of territorial systems and human behaviour, the particularities of the institutions' functioning and their relations with the surrounding spatial and social contexts. CICS.NOVA, through its 4 regional poles, promotes an interregional network fully integrated in the national and international scientific system, ensuring the collaboration of researchers from all over the country, who work together, anchored in research groups (RG). The RG and the CICS.NOVA teams integrate researchers from various scientific and geographic backgrounds. Thus, the research produced at CICS.NOVA not only benefits from a great interdisciplinarity, but also a wide regional scope.

## Centre for Research in European, Economic, Financial and Tax Law

CIDEEFF



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.cideeff.pt">www.cideeff.pt</a> | 2013               |
| RESEARCHERS  | FUNDING FCT        |
| 17   | 0, 11 M Euros      |

### KEYWORDS

- Public policies
- Budgetary policies
- Financial crisis
- European monetary union

### STRATEGIC AIMS

The strategic aims of CIDEEFF are to define best practices and find suitable legal solutions for national and international governance, to foster international research networks, to promote the debate with academia, public institutions and civil society.

### RESEARCH UNIT DESCRIPTION

CIDEEFF develops research on legal and economical challenges raised by the democratic deficit in global governance and growing asymmetries, by the need to assure the effectiveness of public services, market failures and by the way that the European governance model represents a role model for governance.

CIDEEFF's researchers focus on four thematic areas, within a cooperative and interdisciplinary framework: Tax governance; Globalization, International Trade, Economic Integration and Economic Development; The governance of globalization is a multi-layered and complex phenomenon involving intensive political, legal, social and economic interaction; Market Failures in a Globalized Economy and The Euro, fiscal policy and public policies.

These research groups, through research in fiscal, international trade, regulation, supervision and financial stability aim at highlighting the main challenges and legal and economic obstacles of global governance, moreover

the conflicts between regional, national and international norms. They seek to connect areas related to regional economic integration, economy in a world without frontiers, the challenges posed by a small economy, the democratic deficit for regional governance and political options.

CIDEEFF promotion of research on legal, economic, political and historical aspects of European integration has increased with the post-graduation of hundreds of public servants, lawyers and other professionals, several conferences, summer courses and seminars that joined international experts to Portugal, and by the publication of two law journals and a significant number of books and articles.





## Lisbon Centre for Research in Public Law

CIDP



|                         |                           |
|-------------------------|---------------------------|
| <b>WEBSITE</b>          | <b>DATE OF FOUNDATION</b> |
| http://www.icjp.pt/cidp | 2012                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 39                 | 1,49 M Euros       |

### KEYWORDS

- Technological revolution and public law
- Political democracy and social citizenship
- Better regulation & portuguese-speaking public law
- Governance, sustainability, and accountability
- Collective security and International Law
- Multilevel protection of fundamental rights

### STRATEGIC AIMS

CIDP's main objectives are to develop high quality research projects in the public legal sciences field, securing the internationalisation of CIDP and defining a major role for the social sciences in the University of Lisbon; to contribute further to the internationalization of Portuguese Public Law studies; to foster intergenerational and gender balance and to disseminate legal-scientific knowledge, ensuring greater national and international visibility of CIDP's scientific production.

### RESEARCH UNIT DESCRIPTION

Founded in 2012, the Lisbon Centre for Research in Public Law is a legal research centre devoted to Public Law. This evaluation has provided a stimulus for innovative and interdisciplinary research, for high-quality teaching, and for enhancing the social relevance of knowledge produced by CIDP. ICJP (Instituto de Ciências Jurídico-Políticas) is its main host institution. FDUL is CIDP's secondary host institution. It ensures appropriate institutional conditions for CIDP's research development.

CIDP is formed by an active team of scholars and researchers which encompasses almost all the teaching staff of FDUL in the field of Public Law, including 39 postdoctoral researchers and professors, 21 integrated doctoral and master students who lecture at FDUL, and 38 national and

foreign collaborator researchers. CIDP's critical mass enables it to have a very strong output in scientific publications and innovative master and doctoral courses. Indeed, both the individual and the collective scientific production of CIDP's researchers exhibit the highest level of scientific output in Public Law at the national level.

CIDP hosts the permanent Observatory of public administration which aims to monitor the organization, working, and change of the Portuguese public administration, covering its institutional aspects and the profile of workers. CIDP's research has had a very strong impact in the Portuguese-speaking countries and displays growing significance in southern Europe.

## Research Centre for Criminal Law and Criminal Sciences

CIDPCC



|                |                           |
|----------------|---------------------------|
| <b>WEBSITE</b> | <b>DATE OF FOUNDATION</b> |
| www.cidpcc.pt  | 2012                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 23                 | 0, 18 M Euros      |

### KEYWORDS

- Criminal law
- International criminal law
- Criminal procedure law
- Philosophy of mind and crime
- Theory of society and crime
- Economical financial criminal law (compliance)

### STRATEGIC AIMS

CIDPCC main objectives are to implement innovative research practices on criminal law and criminal policy which may contribute to a critical analysis of the penal system, to develop effective interdisciplinary science that allows a reconstruction of fundamental criteria on criminal law; to promote international integration of research carried out by CIDPCC and to operate knowledge transfer to the academic community, the legal community and society in general.

### RESEARCH UNIT DESCRIPTION

CIDPCC is a multidisciplinary research unit at the University of Lisbon School of Law. It develops innovative scientific research in criminal substantive and procedural law and related sciences. Particular emphasis is given to interdisciplinarity with other theoretical and scientific fields, including political philosophy, ethics, aesthetics, behavioural sciences, neuroscience, medicine, applied mathematics and AI.

In today's complex and differentiated societies, criminal law can only be understood through its relationship with areas like political philosophy, ethics, logic, psychology, and sociology. The focus of scientific activity is the substantive and procedural criminal law, investigated with the assistance of theoretical and empirical criminology tools,

and guided by purposes of critical analysis of the legal system in its legal framework and its jurisprudential and social achievement. The substantive and procedural criminal law integrated into the space of contemporary globalization articulates areas of research with initiatives within the European Union and Portuguese-speaking world. Special attention is paid to the legal systems in modern dialectic between civil law and common law.

## Research Centre Didactics and Technology in the Education of Trainers

CIDTFF

cidtff  
centro de investigação  
Didática e Tecnologia na Formação de Formadores

| WEBSITE          | DATE OF FOUNDATION |
|------------------|--------------------|
| www.ua.pt/cidtff | 1994               |
| RESEARCHERS      | FUNDING FCT        |
| 63               | 1,22 M Euros       |

### KEYWORDS

- Multiliteracies and Sustainability
- Diversities and Curriculum
- Professional and Human Development
- Educational policies, quality and evaluation
- Multimodal educational resources
- Professional and organizational practices

### STRATEGIC AIMS

CIDTFF main objectives are to research meaningful educational issues, aiming at its sustainability; to analyse the implementation of educational policies and contribute to their definition; build innovative proposals for the development of multiliteracies and transversal competences; design, implement and assess programmes and mechanisms for supervising education, training, and human and professional development and to develop resources within qualitative research methodologies.

### RESEARCH UNIT DESCRIPTION

The mission of the Research Centre on Didactics and Technology in the Education of Trainers is anchored in a perspective of social responsibility in educational research to produce knowledge capable of contributing to the training of critical and active citizens, and to the construction of a better world. For such, the CIDTFF has a diverse team of researchers whose object of study focuses on educational processes in formal, non-formal and informal contexts, understood in a continuum and with an ecological approach, covering its national and transnational regulation conditions, circumstances in which such processes occur and communication spaces where they emerge.

The centre takes part in several funded projects and participates in (regional, national, European, Iberian-Amer-

ican and transnational) networks related to its object of study, benefiting from a participative and international environment that allows young researchers to develop high-quality training paths, either at doctoral level (within the scope of the four doctoral programs related to the RU – Education, Multimedia in Education, Science and Technology Education Research and History of Science and Scientific Education) and post-doctoral, as well as at the level of scientific initiation of young researchers. Cooperation for development, knowledge transfer and science dissemination and communication are also priorities for the CIDTFF. CIDTFF has developed tools for science education such as EuPARK: Mobile Learning, Augmented Reality and Geocaching in Science Education and contributed to the development of the multilingual Kamishibai: International competition within the scope of the Kamilala project, the LoCALL App: Educational resource for exploring linguistic landscapes and the MIRIADI Portal: In cooperation with local government to improve Public Engagement with S&T it cooperates with the Science Education Center of Vila Nova Barquinha and has developed.

## Center for Research in Education

CIE

CIE-UMa  
Centro de Investigação em Educação

| WEBSITE                     | DATE OF FOUNDATION |
|-----------------------------|--------------------|
| http://www4.uma.pt/cie-uma/ | 2003               |
| RESEARCHERS                 | FUNDING FCT        |
| 16                          | 0, 20 M Euros      |

### KEYWORDS

- Curriculum studies
- Pedagogical innovation
- Educational administration

### STRATEGIC AIMS

The CIE-UMa has as global strategic objective the following: contribute to the updating of school teachers and educators' professional development; support the presentation and publication of scientific works resulting from projects developed within the scope of the research lines of the Centre; optimize support services for the research work to ensure the economic use of resources; enhance and support the presentation of project applications for financing granted by public or private bodies; contribute to the mobilization and communication of scientific knowledge in the Region.

### RESEARCH UNIT DESCRIPTION

The Center for Research in Education of the University of Madeira is a research unit dedicated to scientific research in the field of education and offer services to the community in the dissemination and application of the results of that research. This is the mission that, for 18 years, has involved us as researchers to reflect and act critically in the field of social sciences and in the epistemological field of educational sciences. CIE-UMa is an FCT R&D unit of the University of Madeira classified as GOOD in the last external evaluation.

The integrated researchers comprise a research group. CIE-UMa preferred to concentrate its efforts, rather than

disperse them, due to its geographical specificity, focusing and doing its best on three fundamental lines of research: Curriculum, Pedagogical Innovation and Educational Administration. There is also a transversal line in the Ethnography of Education, seen as a methodological approach to be studied in educational research, but without separating other qualitative and quantitative research methodologies. We consider that it is important to dive deep inside the practice at school, to really understand what is going on in the classes at school, envisaging them as cultural communities, in which their members, the learners and the teachers, are phenomenological subjects, with their own histories, own backgrounds and own cultural references. For this research centre, the ethnography of education, case studies and life histories, help the educational researcher to apprehend it at a micro-level approach, that is to say, to look at the practice of social construction of identities.

Since its creation CIE-Uma has made efforts to reinforce the collaborative work with the schools of the Autonomous Region of Madeira and the initial and advanced training of teachers and also in the Internationalization of the R&D unit with joint projects with European and Brazilian partners.

## Research Center in Basic Education

CIEB



| WEBSITE             | DATE OF FOUNDATION |
|---------------------|--------------------|
| www.cieb.es.eipb.pt | 2018               |
| RESEARCHERS         | FUNDING FCT        |
| 15                  | 0, 22 M Euros      |

### KEYWORDS

- Teacher training
- Tutorial supervision
- Curriculum development
- Digital skills
- Educational development
- Pedagogical innovation

### STRATEGIC AIMS

CIEB has the following main objectives : to identify the opportunities of pedagogical innovation in students' learning and in teacher training in basic education; to design, monitor and evaluate pedagogical and organizational projects for the development of enabling learning environments; to create praxeological knowledge to support teacher practices and students' learning in basic education, assessing its social and academic impact.

### RESEARCH UNIT DESCRIPTION

CIEB is committed to the research on the specificities of basic education (children from 0 to 14 years old), understood as fundamental for learning and, consequently, for the development of societies, ensuring the participation, equity, and social justice. The research structure is based on the CIEB holistic vision of education that connects the curriculum, in-service and pre-service teacher education, collaborative work with educational contexts, pedagogy, and didactics, and praxiological research to promote innovation and the quality of students' learning and professional development.

The mission that stems from this vision of education is assumed: in the development of projects of pedagogical intervention, carried out through cooperative support to the learning of students and their families; in promoting edu-

cational and social success of children, and improvement of their basic and transversal learning skills and creating a solid technical-scientific knowledge that can be used as reference and a fundamental basis in the design and evaluation of programs of intervention and educational change.

The projects under development at the Basic Education Research Center have contributed to identification of teaching and learning models and practices, emerging or alternative identities and training pathways (involving 11 clusters of schools in the region and other schools and social institutions).

CIEB has been directly involved in projects or programmes of pedagogical training/innovation in the community and the production of scientific and pedagogical-didactic material; in the development and integration in national and international cooperation and exchange projects/programmes.

## Research Centre on Child Studies

CIEC-UM



| WEBSITE                    | DATE OF FOUNDATION |
|----------------------------|--------------------|
| http://www.ciec-uminho.org | 2011               |
| RESEARCHERS                | FUNDING FCT        |
| 38                         | 0, 81 M Euros      |

### KEYWORDS

- Children's health and wellbeing
- Children's learning
- Children's development
- Children's socio-educational policies and contexts

### STRATEGIC AIMS

The main objective of CIEC is to promote high quality research and scientific knowledge aiming at improving children's well-being, development and learning. As a unique research centre, CIEC's goals include: conducting research using a holistic approach to the study of children and childhoods; contributing to policies, rights, cultures and practices focusing on children's lives, especially those affected by social vulnerability and educating and supporting professionals who work with children.

### RESEARCH UNIT DESCRIPTION

CIEC develops research that contributes to improving children's well-being, development and learning through a holistic approach. Research focuses on children's worlds including also adults, families and professionals (educators, teachers, social workers, nurses and other health professionals). The centre is organised in two research groups: "Children's contexts, their everyday life and well-being" and "Children's learning and development" integrating both junior and senior researchers. Five thematic strands are also in operation: "TS1 Children's social practices and their contexts"; "TS2 Child health, environment and physical education"; "TS3 Childhood professionals"; "TS4 Pedagogical resources for children"; and "TS5 Cultural productions for children".

CIEC has a clear research strategy which encompasses the development of research projects, namely with external funding, the dissemination of results and the transfer of knowledge to potential users at the academic, practitioner and policymaking levels, the advancement of training for junior researchers and PhD candidates, and the strengthening of internationalisation, especially with similar research centres in Europe and beyond. Of particular relevance are missions to international research institutions, national and international scientific events, scientific production to advance knowledge in the field and the development of strategic actions that enhance the social and political relevance of research on children and childhoods. CIEC has been involved in intervention projects with a variety of institutions such as schools, municipalities, F.C.Gulbenkian or UNICEF.



## Research Centre on Education

CIED



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.cied.uminho.pt">http://www.cied.uminho.pt</a> | 1976               |
| RESEARCHERS   | FUNDING FCT        |
| 50  | 0, 99 M Euros      |

### KEYWORDS

- Education policies and social inclusion
- Learning environments and sustainable futures
- Diversities, equity and innovation
- Training and lifelong learning

### STRATEGIC AIMS

CIED main objectives are to produce in-depth knowledge about education and training policies, learning environments, pedagogical processes and resources, for equity, justice, inclusion and lifelong learning in the multifaceted world of multiliteracies in today's semiotic and grapho-centered economies; to produce knowledge about the best teaching strategies to educate individuals and communities and to address societal challenges, supporting inclusive, innovative and reflective societies.

### RESEARCH UNIT DESCRIPTION

The Research Centre on Education is a multidisciplinary research unit at the Institute of Education, whose mission is to conduct educational research as a means of participating in the transformation of the lives of individuals and communities. Since 1976, research conducted at the Centre focuses on children, youth, adults, and the elderly, in a variety of social settings and types of communities, taking into consideration the diverse cultural and social constraints and resources that impact on learning, and envisioning that all citizens are equally prepared to participate actively and critically in society.

The plurality and diversity of approaches to educational phenomena, and the merging of traditional key areas with emergent topics in the study of school and non-school

phenomena in a lifelong learning perspective, as well as the high number of PhD students from different parts of the world, are distinctive aspects of the Centre, reflected in an increasing scientific production, at national and international levels. In the 2019 evaluation carried out by FCT, the Centre was awarded the grade of Very Good. The mission of disseminating knowledge and more broadly interacting with the academic and social communities is also ensured by the publication of the 30-year-old Portuguese Journal of Education (RPE), a Scopus indexed peer reviewed online journal with wide national and international recognition.

## Interdisciplinary Centre for Gender Studies

CIEG



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.cieg.iscsp.ulisboa.pt">www.cieg.iscsp.ulisboa.pt</a> | 2012               |
| RESEARCHERS  | FUNDING FCT        |
| 17   | 0, 85 M Euros      |

### KEYWORDS

- Gender, feminist and women's studies
- Masculinities and femininities
- Gender violence and human rights
- Intersectionality and global inequalities
- Gender and interdisciplinarity
- Equality policies

### STRATEGIC AIMS

CIEG strategic aims are as follows: to promote, disseminate and develop research in the field of gender, feminist and women's studies while supporting public policies and also to promote knowledge transfer and dissemination in order to increase the visibility of gender research within the scientific community.

### RESEARCH UNIT DESCRIPTION

CIEG is a pioneering research centre, the only one in Portugal entirely dedicated to Gender Studies. It was created in 2012 and rated Excellent in 2015 and 2019 by international evaluation panels. This recognition is linked to the intense activity and ability to involve, in a short period of time, researchers from different areas and from Universities across the country. CIEG is now internationally recognized, which was evident in the two International Congresses (2016 and 2019), gathering hundreds of researchers from Europe and from different parts of the world. The Centre involves senior researchers with long and prestigious careers, as well as juniors and doctoral students. It also brings together researchers from different backgrounds, from social sciences, humanities, technological sciences, as well as the arts, united by the same object of study.

CIEG filled an important gap and contributed to the con-

solidation of the scientific area of Gender, Feminist and Women Studies. The Centre boosted the creation of DEG, a PhD in Gender studies, since 2018, it is linked to several Masters at ISCSP-ULisboa, and also contributed to the creation of the 1st Post-Graduate Course in Gender Equality. It also promotes regular meetings where current issues are debated. Its researchers participate and direct multiple national and international research networks.

## Centre for Educational Research

CIE-ISPA



|                                       |                                    |
|---------------------------------------|------------------------------------|
| <b>WEBSITE</b><br>http://cie.ispa.pt/ | <b>DATE OF FOUNDATION</b><br>2013  |
| <b>RESEARCHERS</b><br>17              | <b>FUNDING FCT</b><br>0,22 M Euros |

### KEYWORDS

- Motivation
- Inclusion
- Learning
- Teaching
- Literacy

### STRATEGIC AIMS

CIE – ISPA aims to produce and disseminate scientific knowledge which contributes to the development of quality educational processes that answer the requirements of all existent diversity of populations and contexts. To study cognitive, affective and social processes that are involved in learning, as well as the contexts inherent to these processes. To strengthen national and international partnerships which will enable the development of advanced research.

### RESEARCH UNIT DESCRIPTION

The Centre for Research in Education (CIE-ISPA) carries the mission of studying, analyzing, and promoting intervention in several dimensions of educational processes and contexts, seeking to develop and disseminate scientific knowledge that can contribute to the promotion of quality in education. This research unit also intends to answer several population necessities as well as necessities of educational contexts, in order to develop quality education practices which are supported by scientific evidence. The research that is conducted in CIE-ISPA focuses on the study of educational processes, sharing its resources between two main fields: one of them is centered in the study of educational contexts and the acquisition of written language, and the other focuses on the affective components

of quality learning. The analysis of educational practices related to written languages in the first years of formal learning (pre-school and elementary school), the development and analysis of intervention programs for written language learning, the study of teaching and learning processes in its affective and cognitive dimensions, school and family relationships, the learning environments that better contribute to schooling and social inclusion quality and teachers' resilience and well-being have been some of the main areas of research conducted at CIE-ISPA.

CIE-ISPA developed a word frequency corpus of words integrated in reading material for children and was the responsible for the conception, scientific consultancy and evaluation of the PIPL programme.

## Research Centre of the Institute for Political Studies

CIEP-UCP



|   |                                    |
|---|------------------------------------|
| <b>WEBSITE</b><br>http://www.iep.lisboa.ucp.pt/ciep | <b>DATE OF FOUNDATION</b><br>2002  |
| <b>RESEARCHERS</b><br>20                            | <b>FUNDING FCT</b><br>0,19 M Euros |

### KEYWORDS

- Political theory
- Democracy
- European civilization
- International relations, security and defence

### STRATEGIC AIMS

In an era when knowledge tends to represent the key to development, CIEP's strategy is to conduct high-quality research in political science (particularly in its core fields of political theory, comparative politics and international relations), providing the intellectual tools and frameworks to deal with the great contemporary societal challenges not only to Portugal but also to the Portuguese language world and offering opportunities for advanced training and knowledge transfer.

### RESEARCH UNIT DESCRIPTION

CIEP is the Research Centre of the Institute for Political Studies of Universidade Católica Portuguesa (IEP) and is fully aligned with the Institute's vision and strategy. CIEP also reflects the Institute's commitment to have the best teaching school for political studies in Portugal and to develop research that is an undeniable reference at both the national and international levels, contributing significantly to the scientific field of political science. Despite its forward-looking character, CIEP has strong and deep roots in the past, which contributed to the achievement of an undeniable position of reference at the national level in its main fields of specialisation within the area of political science.

The research unit is particularly proud of its internationali-

zation achievements and regards them as strategic assets for the future, particularly its membership in several prestigious international research networks associated with its areas of specialization, the notable and growing record of quality international publications by its researchers in the core areas of expertise of the Centre and the increasingly successful yearly organization of Estoril Political Forum, the most prestigious Annual International Political Studies Meeting in Portugal. CIEP, in close association with IEP, is uniquely positioned regarding research involving government, diplomatic activities and international relations in general, with clear spill over benefits for the broader community.

## Centre for Research in Education and Psychology

CIEP-UE



|  |                                    |
|--|------------------------------------|
| <b>WEBSITE</b><br>http://www.ciep.uevora.pt/ | <b>DATE OF FOUNDATION</b><br>2007  |
| <b>RESEARCHERS</b><br>24                     | <b>FUNDING FCT</b><br>0,53 M Euros |

### KEYWORDS

- Educational territories
- Teaching and learning
- Evaluation
- Inclusion
- Well-being
- Development

### STRATEGIC AIMS

CIEP intends to develop knowledge and methodologies that contribute, regionally and globally, to improving learning, social integration and inclusion, the quality of educational organizations and the well-being of individuals, based on research, innovation and transfer of knowledge to society. Therefore, main concerns are regional sustainability, internationalization, but also research itself, the promotion of digital skills and computational thinking capacity and the promotion of active aging.

### RESEARCH UNIT DESCRIPTION

Focused on Educational Sciences, but with an interdisciplinary approach, CIEP-UE is active for about ten years, articulating the main areas of Education and Psychology. These activities have a strong impact on south Portugal region, whilst framing it at national and international level. This unit also plays an important role in supporting the ongoing education and psychology courses, namely the Educational Sciences PhD programme.

CIEP-UE main research topics are: educational policies; territories and institutions; teaching and learning processes; assessment and evaluation; educational technologies; higher education structures and processes; training and development of teachers and educators; development and inclusion; and risk, health and well-being.

CIEP-UE is also involved in important and innovative movements, being regularly invited by the Ministry of Education to conduct studies on several topics such as: (i) External evaluation study of the Curricular Enrichment Activities Programme in the 1st cycle of basic education; (ii) National evaluation study of «More School Success models TurmaMais and Fénix»; (iii) Study on the enlargement of Compulsory Education: Inclusive Educational Measures; (iv) Introduction to Programming in 1st Cycle Schools in Portugal.

CIEP-UE shares the concerns of international agencies, and assumes that the present major challenges are the generalization of access to formal education and training systems, the promotion of school achievement and the struggle against school failure and early school leaving, the development of a truly inclusive school and the questions about risk, aging and well-being. Thus, CIEP-UE will continue to develop knowledge and methodologies that contribute to the promotion of success, combating school failure and drop-out, social integration and inclusion and the well-being of individuals.

## Life Quality Research Centre

CIEQV



|                                 |                                    |
|---------------------------------|------------------------------------|
| <b>WEBSITE</b><br>www.cieqv.com | <b>DATE OF FOUNDATION</b><br>2014  |
| <b>RESEARCHERS</b><br>32        | <b>FUNDING FCT</b><br>0,44 M Euros |

### KEYWORDS

- Sport
- Life styles
- Education
- Food Chain
- Motor Behaviour
- Organizational Dynamics

### STRATEGIC AIMS

The Life Quality Research Centre (LQRC-CIEQV) develops research in the thematic area of Quality of Life, in a multidisciplinary, interdisciplinary and transdisciplinary paradigm of various domains, including: motor behaviour; organizational dynamics; food production and technology / food behaviour; physical activity and healthy lifestyles; education and training; individual and community.

### RESEARCH UNIT DESCRIPTION

The Life Quality Research Centre (LQRC-CIEQV) develops research in the thematic area of Quality of Life, in a multidisciplinary, interdisciplinary and transdisciplinary paradigm of various domains, including: a) motor behaviour; b) organizational dynamics; c) food production and technology / food behaviour; d) physical activity and healthy lifestyles; e) education and training; f) individual and community health.

The centre is a consortium of two Higher Education Institutions: Polytechnic Institute of Santarem and Polytechnic Institute of Leiria. These institutions have over 20,000 students. The institutes provide state-of-the-art laboratories to conduct research in Quality of Life.

The multidisciplinary character of CIEQV is one of its great innovations and assets, bridging the gap between different areas related to sustainable behaviour and a healthy

lifestyle. The association of research from different areas is essential to understand the quality of life in societies. Thus, the CIEQV research uses a dynamic contemporary structure and a scientific and multidisciplinary approach. The CIEQV is dedicated to open access communication, original research, theoretical articles, and methodological reports in the context of quality of life. CIEQV promotes scientific production in articles, books, newsletters, and international conferences.

## Centre for Research and Studies in Sociology

CIES-IUL

**cies** \_iscte  
Centro de Investigação e Estudos de Sociologia

| WEBSITE               | DATE OF FOUNDATION |
|-----------------------|--------------------|
| www.cies.iscte-iul.pt | 1985               |
| RESEARCHERS           | FUNDING FCT        |
| 118                   | 2, 10 M Euros      |

### KEYWORDS

- Social structures and social change
- Institutions and social values
- Public policy and social inclusion
- Social research methods
- Science and public engagement with S&T
- Contemporary world

### STRATEGIC AIMS

CIES-Iscte aims to analyze the ongoing transformations of contemporary societies and the challenges they pose, intersecting cutting-edge topics with consolidated research themes. Supported by a set of research structures, the Centre's strategic program is directed at strengthening knowledge transfer, namely for the formulation and evaluation of public policies, the combination of advanced training with research activities and the promotion of an open science policy.

### RESEARCH UNIT DESCRIPTION

The Centre for Research and Studies in Sociology (CIES-Iscte) is an R&D unit of Iscte - Instituto Universitário de Lisboa and the principal institution of the Associate Laboratory Sociodigital Lab for Public Policy.

Within the social science field, CIES-Iscte is dedicated to studying contemporary social problems from a multidisciplinary perspective. Its main scientific field is sociology and it develops relevant activity in the fields of public policy, political science, communication sciences, modern and contemporary history and social work.

Its activity is based on a demanding articulation between basic research and applied research mainly directed at the design, monitoring and evaluation of public policies and its theoretical and methodological matrix fosters diversity

and the intersection of intensive and extensive approaches, in order to deepen the analytical relationship between the study of social, political and historical macroprocesses and the social, cultural and spatial microdynamics. The scientific activities are organized in research groups and transversal and interdisciplinary structures (observatories and laboratories). The Centre ensures advanced training activities through the coordination of PhD programs and has a consolidated publishing activity, such as the journal *Sociologia Problemas e Práticas* and the book publisher *Mundos Sociais*.

## Center for Research and Innovation in Business Sciences and Information Systems

CIICESI



| WEBSITE                                      | DATE OF FOUNDATION |
|--|--------------------|
| https://www.estg.ipp.pt/investigacao/ciicesi | 2009               |
| RESEARCHERS                                  | FUNDING FCT        |
| 21   | 0, 50 M Euros      |

### KEYWORDS

- Decision and information
- Innovation and entrepreneurship
- Industrial and engineering management
- Collaborative networks

### STRATEGIC AIMS

CIICESI strategic aims are to boost the innovation ecosystem of the Tâmega e Sousa Region for the industrial revolution - Industry 4.0; to position CIICESI as the reference interface for technology and knowledge transfer projects in the Industry 4.0 and IoT domains; to strengthen formal technology transfer mechanisms with emphasis on advanced production system while contributing to the competitiveness of the region's industry and, at the same time, to its socio-economic development.

### RESEARCH UNIT DESCRIPTION

CIICESI is functional unit of innovation and research that serves the community, disseminating knowledge in their specific domains. CIICESI has 51 researchers specialists in different areas of the business sciences and information systems. Its mission is to promote research, development, innovation and knowledge transfer to public and private institutions, incorporating decision intelligence in the management processes.

the centre aims to contribute within local and regional development; industrial management and engineering; management of information systems; transports, distribution and logistics; decision-supporting systems; business information systems; and project management. the impact of the centre's scientific contributions needs to be framed

in its interdisciplinary nature and on the application of techniques of artificial intelligence, data analysis and decision making.

CIICESI meets its mission through the creation and execution of R&D projects and technological and scientific knowledge transfer, specialized postgraduate education, development of new products and services and dissemination actions within its scope. CIICESI aims to create impact on the scientific community at both a national and international levels, on public and private institutions and individuals of the region.



## Centre for Research and Intervention in Education - University of Porto

CIIE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.fpce.up.pt/ciie/">http://www.fpce.up.pt/ciie/</a> | 1988               |
| RESEARCHERS   | FUNDING FCT        |
| 54  | 1, 61 M Euros      |

### KEYWORDS

- Education, citizenship and social cohesion
- Learning, evaluation and leadership
- Vulnerable groups, inclusion and social justice
- Arts and digital education
- Young researchers and careers
- Innovation and knowledge sharing

### STRATEGIC AIMS

CIIE main objectives are to develop state-of-the-art research that addresses emerging educational challenges and draws implications for significant in- and out-of-school educational problems; to foster internationalization investing in sustainable networks that interweave the Global North and the Global South; to stimulate innovative knowledge that contributes to the improvement of educational practices and can support the resonance of public debate and decision-making on educational policies.

### RESEARCH UNIT DESCRIPTION

CIIE is a research institution in the field of Education Sciences, based at the Faculty of Psychology and Education Sciences of the University of Porto. Evaluated by FCT as 'Excellent' in the last evaluation, it has become the highest ranked institution in this area (ex aequo with another centre) in Portugal.

CIIE develops high quality research on key issues of change and educational and social processes, in order to expand the role of education in promoting equity, inclusion and active citizenship. Created in 1988, CIIE has a long track-record of excellence in research and training on a wide range of educational and social issues across all educational sectors, from early years to higher education. The Centre currently operates in 9 strategic areas: Engag-

ing vulnerable youth in education and training; Contemporary educational challenges for migrants and refugees; Empowerment and inclusion through digital arts education; Citizenship, communication and literacy in health and well-being; Higher education, innovation and diversity; Community education, participation and social change; Training, equity and the teaching profession; Evaluation and public policy in education; and Educational management and democratic participation.

With more than 100 integrated members and collaborators, in a welcoming and stimulating environment, CIIE has been able to consolidate a high level of scientific and implementation capacity, with a vast network of partnerships and international recognition, which has provided significant success in attracting external funding.

## Centre for Legal and Economic Research

CIJE



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.cije.up.pt">www.cije.up.pt</a> | 1999               |
| RESEARCHERS  | FUNDING FCT        |
| 20   | 212040 Euros       |

### KEYWORDS

- Legal and economic research
- Labour law;
- Digital law;
- New Rights
- Legal research
- Law

### STRATEGIC AIMS

CIJE main objectives are the development of research in legal areas, in an innovative and transdisciplinary perspective and in cooperation with similar national and foreign institutions, on subjects covered by the research lines defined by CIJE's Scientific Council; to stimulate the provision of services to the community and disseminating the results of the research produced, through the organisation of scientific events and publications.

### RESEARCH UNIT DESCRIPTION

The Centre for Legal and Economic Research (CIJE) is a Research and Development Unit integrated in the Faculty of Law of the University of Porto (FDUP). Its main mission is to promote and develop research in legal areas, both nationally and internationally. Founded in 1998, the Center began its scientific activity in 1999, with recognition and financial support from the Portuguese Foundation for Science and Technology (FCT).

Since its foundation, CIJE participated in international projects, in partnership with foreign universities and international organisations and has provided services to the national and international community of significant relevance and impact. At the same time, CIJE, through its researchers, has provided continuous collaboration to FDUP, promoting and actively participating in post-graduate and

masters' courses. Its research activity also focuses on the supervision of research and doctoral projects, disseminating its results nationally and internationally through the organisation and participation in conferences and through publications.

Since 2013, CIJE is the editor of RED - Revista Electrónica de Direito, an open access electronic journal that is published three times a year. RED is a double-blind open access peer-review journal committed to ensuring the highest standards of ethics in publication and quality of articles. It intends to promote and publish interdisciplinary scientific research in the fields of business law and economics, favouring research on comparative law and EU law, as well as contributions from different Portuguese speaking countries.

## Center for Research in Neuropsychology and Cognitive and Behavioural Intervention

CINEICC




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### WEBSITE

<http://www.uc.pt/en/fpce/research/CINEICC>

### RESEARCHERS

39

### FUNDING FCT

1, 13 M Euros

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### KEYWORDS

- Cognitive and behavioural intervention
- Psychopathology
- Disease and health
- Psychological assessment
- Neuropsychological assessment
- Cognitive neuroscience

### STRATEGIC AIMS

CINEICC main aim is to study emotional and cognitive processes, and develop screening and assessment tools and empirically-based psychological interventions towards the promotion of health and well-being. The strategic aims established are to establish international networks while increasing national partnerships, to promote postgraduate and graduate training, optimize dissemination and favor an open science policy.

### RESEARCH UNIT DESCRIPTION

The Center for Research in Neuropsychology and Cognitive and Behavioral Intervention is a Research Unit of the Faculty of Psychology and Educational Sciences of University of Coimbra. The strategic vision of CINEICC is aligned with its past research and with the societal challenges of health, demographic changes and wellbeing of the EU Framework Programme Horizon2020. The main aim of the R&D unit is to study emotional and cognitive processes, and develop screening and assessment tools and empirically-based psychological interventions towards the promotion of health and well-being.

The activities of the are organized in 4 main scientific aims: 1. Study of factors and processes of health, psychopathology and aging; 2. (Neuro)psychological assessment; 3. Development, application and assessment of empirical-

ly-based (neuro)psychological interventions.; 4. Development of Cognitive Neuroscience research with potential translational impact.

The work developed by CINEICC will have a fundamental impact on both the psychological sciences, and on the development, dissemination, and implementation of scientifically-informed knowledge that is tremendously useful to mental health professionals (as well as other professionals), and to the community at large.

## Research Centre for Tourism, Sustainability and Well-being

CINTURS




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### WEBSITE

<https://cinturs.pt/site/>

### RESEARCHERS

35

### DATE OF FOUNDATION

2007

### FUNDING FCT

0, 97 M Euros

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### KEYWORDS

- Tourism
- Sustainability
- Competitiveness
- Wellbeing
- Territory

### STRATEGIC AIMS

CinTurs is a multidisciplinary Research Centre that combines knowledge and approaches from Human, Social and Environmental Sciences to produce and transfer knowledge in Tourism and Hospitality with the goal of contributing to sustainable development of tourist territories, competitiveness of hospitality industry and destinations' governance, and well-being of tourists, visited communities and employees in the tourism industry.

### RESEARCH UNIT DESCRIPTION

CinTurs, launched in 2007, has been a multidisciplinary research Centre in the domain of Social Sciences, with researchers organized in 3 groups: Cities and Spatial Dynamics; Organizations, Innovation and Learning Spaces; Tourism and Well-being in Society.

CinTurs is located at the Faculty of Economics of the University of Algarve (FEUAlg) and shares part of its facilities. The Research Centre has support services that include: secretariat, marketing and international relations services, and support to projects from a specialized unit at UALG (UAIC).

The research areas of CinTurs are the following: Sustainable Tourism and Territories; Tourism and Hospitality' Competitiveness and Governance; and Tourism and Stakeholders' Well-being. CinTurs is classified in the fol-

lowing scientific areas within Social Sciences: Social and Economic Geography; Economics and Management; Other Social Sciences.

CinTurs edits 2 scientific journals Journal of Spatial and Organizational Dynamics (JSOD), and Tourism and Management Studies (TMS).

## Psychology Research Center

CIP

**WEBSITE**

cip.autonoma.pt

**DATE OF FOUNDATION**

2001

**RESEARCHERS**

27

**FUNDING FCT**

0, 34 M Euros

**KEYWORDS**

- Stress
- Well-being
- Sleep disorders
- at-risk developmental contexts
- Social exclusion processes
- Health promotion

**STRATEGIC AIMS**

CIP has focused its research on the topics of psychosocial vulnerability and unstable contexts, focusing on the factors of prevention and promotion of health and well-being throughout life. It is intended that the research activity has an impact on individual resources and/or group functioning, which will translate into positive outcomes in terms of human capital and in favour of the conditions for a better economic development, reducing social asymmetries.

**RESEARCH UNIT DESCRIPTION**

CIP is a research unit of Autonomous University of Lisbon (UAL) and operates in the field of scientific research and technological development, in the field of Psychology. CIP has integrated a group of researchers as a result of the partnership with another management institution (UALG), which will allow setting more ambitious objectives in terms of the CIP's national and international visibility and recognition.

Our main objectives are: (1) to deepen knowledge regarding stress and its impact in specific contexts of potential vulnerability, such as family, work and societies in situations of armed conflict (war, post-war, peace operations); (2) to structure action-research which, in addition to advancing knowledge, has concrete positive effects on the populations studied; (3) to deepen the relationship be-

tween the psychological and biological variables that interfere with the disease and health mechanisms of individuals who are confronted with potentially disorganizing situations, seeking to understand the impact of "culture" in the selection of these mechanisms; (4) to adapt psychometric instruments to the populations involved in the various ongoing projects, analysing and optimizing their psychometric properties; (5) to advance knowledge about the predictors of well-being in different countries and cultures based on the analysis of certain individual characteristics; (6) to analyse and understand changes in the world of labour, with probable risks to individual and group health and consequent psychological and socio-cultural maladjustment; (7) to study health prevention and promotion factors and more efficient pedagogical strategies and methodologies.

## The Psychology of Positive Development Research Center

CIPD

**WEBSITE**

http://cipd.ulusiada.pt

**DATE OF FOUNDATION**

2006

**RESEARCHERS**

16

**FUNDING FCT**

0,15 M Euros

**KEYWORDS**

- Integrative theoretical approach
- Multilevel approaches and methodologies
- Person-centered approaches
- Psychobiological model of personality
- Positive development
- Subjective wellbeing

**STRATEGIC AIMS**

Our overall objective is to conduct research activities that contribute to advancing knowledge on development and positive functioning, including subjective well-being. We aim to contribute to a better understanding of the common and specific/unique pathways to well-being as it applies to more or less healthy individuals.

**RESEARCH UNIT DESCRIPTION**

Since its formation, the Psychology for Positive Development Research Center (CIPD) has focused its strategy and scope of action on the advancement of knowledge on the processes underlying positive functioning. Aligning with its integrative approach to studying biopsychosocial processes, CIPD has four lines of investigation: Personality and Wellbeing, Engagement, Socio-Emotional Development, and Development and Education.

CIPD adopts an integrative approach to understanding positive development that is reflected in several aspects of the research unit including the paradigmatic approach, our adopted conceptual frameworks and methodologies, the nature of results, and their implications for society. CIPD has contributed to the development of new knowledge on how to improve the quality of processes and outcomes in the national education system.

CIPD conducts research in collaboration with research-

ers from various national and international institutions, as well as students from different cycles of study, including PhD candidates from the Lusíada University PhD program in Applied Psychology: Health and Wellbeing. Demonstrating that CIPD continues to produce nationally and internationally impactful research, recent works have been published in flagship international journals such as the Journal of Youth and Adolescence, The Journal of Positive Psychology, and the Journal of Environmental Psychology.

## Center for Research in Higher Education Policies

CIPES



| WEBSITE      | DATE OF FOUNDATION |
|--------------|--------------------|
| www.cipes.pt | 1998               |
| RESEARCHERS  | FUNDING FCT        |
| 20           | 0,72 M Euros       |

### KEYWORDS

- Higher education systems
- Policies analysis and assessment
- Institutional and organizational studies
- Human capital
- Higher education studies
- Higher education institutions and actors

### STRATEGIC AIMS

CIPES mission has been to engage in research to advance critical thought and promote informed understanding about the vital policy issues confronting higher education at both the national and international arenas. CIPES aims to strengthen the public debate on Portuguese higher education by bringing in its long-standing expertise in comparative research of higher education systems at the international level.

### RESEARCH UNIT DESCRIPTION

CIPES - Center for Research in Higher Education Policies - is a private association, founded by the Universities of Aveiro and Porto and open to other institutions of higher education. CIPES was established in 1998 and from the outset, its mission has been to engage in scholarly research in order to advance critical thought and promote informed understanding about the vital policy issues confronting higher education at both the national and international arenas.

The breadth and depth of projects and publications encompasses the major higher education policy issues and reflects the wide diversity of academic backgrounds of the researchers at the Centre. Since its inception, CIPES has considered the internationalization of its activities as a central aspect of its development, and is nowadays

an active partner in various research projects in the field of higher education policies, in Europe and in the world. CIPES has been participating actively in international research projects, and it is usual for its researchers to participate in international conferences and to publish in relevant international journals in the field.

CIPES has always committed with the organization of several seminars and international conference in a diversity of research themes, with the objective of raising the knowledge of its research groups, as well as attaining a higher degree of international visibility. Nowadays, CIPES is organized around three main research themes: i) System Level Policies (SLP), ii) Institutional and Organizational Analysis (IOA) and iii) Economic and Social Relevance of Higher Education (ESRHE).

## Psychology Research Centre

CIPSI



| WEBSITE                               | DATE OF FOUNDATION |
|---------------------------------------|--------------------|
| https://www.psi.uminho.pt/en/Research | 2003               |
| RESEARCHERS                           | FUNDING FCT        |
| 44                                    | 1641805.2 Euros    |

### KEYWORDS

- Learning and cognition
- Clinical and forensic psychology
- Development and educational psychology
- Psychological neuroscience
- International outreach research
- Research impact on society

### STRATEGIC AIMS

The main purpose of the CIPsi is the promotion and dissemination of high quality scientific knowledge in the domains of Basic and Applied Psychology. To this end, the Centre has focused its goal on two main vectors: to increase the internationalization of research; and to promote its impact in the academic and societal community.

### RESEARCH UNIT DESCRIPTION

The Center for Research in Psychology (CIPsi) is the School of Psychology's research and development unit (R&D Unit) of the University of Minho. CIPsi's main objective is the development and dissemination of scientific knowledge in several specific areas of basic and applied psychology: human cognition; animal learning and behavior; psychological neuroscience; learning, instruction and career; development and psychopathology; psychotherapy and psychopathology; health, wellbeing and performance; in addition to victims, offenders and the justice system.

Founded in 2003, CIPsi currently includes more than 50 junior and senior researchers, in a harmonized proportion of faculty and career researcher positions. Per year, on average, CIPsi publishes more than 150 articles in major journals, receives over 2,500 citations, and captures over 4 million euros in research projects and activities of knowledge transfer. CIPsi has also several national and in-

ternational collaboration agreements and protocols with public and private entities.

Progressively recognized by different panels as a research center of excellence, CIPsi has occupied a prominent position at both the national and international levels over the last 10 years.



## Research Centre in Digital Services

CISED



|                          |                           |
|--------------------------|---------------------------|
| <b>WEBSITE</b>           | <b>DATE OF FOUNDATION</b> |
| http://www.ipv.pt/cised/ | 2018                      |
| <b>RESEARCHERS</b>       | <b>FUNDING FCT</b>        |
| 40                       | 0, 62 M Euros             |

### KEYWORDS

- Digital services
- Social networks
- Digital society
- Digital service business
- Digital automotive industry

### STRATEGIC AIMS

CISeD main objectives are to develop the number and quality of digital services in the automotive and digital industries; to develop and disseminate research in collaboration with national and international partners in order to address real issues facing individuals, organizations and society at large; to develop applied research and promote scientific employment and allow students from IPV and partner institutions to participate in R&D projects.

### RESEARCH UNIT DESCRIPTION

Research Centre in Digital Services (CISeD) has been created by Polytechnic Institute of Viseu to conduct applied research in digital services. The research conducted within CISeD covers areas related with computer science, economics and management, culture, quantitative methods and electrical and mechanical engineering. The research centre includes, in its genesis, partners as The Tallaght Institute of Technology and the General Foundation of the University of Salamanca, and also companies Bizdirect (a SONAE group enterprise), Softinsa (a IBM group enterprise), as well as establishing partnerships in the automotive industry - Faurécia, PSA Mangualde, HUF group and Tojaltec.

CISeD's vision is to be a centre for excellence in the Digital Services area and in the development of technologies for

the automotive industries. Our mission is to be a reference research unit in our field, leading in knowledge, learning and education in order to improve the conditions of our society. Through human resources recognition CISeD aims to be an instrument of inspiration and motivation for the community.

## Centre for Psychological Research and Social Intervention

CIS-IUL



|                              |                           |
|------------------------------|---------------------------|
| <b>WEBSITE</b>               | <b>DATE OF FOUNDATION</b> |
| http://www.cis.iscte-iul.pt/ | 2010                      |
| <b>RESEARCHERS</b>           | <b>FUNDING FCT</b>        |
| 52                           | 0,46 M euros              |

### KEYWORDS

- Social psychology
- Applied psychology
- Social cognition
- Social intervention
- Interpersonal and intergroup relations
- Researcher training

### STRATEGIC AIMS

Advancing psychological theory and evidence-based interventions by strengthening our core areas of expertise, while embracing new opportunities in emerging research areas and intensify cross-thematic and interdisciplinary collaborations. We will strive to maintain our deliberately inclusive policies, offering a challenging and supportive environment for researchers at different stages of their career, as well as to strengthen commitment to open science and communication.

### RESEARCH UNIT DESCRIPTION

The Center for Psychological Research and Social Intervention (CIS-Iscte) is a FCT center of excellence dedicated to the advancement of knowledge on Psychology, the analysis of the psychological and psycho-social dimensions of relevant social problems, and the development of evidence-based interventions. CIS-Iscte contributes to inform knowledge-based public policies and to analyze their public acceptance (e.g., in the domains of health, education, environment, justice, intergroup relations, gender). CIS-Iscte's integrative approach to psychological research, tackling different levels of analysis with various research methods, enables it to integrate theories across diverse areas of psychology and to connect them with other disciplines. CIS-Iscte has a solid international network

of partnerships, and a policy of open access for research outputs. It engages in transferring knowledge to society and in integration of research and teaching at all levels of education. Another priority is the scientific training of young researchers and students.

CIS-Iscte's strategic plan and mission are aligned with the objectives of the UN 2030 Agenda, the EU Twin Agendas, the Strategic Foresight Report for a more Resilient Europe, the National Agenda for Higher Education, and the Economic Recovery and Resilience Plan for Portugal. CIS-Iscte co-leads the recently approved Associate Laboratory: Socio Digital Laboratory for Public Policy (Socio-Digital Lab).

## Centre for Tourism Research, Development and Innovation

CITUR



|   |                                     |
|---|-------------------------------------|
| <b>WEBSITE</b><br>http://citur.ipleiria.pt/ | <b>DATE OF FOUNDATION</b><br>2008   |
| <b>RESEARCHERS</b><br>98                    | <b>FUNDING FCT</b><br>1249200 Euros |

### KEYWORDS

- Tourism research and innovation

### STRATEGIC AIMS

CiTUR's mission is to develop applied research, create and transfer scientific knowledge in the field of tourism, permanent training and provision of tourism services and related areas; CiTUR has as objectives: promotion, coordination and implementation of scientific research projects; dissemination of scientific knowledge and cooperation at national and international level;; implementation of studies and projects guided towards the needs of the academic, business and institutional community.

### RESEARCH UNIT DESCRIPTION

The Centre for Research, Development and Innovation in Tourism (CiTUR) is a Research and Development Unit (R&D) born from the polytechnic subsystem of education in tourism and hospitality. Seventeen schools are linked, involving almost 200 researchers, half of them as 'integrated'. In addition to the objectives that are common to the whole academy, polytechnics are expected to generate and disseminate knowledge that can be recognized by society and the business as applicable, in the sense that it can be seen as ready for immediate use on productive processes and / or social intervention.

In terms of its internal organisation, CiTUR is structured into six regional nodes, based in Coimbra, Estoril, Faro, Funchal, Guarda and Leiria. Crossing these nodes, the

Unit considers six thematic research groups. The goals of these groups are necessarily broad, having in mind the diversity of the members that are part of them and the Unit's youth, which has not yet allowed a collective work practice and a convergence to the research topics that might be considered as strategically more interesting:. Tourism Economics and Management ; Tourism, Hospitality and Restaurants;e-Tourism; Territory and Tourist Destinations; Planning and Management of Tourist Products and Animation and Tourism, Culture, Society and Language.

## Lusíada Research Center on Social Work and Social Intervention

CLISSIS



|  |                                     |
|--|-------------------------------------|
| <b>WEBSITE</b><br>http://clissis.ulusiada.pt | <b>DATE OF FOUNDATION</b><br>2007   |
| <b>RESEARCHERS</b><br>26                     | <b>FUNDING FCT</b><br>0, 29 M Euros |

### KEYWORDS

- Social work
- Social intervention
- Psychology
- Aging
- Social policies
- Welfare and social inclusion

### STRATEGIC AIMS

CLISSIS vision is to be a scientific and technical reference which contributes, throughout its activities, for the development of knowledge on social problems that may be used by social organizations and professionals in the design of new strategies, methodologies, policies and tools to improve welfare and quality of life of their constituencies in Portuguese society.

### RESEARCH UNIT DESCRIPTION

The Lusíada Center for Research in Social Work and Social Intervention (CLISSIS) was created in 2007, at the Instituto Superior de Serviço Social de Lisboa at Universidade Lusíada. From the beginning, CLISSIS defined itself in a broader scope of action than the Social Service, which it called "Social Intervention". CLISSIS assumes an interdisciplinary and multi-sector approach on "Social Intervention" aiming to be a scientific reference in the knowledge on social problems, to be used in the promotion of new strategies, policies and tools on welfare and quality of life. CLISSIS mission is to increase knowledge about different social problems that affect contemporary Portuguese society, and their impact on quality of life and social cohesion and inclusion, to contribute to the assessment and innovation of social policies and their implementation, from a micro and macro perspective; It aims to contribute

to the assessment and testing of different types of social and institutional responses, from a perspective of promoting quality of life, and social intervention strategies and methodologies and to improve knowledge of different actors and social organizations, namely in the so-called Social Economy sector and, specifically, in the area of Social Work, as agents of social change.

CLISSIS integrates researchers from different scientific areas, namely Social Work, Psychology, Sociology and Anthropology, its has a multidisciplinary nature; existing link with social and community organizations; connection with graduate and postgraduate education at Universidade Lusíada and at ISSSP.

## Research Centre in Organizations, Markets and Industrial Management

COMEGI



|   |                                     |
|---|-------------------------------------|
| <b>WEBSITE</b><br>http://comegi.ulusiada.pt | <b>DATE OF FOUNDATION</b><br>2018   |
| <b>RESEARCHERS</b><br>49                    | <b>FUNDING FCT</b><br>0, 50 M Euros |

### KEYWORDS

- Management
- Industrial management
- Organizations
- Markets
- Qualifications

### STRATEGIC AIMS

This research unit promotes the development of research centred in the fields of management is based on three major scientific principles: a systemic approach to understand, to diagnose and to recommend better strategies and actions; an interdisciplinary integration of multiple knowledge stemming from the nature of COMEGI and a “problem oriented- approach” following the so called Mode 2 of Research which implies that research should be based on real problems and systems.

### RESEARCH UNIT DESCRIPTION

COMEGI is a research centre which promotes research centred in the fields of management in line with the Universidade Lusíada (UL) strategy to promote higher level research and provide a strong scientific background to the higher degrees offered within the scope of activities of the centre. This centre stems from the previous existing research centre of the UL, CLEGI, which was devoted just to industrial management.

The mission of COMEGI is developing high level of advanced and innovative research to acquire new results on the major challenges of modern management sciences: covering the major area of public management which is, unfortunately, ignored by most research units on management, and relating its issues with the budgeting, financial

and fiscal contexts; pursuing research lines on E-Business, marketing and social and labour markets giving special attention to key challenges like e-public procurement and digital banking; selecting major issues on HR Management, leadership, motivation and performance assessment; Focusing on Technology Management including operations management, industrial systems and competitiveness. COMEGI is placing a strong focus in cooperation with the different institutions and companies intensifying collaboration to foster mutual benefits.

## Center for Psychology at University of Porto

CPUP



|   |                                      |
|---|--------------------------------------|
| <b>WEBSITE</b><br>http://www.fpce.up.pt/cpup/ | <b>DATE OF FOUNDATION</b><br>1980    |
| <b>RESEARCHERS</b><br>67                      | <b>FUNDING FCT</b><br>1, 29 M. Euros |

### KEYWORDS

- Learning and cognition
- Human development
- Health and well-being
- Psychology, experimental and applied

### STRATEGIC AIMS

The overarching goal of CPUP is to produce high-quality psychological research and evidence-based educational, social and clinical applications thus contributing to a better, inclusive and open society. Our goals include pushing further the levels of excellence and internationalisation, with a new emphasis on translational research and knowledge transfer: along with making high-quality science that is visible to our peers and bring science closer to society.

### RESEARCH UNIT DESCRIPTION

CPUP is hosted at the University of Porto, Faculty of Psychology and Education Sciences, where it was created in 1980. Its value to science and society has been recognized over the years; it was rated Excellent in the 2013 FCT evaluation and has been consulted by national ministries on several occasions regarding socio-educational policies. CPUP includes five research groups that share well-equipped labs to conduct basic and applied research. The Center for Psychology at University of Porto (CPUP) is a research center with a vibrant scientific environment that brings together 67 PhD researchers, of whom 13 are full-time post-doctoral fellows, and 37 nonPhD full-time research assistants, of whom 31 are doctoral students. CPUP researchers come from complementary areas of Psychology and share a common interest in human be-

havior, mind, and brain, in health and disease. By using complementary frameworks and methods, and sharing expertise and resources, the research groups provide a comprehensive approach to the main psychological and social dimensions of human life.

CPUP has provided original contributions that were disseminated in high-ranked scientific journals and general outlets. Committed to conduct world-class research and promote knowledge exchange, CPUP is a highly internationalized center. Collaborations with prestigious institutions resulted in joint projects, funding applications and new PhD programs. CPUP attracted national and international students, hosted post-docs and renowned researchers, and organized worldwide conferences. It also extended its partnership network of stakeholders and kept close liaison with the Faculty Psychology Counselling Services, thereby fueling science and society synergies.

## Centre for Research in Anthropology

CRIA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://cria.org.pt">http://cria.org.pt</a> | 2007               |
| RESEARCHERS   | FUNDING FCT        |
| 76  | 1, 45 M Euros      |

### KEYWORDS

- Anthropology and Ethnography
- Governance and livelihoods
- Mobilities
- Cultural practices
- Environment
- Human rights

### STRATEGIC AIMS

CRIA is the main Portuguese research centre in Anthropology, advocating the relevance of fundamental and applied anthropological research towards a differentiated understanding of the social, cultural and environmental worlds. CRIA's strategic goals focus on fostering the dialogue between the academia, civil society, and policymakers in the fields of Heritage, Environment, Sustainability, Governance, Mobilities, and Culture, strongly committed with responsible science and innovation orientation.

### RESEARCH UNIT DESCRIPTION

CRIA is a dynamic network based on four universities (ISCTE, NOVA FCSH, UCoimbra and UMinho). This network enables each institutional division to autonomously develop its own activities while sharing the fundamental resources necessary to the management, fundraising, research dissemination, teaching and knowledge transfer. Furthermore, it encourages the mobility of CRIA's researchers between the different institutional grounds. Research in CRIA is structured in four major research groups which compose its scientific core and bring together researchers from the different institutional divisions. These research groups build upon specific fields of research: circulation and place-making; environment, sustainability, and ethnography, governance, policies and

livelihoods and practices and politics of culture. Complementarily, thematic lines aggregate researchers from the different research groups around particular subjects and contexts of research, such as: Anthropology of health; Visual Anthropology; Studies in Arab and Islamic contexts; Anthropology of Religion, informal resources; State and Social Capital; South Asia study circle. Research and teaching also benefit from CRIA's four laboratories: the Laboratory of Biological Anthropology and Human Osteology; the Laboratory of Environmental Anthropology and Behavioral Ecology; the Audiovisual Laboratory; and the Jill Rosemary Dias Laboratory. CRIA fosters Open Science through the edition of the *Etnográfica* peer-reviewed journal.

## Research in Social Sciences and Management

CSG



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://csg.rc.iseg.ulisboa.pt/en/">https://csg.rc.iseg.ulisboa.pt/en/</a> | 2013               |
| RESEARCHERS   | FUNDING FCT        |
| 120   | 2, 19 M Euros      |

### KEYWORDS

- Economic Sociology
- Organizations and business
- Economic History
- Development studies
- Sustainability sciences
- Socioeconomics

### STRATEGIC AIMS

CSG aims to produce internationally-recognised high quality multi- and interdisciplinary research. The unit's hallmark is the study of economic and organisational reality through the lens of various social sciences, breaking the frequent isolation of economics and management from other social disciplines and enriching research.

### RESEARCH UNIT DESCRIPTION

In the light of the new demands facing R&D activities, in 2013 four of the research units of ISEG/ULisboa - SOCIUS (Research Centre in Economic and Organisational Sociology), ADVANCE (Centre for Advanced Research in Management), CESA (Research Centre on Africa, Asia and Latin America) and GHES (Economic and Social History Research Unit) decided to set up a new research unit: CSG/Research in Social Sciences and Management. The objective of this consortium was to bring together a group of researchers who share a similar conception of the study of socio-economic and organisational reality, by increasing critical mass and enhancing complementarities. The research carried out by CSG integrates social and behavioural variables in understanding complex phenomena, whose particularity is also a consequence of the space and time in which they are located. This new research structure is openly interdisciplinary, bringing together the scientific

areas of the associated units, namely: Economic and Organisational Sociology, Economics, Management, Finance, Development Studies, Economic and Social History - and, to a lesser extent, other areas of social sciences. While studies with a well-marked disciplinary character will still be developed - in response to a demand which goes back to the institutional environment - integrated frameworks will be adopted with increasing frequency. With regards to the latter, no disciplinary matrix will be dominant, thus enabling a broad understanding of complex problems and a better applicability of policy recommendations. In relation to research results, the objective of the unit is to strengthen the link between theory and practice, and between basic and applied research. Cooperation with the economic and business environment is also a priority, as well as being involved with public policies. On the international front, the various networks in which researchers operate are the basis for the broad geographic scope of activity.



## Católica Lisbon Research Unit in Business and Economics

CUBE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://www.clsbe.lisboa.ucp.pt/faculty-knowledge/research/research-catolica-lisbon-cube">https://www.clsbe.lisboa.ucp.pt/faculty-knowledge/research/research-catolica-lisbon-cube</a> | 1997               |
| RESEARCHERS   | FUNDING FCT        |
| 53  | 1, 51 M Euros      |

### KEYWORDS

- Strategy, entrepreneurship and innovation
- Economic theory, policy, and applications
- Organizational behavior, ethics, social enterprise
- Marketing and consumer behaviour
- Finance and accounting
- Operations and information management

### STRATEGIC AIMS

The mission of CUBE is to be among the top research groups in Business and Economics in Europe, recognized for its research excellence and societal impact. CUBE has 4 structuring objectives: reinforce research excellence through publications, projects, and service; to expand international scope, participation and recognition of CUBE research; bring scientific expertise to community, regional, national challenges and support excellence in scientific careers, for new and established researchers.

### RESEARCH UNIT DESCRIPTION

CUBE is the research unit of CATÓLICA-LISBON, a “Triple Crown” accredited and top 30 European business school according to Financial Times ranking. The mission of CUBE is to be among the top research groups in business and economics in Europe. In 2019, CUBE was classified as Excellent in FCT’s evaluation process and received the highest rating of all Portuguese research units in the Management field. CUBE comprises eight research groups and various centers and labs, which combine research with knowledge diffusion and societal impact activities.

CUBE has an increasing number of research projects whose funding sources include FCT, the European Commission, nonprofit organizations and private companies. CUBE has kept to a strong track-record of highly cited,

top-level publications. CUBE has had a significant impact on the scientific community, organizations, and society through the dissemination of research in articles and conferences, through education, via spin-offs from its research. CUBE researchers serve on editorial boards of the top academic journals in their fields, take leadership roles in scholarly communities and engage in applied research projects.

CUBE has been awarded the Smart Business Modeler: Wharton Reimagine Education Award’s best ICT Tool in Learning and Teaching.

## Digital Media and Interaction Research Center

DIGIMEDIA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://digimedia.web.ua.pt/">http://digimedia.web.ua.pt/</a> | 2018               |
| RESEARCHERS   | FUNDING FCT        |
| 26  | 0, 61 M Euros      |

### KEYWORDS

- Digital Media
- Human Computer Interaction
- User Experience
- Cyberculture
- Communication
- Societal Challenges

### STRATEGIC AIMS

DigiMedia research is focused on understanding, designing, prototyping and validating digital media and communication services for the enhancement of the user experience in specific contexts such as entertainment, learning, health and well-being.

### RESEARCH UNIT DESCRIPTION

The Digital Media and Interaction Research Center – DigiMedia is a research unit funded by FCT whose mission assumes a social responsibility for research and innovation in the areas of web technologies, digital games and interactive television. DigiMedia’s activity is focused on understanding, designing, prototyping and validating communication services based on Digital Media that optimize the user experience in specific contexts, namely entertainment, learning, health and wellbeing.

DigiMedia objectives are to strengthen national and international relevance, through funded projects, connection to industry, and organization of scientific events; promote the dissemination of results by investing in open access publishing, and in a Digital Media Observatory; strengthen the relationship of research with undergraduate and graduate programs through the involvement of students from the various cycles in research activities.

DigiMedia structures its research activity taking into ac-

count the close relationship between users, digital technologies and human-centered approaches that mediate and foster the experience of using digital services, supported by an R&D cycle: understand, study and monitor the use of digital media; design and propose, through user-centered approaches, new digital solutions; implement prototypes of the proposed solutions, and validate and evaluate the proposed and prototyped solutions in terms of their user experience (UX) and their suitability to solve the identified digital communication needs.

DigiMedia’s team of integrated researchers is organized into 6 research groups aligned with the thematic areas and strategic objectives: Cyberculture, Social iTV, eHealth and Wellbeing, Advanced Technologies, Social Media and Learning, Games and Transmedia and has developed digital resources (applications or games) in promoting digital wellbeing practices. It is also responsible by the creation of the Journal of Digital Media and Interaction, DigiMedia Collection and Digital Media Observatory.

## Centre for Socioeconomic and Territorial Studies

DINÂMIA'CET-IUL

dinâmia'cet .. iscte  
Centro de Estudos sobre a Mudança Socioeconómica e o Território

### WEBSITE

<https://www.dinamiacet.iscte-iul.pt/>

### RESEARCHERS

78

### FUNDING FCT

1, 43 M Euros

### KEYWORDS

- Regulation and institutions
- Sustainability
- Urban morphology and spatial design
- Territoriality and development
- Innovation, creativity and social change
- Citizenship and participation

### STRATEGIC AIMS

Dinâmia'CET-IUL (D'C) performs advanced international and comparative research, framed by a sustainable development approach, while pledging to increase knowledge about the Portuguese society. It seeks to contribute to the understanding of the contemporary world and to the design of the future through the analysis of contexts, actors and consequences of change, encompassing a particular focus on public policy and institutional frameworks, thus working both at analytical and normative level.

### RESEARCH UNIT DESCRIPTION

DINÂMIA'CET - IUL (D'C), Centre for Socioeconomic and Territorial Studies is an ISCTE-IUL interdisciplinary research unit in social and human sciences, which combines fundamental and applied research on relevant economic, social and cultural topics. Working on an interdisciplinary basis - the Centre gathers researchers in economics, sociology, law, architecture, regional and urban planning, anthropology, geography, management, quantitative methods - it seeks to contribute to the understanding of the contemporary world and to the design of the future.

The pillars of D'C activities are its three Research Groups: Innovation and Labour; Cities and Territories; Governance, Economy and Citizenry. this main structure is complemented by three crosscutting integrating thematic lines:

innovation and transition to sustainable societies; regulatory and governance challenges for complex societies; creative and participative lives in empowered societies.

In order to conduct its mission, the Centre mobilizes an array of theoretical and methodological resources guided by a common core issue. What is at stake is to capture the nature of the dynamics underlying socioeconomic and territorial change, their genesis in the inter-play between collective public and private actors operating in different domains (e.g. markets, territorial communities, public spaces), as well as their impact, notably in spatial terms (landscape, morphology, etc.)

D'C publishes an online journal, CIDADES, Comunidades e Territórios, and a Working Paper series, both peer-reviewed. It also participates in publishing Portuguese Journal of Social Science and the journal Passagens, in collaboration with the Architecture PhD programme. These activities are supported by a close-knit network of partnerships with other national and international research units, public agencies and civil society players.

## Research Unit on Governance, Competitiveness and Public Policy

GOVCOPP

govcopp universidade de aveiro  
unidade de investigação em governação, competitividade e políticas públicas

### WEBSITE

<https://www.ua.pt/govcopp/>

### DATE OF FOUNDATION

2008

### RESEARCHERS

84

### FUNDING FCT

1, 55 M Euros

### KEYWORDS

- Public Policy
- Competitiveness
- Territory
- Governance and decision support
- Management
- Tourism

### STRATEGIC AIMS

The GOVCOPP's research focus is on applied social sciences, producing knowledge aimed at promoting economic efficiency and good practices in governance in specific territorial context and scales: European, national, and regional, with a particular focus on the Centro and Aveiro regions.

### RESEARCH UNIT DESCRIPTION

The Research Unit (RU) on Governance, Competitiveness and Public Policy (GOVCOPP) is part of the University of Aveiro (UA), including researchers from several Departments as well as researchers working in other Portuguese Higher Education Institutions.

The unit is organized in four research groups that are integrated through two strategic action subprograms (SAS): Production of new knowledge related to the multiple dimensions of a foresight-oriented vision of regional governance and territorial competitiveness (Region of the Future) and promotion of evidence-based decision-making and participative processes providing objective assessments of stakeholders' preferences (Regional Decision Support System).

It has a multidisciplinary approach combining economics, management, operational research, sociology, geography, and political sciences. Multidisciplinary gains coherence

by considering the interplay of economic competitiveness, environmental sustainability, and social inclusion as the main scope of public policy and the driver of good governance.

GOVCOPP creates, applies, and diffuses scientific knowledge concerning: governance structures and practices; public policies directed at territorial planning; innovation in management and industrial engineering; sustainable economic efficiency related to systemic regional processes and promoted by policies; decision support systems required to deal with complex problems and to promote responsible public participation; and future studies and foresight techniques.

# Digital Human Environment and Interactions Labs

HEI-LAB



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://hei-labs.ulusofona.pt/">https://hei-labs.ulusofona.pt/</a> | 2018               |
| RESEARCHERS   | FUNDING FCT        |
| 37  | 0, 47 M Euros      |

#### KEYWORDS

- Human-environment interactions
- Cognitive-emotional processes
- Behavioral modelling
- Design systems
- Critical Design
- User Experience Design

#### STRATEGIC AIMS

HEI-Lab's mission is to converge knowledge from Psychology and Videogames into a transdisciplinary scientific platform to study human behaviour within this interchangeable view. Digital technology following psychological principles and created with Design and Engineering processes is HEI-Lab's signature. Our approach offers the opportunity to explore human behaviour by digitally modelling its contextual environment.

#### RESEARCH UNIT DESCRIPTION

HEI-Lab is a transdisciplinary research and intervention (R&I) centre in psychology and design. We develop digital and natural environments to study cognitive, behavioral and emotional processes, and study these to develop models of design, with a novel framework to address the intersection between people and the digital world. HEI-Lab generates new challenges, methods, and solutions. It also aligns with current guidelines of the EU, the WHO, and the APA, which have identified eHealth as a growing practice and global goal.

The concept behind HEI-Lab is rooted in the framework of human-environment interaction and looks at the mutual effects between human behaviour and its contexts. When needed, HEI-Lab creates these contexts through digital means, namely, virtual reality (VR). Within this scope, HEI-

Lab conducts research in the Human Mind and Behaviour (HMB) arena, supported by several theoretical frameworks that guide the R&D activities of five thematic labs: Human Cognition and Behaviour Lab; Psychopathology and Human Change Lab; Human Development and Relationships Lab; Social Behaviour, Environment, and Culture Lab; and Playful Interaction Design Lab. These labs' activities are supported by three research physical facilities - Cyberpsychology Lab, Psychology Experimental Lab and Interfaces and Interactions Lab -, where contextual digital apps are developed and data from HMB is recorded and analysed. Typically, these data are collected through self-reports, hemodynamic measurements (fNIRS), physiological measurements [cortical activity (EEG) and peripheral activity (EDA, ECG, EMG, Respiration)], eye-tracking, and automatic facial/emotion recognition. Researchers' work is supported by a team of developers that produce digital contexts and perform data collection and analysis procedures.

# NOVA Institute of Communication

ICNOVA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://icnova.fcsh.unl.pt">http://icnova.fcsh.unl.pt</a> | 2020               |
| RESEARCHERS   | FUNDING FCT        |
| 77  | 1, 90 M Euros      |

#### KEYWORDS

- Media and journalism
- Contemporary culture and mediation technologies
- Strategic communication
- Performance studies and multimodal communication
- Digital media and emerging technologies

#### STRATEGIC AIMS

ICNOVA (NOVA's Institute of Communication) seeks to develop advanced research in Communication Science by exploring innovative and inclusive paths in the fields of mediated communication and the arts. The institute aims to respond to challenges of the contemporary world, and promotes a close and dynamic relationship with society at the local, national and international levels via the transfer and sharing of knowledge, which results from the activity and freedom of creation of its members.

#### RESEARCH UNIT DESCRIPTION

ICNOVA is a research unit in the field of Communication Science in Portugal, resulting from former units (CECL and CIMJ, pioneers in the area; and CIC.Digital). Its current structure includes 5 groups (Media and Journalism; Culture, Mediation and Arts; Strategic Communication and Decision Making - Process; Performance and Cognition; iNOVA Media Lab), 2 labs (BlackBox, Scenic Experimentation Laboratory and iNOVA Media Lab) and 5 observatories.

Media and Journalism focuses its action on two pillars: journalism studies and the interrelations between media and society. Culture, Mediation and Arts addresses the analysis of cultural phenomena according to the idea that communication has a crucial role as the enabler of

meaning to the multidimensionality of culture, patent in the discursive, imaged, and other regimes of mediation. Strategic Communication and Decision-making Processes seeks to study the use by organizations of planned, controlled, and persuasive communication, in order to pursue its organizational goals (commercial, social, or political). Performance and cognition studies how the dimensions of cognition, representation and performance strongly structure communication. iNova Media Lab conducts research on the convergence of digital media and emerging technologies.

## Police Research Center

ICPOL



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.iscpsi.pt/investigacao/investigID/Paginas/default.aspx">http://www.iscpsi.pt/investigacao/investigID/Paginas/default.aspx</a> | 2004               |
| RESEARCHERS   | FUNDING FCT        |
| 18  | 311000 Euros       |

### KEYWORDS

- Police sciences
- Policing
- Police and society
- Police work and organization

### STRATEGIC AIMS

The goals are oriented towards the development of Police Sciences and other related sciences (e.g. Law, History, Sociology, Economy, Sports Sciences), through two axes of scientific activity: Police issues-oriented research; Programmatic research, regarding specific areas of knowledge identified as fundamental by ICPOL's scientific coordination.

### RESEARCH UNIT DESCRIPTION

ICPOL is composed of a body of researchers, the vast majority of whom hold a PhD, either from the Institute of Police Sciences and Internal Security (ISCPSI) or from other organisational units of the PSP. It also includes other researchers from universities, including some from abroad. From the point of view of the background of this body of researchers, there is a great diversity, mainly from the Police Sciences, Social Sciences and Humanities, but also from the Sports scientific area.

ICPOL is also responsible for the management of a Documentation Centre open to the outside, which manages the RCAAP of ISCPSI and also acts as an editor of the scientific work produced by PSP, holding a scientific journal called POLITEIA and being responsible for the annual publication of several books.

Supported by funds from the PSP budget and with the financial support of FCT, ICPOL also benefits for the development of the activity of partnerships resulting from its participation in European research projects, including HORIZON 2020 and HORIZON EUROPE. Its international cooperation network includes, among the most relevant, AMERIPOL (The Police Community of the Americas) and CEPOL (European Union Agency for Law Enforcement Training).

ICPOL develops a wide range of activities directed to the scientific community and to all those who are interested in internal security issues, through colloquiums, seminars and congresses in those issues.

ICPOL edits a Biannual publication of a scientific journal (Politeia) with double blind review.

## Institute of Social Sciences, University of Lisbon

ICS-ULISBOA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.ics.ulisboa.pt">http://www.ics.ulisboa.pt</a> | 1992               |
| RESEARCHERS   | FUNDING FCT        |
| 112   | 3, 04 M Euros      |

### KEYWORDS

- Contemporary societies: legacies and challenges
- Inclusion, citizenship, sustainability
- Plural SSH approaches and methods
- Research-led advanced training
- Knowledge SSH infrastructures
- Open and citizen science

### STRATEGIC AIMS

ICS is a research centre of excellence in SSH, with the following aims: innovative and top-ranking research, building bridges between disciplines, research institutions and other actors; applied knowledge and relevant contributions on problems of national and global concern, informing public policies; advanced research-led training; engagement with society and knowledge dissemination; international projection of knowledge produced.

### RESEARCH UNIT DESCRIPTION

As an "Excellent" R&D Unit and Associate Laboratory, ICS is devoted to scientific research, post-graduate teaching and outreach activities, with a particular emphasis, given its responsibilities as an AL, on public engagement with society, scientific employment and research careers, and internationalization.

Working in the fields of anthropology, political science, economics, geography, history, social psychology and sociology, ICS: 1) carries out top interdisciplinary research, both fundamental and oriented to the demands of society and the public sector, on the challenges of sustainability, citizenship, social inclusion and vulnerability, memory and legacies; 2) places internationalization at the heart of its strategy, supporting and rewarding internationalization of careers, research, and collaborative networks, taking

part in international funding programmes (H2020, ERC, MSC Actions), and basing its recruitment and evaluation strategy on open and competitive processes; 3) supports rigorous research by organizing key infrastructures for gathering, handling, preserving and disseminating data: PASSDA (National Infrastructure Roadmap), ICS-Iscte Polling Laboratory, XLab Experimental Laboratory, ICS Observatories and Hubs, Social History Archive, publishing infrastructure; 4) focuses on doctoral and post-graduate teaching and life-long training for non-academic publics; 5) promotes diverse outreach strategies: engaging with the media and social networks, dissemination through publications and events for wider publics, collaboration in public and civil society initiatives, open science platform.



# University of Coimbra

## Institute for Legal Research

IJ



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="https://www.ij.fd.uc.pt/index_en.html">https://www.ij.fd.uc.pt/index_en.html</a> | 2013                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 75  | 0,66 M Euros              |

### KEYWORDS

- Person
- Autonomy
- Responsibility
- Innovation
- Crisis
- Sustainability

### STRATEGIC AIMS

UCILeR's target is to seek juridical answers to the challenges of contemporaneity. It is in the tripartite specification vulnerability/plurality/undecidability that the consideration of these responses finds its coherence, which actually means assuming the following question: will the Law be able to recognize relevant situations of vulnerability and the plurality caused by the explosion of multiculturalism and the celebration of differences, whilst facing the instability of the contexts?

### RESEARCH UNIT DESCRIPTION

UCILeR was created in 1911. In 2013, honouring that tradition, the research unit re-emerged and was accredited by the FCT. Since then, valuing history, but always keeping an eye on the contemporary issues, the UCILeR's mission has been focused on societal challenges (condition of vulnerable people, environment and climate challenges, territorial justice, terrorism, forestry planning, artificial intelligence), aiming at the projection of juridical responses in explicit dogmatic solutions and not just in theoretical discussions.

The reflective treatment of these responses is accomplished in a double dimension, considering, on the one hand, their pragmatic-instrumental component, and, on the other hand, taking into account its limits. The treat-

ment of these latter is, in turn, referred to a reconstitution of the requirements or aspirations which nowadays allow us to distinguish juridicity.

The research carried out by the UCILeR reflects these purposes and supports them in the expected processes of "dissemination": scientific meetings in multiple formats and publications (whenever possible in open access) aimed at different audiences. One of the decisive aspects of this investigation is, in turn, the integration in international projects and networks of which is an example The White Book Responsibility for Public Health in The Lusophone World.

# Portugalense

## Institute for Legal Research

IJP

|  |                    |
|--|--------------------|
| <b>WEBSITE</b>                             | <b>FUNDING FCT</b> |
| <a href="http://ijp.upt.pt">ijp.upt.pt</a> | 0, 68 M Euros      |
| <b>RESEARCHERS</b>                         |                    |
| 57   |                    |

### KEYWORDS

- Law
- International relations
- European Union
- Competition and economic regulation
- Neuroscience and law
- Human rights

### STRATEGIC AIMS

IJP is a research unit essentially oriented towards the work in Legal Science, but with important contributions from several other social sciences, such as Political Science and International Relations. Its neo-materialist transdisciplinary approach aims to provide the scientific work of its researchers with the means necessary to solve problems that emerge from a contemporary complex society.

### RESEARCH UNIT DESCRIPTION

The unit is a neo-materialist research hub, exploring the strategic position of Portugal to interface between Europe, Latin America and Africa. The IJP's mission is to promote scientific research in Legal sciences, adding knowledge and critical understanding of the Law and contemporary society, in all its aspects, whether in action, its relationship with other areas of knowledge - Economics, Politics and Public Policies, Philosophy, International Affairs, Sociology, Medicine, Information Technologies and so forth - or in the way that the various level of jurisdictions (National, European and International) interact, influence and blend in an increasingly global society.

The research unit is structured in 4 thematic research groups. Unlike traditional legal research units, these groups are socially-challenged driven. The Legal Integration in a Global Society group seeks answers for the

challenge of legal integration in a globalized society; the Global Dimensions of Human Rights' group builds on the European tradition, epistemology and methodology to promote global Human Rights research. The Democracy and governance for the 21st century group looks at the challenges of democracy and governance in a digital and globalized world, and the Capital, Labor, Tax and Trade follows the same path.

IJP's Research Groups focus on pressing social issues such as private law, human rights, democracy and governance, as well as the global integration of knowledge in Legal Science. Through an epistemological and methodological rigor that guides its scientific work, the IJP promotes national and international partnerships and stimulates networking as a central strategy to achieve its objectives. In addition, there is also a concern to bring the academy closer to other relevant stakeholders, such as society in general, policy makers and other private and public actors, who will jointly benefit from the results of this teamwork.

# Centre for Research and Innovation in Education

INED

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ined.esse.ipp.pt/">http://ined.esse.ipp.pt/</a> | 2020               |
| RESEARCHERS   | FUNDING FCT        |
| 32  | 0,42 M Euros       |

#### KEYWORDS

- Special education and inclusion
- Culture, art and education
- Society challenges and education
- Teacher education

#### STRATEGIC AIMS

Contribute to the construction, dissemination, and sustainability of declarative, procedural, and situational knowledge in Education Sciences in the areas of: Teacher and Educator Education; Special Education and Inclusion; Culture, Art, and Education; Challenges of Society and Education.

Promote the interface between applied research and professional practice, returning the results of research carried out in international projects and partnerships to local and regional contexts of practice.

#### RESEARCH UNIT DESCRIPTION

The Centre for Research and Innovation in Education (inED) is a research unit of the Porto Polytechnic's School of Education. It assumes education as a central process in human lives, both for individuals and for societies, that implies a multidisciplinary approach, and requires multiple inductive and deductive methodologies.

The underlying epistemological foundation for the Centre's activities has stressed the confluence between the contexts of professional practice and the scientific community, configuring a reciprocal interface between research and practice, ascribing meaning and utility to the research outcomes.

This agenda has gradually produced an expertise that en-

abled many of its researchers to be continuously involved in national and international projects and to participate in research networks. This contributed to a higher visibility of the outputs of their work through an increasing number of high-quality publications and presentations while giving inED's researchers a growing impact in the programmatic orientations, particularly in four areas: teacher education and training; special education and inclusion; culture, art and education; society challenges and education.

# Orient Institute

IO

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ioriente.iscsp.ulisboa.pt/en/">http://ioriente.iscsp.ulisboa.pt/en/</a> | 1989               |
| RESEARCHERS   | FUNDING FCT        |
| 11  | 0,18 M Euros       |

#### KEYWORDS

- Asian studies
- International relations
- Strategy
- Anthropology
- Foreign policy
- Asian-lusophone relations

#### STRATEGIC AIMS

The strategical goals of the OI are: to contribute for the scientific progress on the diverse aspects of contemporary Asia and in a Post-Western World; to keep its benchmark for all who are interested in Asian Studies and the dynamics in the post-western world; to promote links and memoir between lusophone countries and asian countries; to keep the advisory and consultancy services to governmental, public and private institutions.

#### RESEARCH UNIT DESCRIPTION

Founded in 1989, the Orient Institute (IO) is an experienced national research unit specialized on the study of Asian countries. Comprehend Asia in a fast changing reality is a challenge, where IO aims to provide answers. With a multidisciplinary team in Social and Political Sciences and experience on strategical regions of Asia, IO aims to create new bridges for the relations between the Lusophony and Asia.

The unit scopes of research are: Asian-Lusophone Relations East-West Dynamics; Regional integration Dynamics. Those scopes allow increasing synergies and establishing a common strategy in the unit research team, creating also links in the unit's internal and external projects: Asian Press Review (internal); State Building and State Fragility Monitor (internal); Identity Reformulations in the Special

Administrative Region of Macau (internal); -Democratization, Economic lessons and EU accession: what Portugal and Turkey can learn from one another (DEEPT) (internal); CRISEA - Competing Regional Integrations in Southeast Asia (Horizon 2020) (external).

IO also shares different opportunities to work or study in Asia, supports its research team and also supports the scientific initiation of young researchers, developing an internship program on research and science management. In order to deepen ties with society, IO shares its initiatives and projects on its website and social media pages. Due to all above stated mentioned, IO aims to continue to be the national reference for Asian Studies, enhancing scientific production and expanding the frontier of knowledge, building scientific and cultural bridges between Asia and Lusophony.

# Portuguese Institute of International Relations

IPRI-NOVA



|                               |                                    |
|-------------------------------|------------------------------------|
| <b>WEBSITE</b><br>www.ipri.pt | <b>DATE OF FOUNDATION</b><br>2003  |
| <b>RESEARCHERS</b><br>44      | <b>FUNDING FCT</b><br>1,13 M Euros |

#### KEYWORDS

- Globalization
- Europeanization
- Democracy
- Governance

#### STRATEGIC AIMS

As an institute of advanced studies in Political Science and International Relations, IPRI-NOVA is an integrated and structured project in three fundamental axes: scientific research, specialized training and knowledge transfer and social value creation. In the research level, the Institute cultivates excellence, and wants to be identified by the quality of its theoretical research, the relevance of its empirical studies and its commitment to Western values and epistemologies.

#### RESEARCH UNIT DESCRIPTION

It is an Institute that works according to the paradigm of research university, integrating research and teaching and, therefore, where, simultaneously, knowledge is produced in its areas of expertise and is taught in a research environment.

IPRI-NOVA is not a think tank, but assumes social responsibility and public mission in contemporary society, developing applied research, strengthening its relationship with the world of policy and strengthening its presence in the public space. In terms of training, the Institute, in close relationship with the Department of Political Studies of FCSH/NOVA, promotes an advanced training policy that integrates teaching/research. In the area of knowledge transfer and value creation, the Institute assumes its so-

cial responsibility. In addition, the Institute develops its own knowledge dissemination tools: the website, publications, and the quarterly magazine R:I.

# Institute of Sociology of the University of Porto

IS-UP



|  |                                    |
|--|------------------------------------|
| <b>WEBSITE</b><br>http://isociologia.up.pt | <b>DATE OF FOUNDATION</b><br>1989  |
| <b>RESEARCHERS</b><br>37                   | <b>FUNDING FCT</b><br>1,04 M Euros |

#### KEYWORDS

- Social Recompositions
- Culture
- Work and labour market
- Family
- Ageing
- Social economy

#### STRATEGIC AIMS

Focused on fundamental research and on providing socially relevant services, alongside the dissemination of research outcomes, to attract new audiences to scientific knowledge and, particularly, to the sociological approach to reality; IS-UP strategic aim is to scale up and consolidate its capacity to put sociological know-how at the service of communities, their well-being and quality of life, with a specific focus on the North region of Portugal.

#### RESEARCH UNIT DESCRIPTION

IS-UP is a research and development centre dedicated to the promotion of sociological knowledge organised into two Research Groups. The structure of activities of the Group Social Recompositions, Culture and Territory is based on the issues of Social Recompositions and Territories and Artistic Creation, Cultural Policies and Practices; moreover, the activities of the research Group Work, Family and Social Policies involve the fields of Work, Employment, Professions and Organisations and Family, Ageing and Gender. Earmarked with an intensive work programme, in terms of both projects and implementation indicators, the activities of the Research Groups of the Institute of Sociology are developed within the framework of very active national and international research networks. As a scientific infrastructure, IS-UP provides access to so-

ciological information on its Internet website and the website of the Open Repository of the University of Porto and promotes several editorial instruments.

In conjunction with the objectives relating to the promotion of innovative knowledge on sociology, IS-UP is the host institution for PhD projects with grants financed by FCT, as part of several national and international PhD programmes in Sociology and/or other Social Sciences, one of which is the PhD Programme in Sociology of the Faculty of Arts of the University of Porto (FLUP).

## Research Centre for Justice and Governance

JUSGOV



| WEBSITE              | DATE OF FOUNDATION |
|----------------------|--------------------|
| www.jusgov.uminho.pt | 2018               |
| RESEARCHERS          | FUNDING FCT        |
| 58                   | 1, 03 M Euros      |

### KEYWORDS

- Justice
- Governance
- Technology
- Human rights
- European integration and globalization
- Law in portuguese speaking countries

### STRATEGIC AIMS

JusGov main objectives are interdisciplinary basic and applied legal research on the main societal challenges, strong internationalisation strategy, through its participation in international research networks, with partner institutions in Europe, the United States and Latin America, and, in particular, by launching a Lusophone Law Research Network, fostering initiation of young researchers, namely through a School of Researchers and strong publication policy, fostering open access supports.

### RESEARCH UNIT DESCRIPTION

JusGov is dedicated to advancing research and scholarship in Law by pursuing an innovative interdisciplinary research programme, engaging in international research networks, investing in a strong dissemination strategy, providing policy relevant research and legal expertise of interest to governments, practitioners and other stakeholders, and contributing to the scientific initiation and advanced training of early stage researchers.

Taking advantage of its location at the University of Minho, JusGov aims at positioning itself as a research hub for legal studies in Northern Portugal. JusGov seeks to explore the role of legal studies in meeting contemporary societal challenges such as those identified by the UN 2030 Agenda for Sustainable Development, and particularly the

promotion of peaceful and inclusive societies for sustainable development, the achievement of gender equality, the provision of access to justice for all, and the building of effective, accountable, and inclusive institutions at all levels.

Developed by six interconnected groups, its research programme covers basic and applied research to be conducted by an interdisciplinary team of lawyers and non-lawyers (from the fields of Criminology, Sociology, Anthropology, Psychology, and Economics) and frequent collaborations across disciplinary lines (e.g. with Computer Engineering and Health Sciences). In international cooperation it is of relevance the constitution and management of the activities of the Lusophone Law Research Network and on science dissemination activities the school of Investigators activities (e.g., podcast on Law for the general public).

## LABCOM - Communication and Arts

LABCOM



| WEBSITE                      | DATE OF FOUNDATION |
|------------------------------|--------------------|
| http://www.labcom-ifp.ubi.pt | 2002               |
| RESEARCHERS                  | FUNDING FCT        |
| 53                           | 0,98 M Euros       |

### KEYWORDS

- Communication
- Media
- Identity
- Representation
- Intermediality
- Interface

### STRATEGIC AIMS

LabCom's strategic aims are: to study, theoretically and empirically, the multilevel and multiform impacts of communication and new media technologies that drive the contemporary mediatization processes; to analyze the technological mediation of communication in the social, economic, and political domains, with emphasis on the areas of science, journalism, culture, arts, and everyday life; and to study the relationship between art, communication and new media technologies and interfaces.

### RESEARCH UNIT DESCRIPTION

LabCom – Communication and Arts is a research unit in the field of Communication Sciences, created in 2002, at the Faculty of Arts and Letters of the University of Beira Interior. The unit carries out advanced research in communication and new information technologies, with an emphasis on online and digital processes, to assess their impact on everyday life and to understand communication phenomena on an individual, community and societal basis. The unit is organized into two Research Groups that operate in an interdisciplinary way: (1) Communication and Media, which investigates the impact and effects of communication and new information technologies in their multiple forms and levels; and (2) Arts, which works on the relationship between communication and new informa-

tion technologies in the arts, from Fine Arts to Cinema and Design. The two groups include researchers from UBI and other Portuguese universities and polytechnics and carry out their research in close connection with the PhDs in Communication Sciences (2007) and in Media Arts (2017). Since its inception, LabCom has had a strong commitment to online publishing and Open Access, being a pioneer in making its research results available on the web. This commitment led LabCom to create a set of digital infrastructures that brought it international recognition in the field of Communication Sciences, attracting millions of visits and downloads per year, mainly from Portuguese-speaking countries like Brazil.

Some of LabCom notable achievements are the research projects “MediaTrust.Lab” and “Filming and looking at oneself in the mirror”; 7 Open Access academic journals (Studies in Communication; DOC On-Line; EIKON; Comunicando; Studies in Journalism; Rhêtorikê; and Recensio); the Publisher LabComBooks, with 3 collections and about 250 published volumes; and the BOCC – Online Library of Communication Sciences, and 3 databases in the areas of Image and Cinema.



## Distance Education and Elearning Laboratory

LE@D



### WEBSITE

<http://lead.uab.pt/>

### RESEARCHERS

18

### FUNDING FCT

0, 22 M Euros

### KEYWORDS

- Elearning
- Distance education
- Open education
- Digital culture
- Digital assessment
- Educational leadership

### STRATEGIC AIMS

The Distance Education and Elearning Laboratory (LE@D) is a R&D unit devoted to interdisciplinary and multidisciplinary research in the area of Social Sciences, namely in Education, integrating researchers from several fields. The unit assumes the leadership of research in those domains, developing innovative and strategic projects and contributing to the debate and reflection on Open and Distance Education and ELearning.

### RESEARCH UNIT DESCRIPTION

The Distance Education and Elearning Laboratory (LE@D) is a R&D unit devoted to develop research in Education, contributing to the following research topics: Open and Distance Education and Elearning (models, trends, and impacts in the networked society); Cyberculture and Networked Society (social, cultural and educational dimensions).

The goals of LE@D are: To deepen research in (1) Open Education, in pedagogical scenarios, in the scope of Distance Education and Elearning Models and Practices, in the perspective of digital inclusion; in attrition and drop-out factors in online education; in elearning models suited to different cultural, sociological and economic contexts; in Assessment in Elearning Contexts; in Educational Supervision and Leadership, in the curriculum, educational

policies and practices of teachers, (2) To participate in international projects and networks, celebrate protocols of collaboration with other national entities in order to deepen the role of the Virtual Observatory on Pedagogic Supervision and Self-Assessment of Schools; (3) To collaborate in the redesign of the current doctoral programs; (4) To organize new editions of the national meetings of Elearning Units and Institutions in Portugal, of the Luso-Brazilian Colloquium on Distance Education and Elearning, of the MyMPEL Conference on Elearning Pedagogy, and a European event with universities in Spain, to establish partnerships for a Ibero-American network in the field of open and free knowledge, the annual conference on Elearning Pedagogy; ensure the publication of the Journal of Distance Education and Elearning (RE@D), an online, open-access journal; increase the publication of the results of the unit's research in open access journals of international impact.

## Research Unit in Business Sciences

NECE



### WEBSITE

<https://www.ubi.pt/entidade/NECE>

### RESEARCHERS

32

### FUNDING FCT

0, 64 M Euros

### KEYWORDS

- Management
- Business
- Economics

### STRATEGIC AIMS

The NECE mission is to catalyse and drive pioneering research in the Business & Economics sciences integrating knowledge and methods from across these complementary fields. NECE strategic challenge involves increasing its scientific research outputs in order to take up an international positioning as a recognised R&D unit in the business sciences field.

### RESEARCH UNIT DESCRIPTION

NECE Research Unit is a Management and Economics Department research centre at the University of Beira Interior (UBI). The NECE mission is to catalyse and drive pioneering research in the Business & Economics sciences integrating knowledge and methods from across these complementary fields. The RU undertakes research across a wide variety of different contexts. As a research unit, NECE is committed to its focus on the interface between the business and economics world and the optimisation of excellent research. NECE contributes to advanced scientific knowledge within its fields of expertise by interconnecting scholars from different areas who deploy their knowledge and methods to attain a common understanding of the under analysed issues.

NECE provides its members with the infrastructural conditions for research through supporting the acquisition

of specialized software packages, corporate, energy and macroeconomic databases and gives financial support for presentation of their on-going work in renowned scientific conferences. Although the research interests of NECE members span different themes, it is organised in three research groups: i) Entrepreneurship, Competitiveness and Innovation (EC&I); ii) Organisational Management (OM); and iii) Economics and Finance (E&F). NECE's members are engaged in international networks either through the participation in prestigious international conferences and training and integrating research associations or by signing bilateral agreements or institutional protocols.

## Centre for Research in Economics and Management

NIPE

**WEBSITE**

www.nipe.eeg.uminho.pt

**DATE OF FOUNDATION**

1999

**RESEARCHERS**

33

**FUNDING FCT**

1,04 M Euros

**KEYWORDS**

- Macroeconomics
- Industrial and Labour Economics
- Public and Regional Economics
- Management and Finance

**STRATEGIC AIMS**

NIPE's main objective is to foster scientific progress in Economics and Business Sciences through publications in scientific journals of international standing. The unit is also intended to disseminate its research findings to the academic community and broader society.

NIPE also aims to contribute, through consultancy, to the adoption of economic policy measures based on rigorous scientific analysis of the Portuguese and European economies.

**RESEARCH UNIT DESCRIPTION**

Founded in 1999, the Centre for Research in Economics and Management (NIPE) is a sub-unit of the School of Economics and Management of the University of Minho. Initially, a small research centre with a more specialized profile in Macroeconomics and Economic Policy, the membership growth broadened its interests to other areas of Economics and, later, to Finance and Management. In the latest evaluation of the R&D Units carried out by the FCT, NIPE obtained the classification of Very Good.

NIPE's mission is to produce and disseminate innovative, impactful, and rigorous research in economics and business studies that is of relevance to academia, organisations, and society. We also shape and inform policy and contribute to orienting our scholarly field towards the eco-

nomical, social, and environmental challenges of the future. NIPE is an internationally oriented research centre. A large number of its members are engaged in international research collaborations. The seminar series involves researchers and speakers from many foreign universities. Every year, NIPE organizes several events and a very successful Summer School, which has global reach. NIPE is a leading research centre on the Portuguese economy. Its members are involved in several research projects that analyse various aspects of the Portuguese economy and which have resulted in many international publications and extensive media coverage.

## Nova School of Business and Economics

NOVA SBE

**WEBSITE**

http://www.novasbe.unl.pt/faculty-research/research-unit

**RESEARCHERS**

73

**FUNDING FCT**

1,82 M Euros

**KEYWORDS**

- Economics
- Management
- Finance

**STRATEGIC AIMS**

Nova SBE aims to further develop excellence, knowledge dissemination and societal impact of research with international recognition.

Invaluable assets are at the core of our goals: first-rate facilities, a new stage of international affirmation after securing every major international accreditation, and an increasingly international composition of its community. The School's strategic plan shows the determination to keep research at the core of its mission.

**RESEARCH UNIT DESCRIPTION**

Nova SBE's mission is to build a global school dedicated to the development of talent and knowledge that produces impact across society. It aims to achieve this mission via international recognition, the increasingly international composition of students and faculty, and the new campus. The Carcavelos campus is a cornerstone for the dynamics of progress supporting the School's ambition: attracting high-quality students and faculty producing impactful research; enhancing corporate and institutional partnerships; fundraising for investing in academic quality; and improving international visibility.

From its creation Nova SBE adopted a research-oriented philosophy and a meritocratic academic career structure, with a promotion system based on the rules that prevail in

research-oriented schools around the world. The combination of intangible and tangible factors creates a diverse and vibrant research culture, as well as a collaborative and supportive environment in a Unit that has been consistently evaluated as Excellent by international panels. Cross-disciplinary orientation reflects the identity of the Unit. Despite the research diversity, Nova SBE joins its researchers into a single unit, recognizing the variety of research that takes place in an economics and business school. This organization favors cross-fertilization between areas but maintains the Unit at a conveniently manageable size.

## Research in Economics and Mathematics

REM

**WEBSITE**

<https://rem.rc.iseg.ulisboa.pt/>

**DATE OF FOUNDATION**

2017

**RESEARCHERS**

70

**FUNDING FCT**

1, 34 M Euros

**KEYWORDS**

- Macroeconomics
- Econometrics
- Microeconomics
- Applied Mathematics
- Statistics and actuarial modeling

**STRATEGIC AIMS**

REM's overarching goal is the promotion of realistic and yet mathematically rigorous economic models to the understanding of key policy questions facing the Portuguese Economy, the economic integration of Europe, and the global economy at large. REM produces original research in Economics and Mathematics, both theoretical and applied, taking a multidisciplinary stance at complex problems in economies and societies.

**RESEARCH UNIT DESCRIPTION**

REM - Research in Economics and Mathematics is a research consortium hosted by ISEG, the School of Economics and Management of Universidade de Lisboa. The consortium was formed in 2017 by bringing together two research centres: Mathematics Applied to Forecasting and Economic Decision (CEMAPRE) and Research Unit on Complexity and Economics (UECE).

The consortium encompasses several areas of research covering economics, mathematics and finance, behavioural and political economy. The research produced is a useful instrument for the formulation and the critical analysis of public policy, also in connection with industry stakeholders. Moreover, REM bears strong cooperation ties with governmental institutions, Central Banks (notably Banco de Portugal), and international organisations (IMF, OECD,

and ECB), and regulators to drive an updated agenda of research into economic and societal challenges.

REM's researchers are organized into six groups: Econometrics; Mathematical Analysis and Computational Finance; Macroeconomics; Mathematics of Complex Systems; Microeconomics; and Statistics and Actuarial Science.

## Research on Economics, Management and Information Technologies

REMIT

**WEBSITE**

<http://remit.upt.pt/>

**DATE OF FOUNDATION**

2017

**RESEARCHERS**

27

**FUNDING FCT**

512000 Euros

**KEYWORDS**

- Innovation and creativity
- Strategy and business models
- Decision support systems
- Territorial development
- Finance and Accounting
- Economic, social and organizational change

**STRATEGIC AIMS**

REMIT aims to produce theoretical and applied knowledge that enables a greater understanding of the current economic, business, technological and territorial dynamics and trends and its socio-economic effects, contributing to the design, implementation and evaluation of organizational strategies and public policies.

**RESEARCH UNIT DESCRIPTION**

REMIT is an interdisciplinary research unit that aims to address societal challenges with a holistic approach, mobilizing several science domains: Economics, Management, Finance, Tourism, Heritage, Engineering, Information Technologies and Systems, Mathematics and Statistics. It was funded in January 2017 under the Universidade Portucalense (UPT) new research policy and integrates UPT's faculty from 3 departments - Economics, Management; Science and Technology; and Tourism, Heritage and Culture - as well as researchers from other national and foreign higher education institutions.

It seeks to reconcile the production of advanced scientific knowledge with: i) the understanding of local, regional, national and international realities and its application in solving specific problems; ii) activities oriented towards professional practice in businesses. It allies strong theoretical basis, methodological rigor and the production of

valuable knowledge for a set of stakeholders: companies, public entities, social sector actors and the civil society. It is also engaged with the provision of services, namely consultancy, to those stakeholders.

It has a PhD program on Business Sciences and supports 7 master programs: Management; Marketing and Digital Business; Informatics; Cultural Heritage and Territorial Development; Tourism and Hospitality; and Artistic Heritage, Conservation and Restoration.

The center is structured around 5 groups: 1) Innovation, Entrepreneurship and Economic Dynamics; 2) Strategy and Competitiveness; 3) Territory and Development; 4) Finance and Accounting; 5) Data Analysis and Decision Support Systems. The center's organizational structure is flexible.

## Education and Training Research and Development Unit

UIDEF

### WEBSITE

<http://www.ie.ulisboa.pt/investigacao>

### RESEARCHERS

68

### FUNDING FCT

1,26 M Euros

### KEYWORDS

- Education and Training Policies
- Teacher Education
- Curriculum
- Didactics

### STRATEGIC AIMS

UIDEF, is the organizational structure for research in education of Universidade de Lisboa. Its overriding purpose is to yield a multidimensional understanding of educational organizations, processes and actors, diagnosing problems and needs, and to provide relevant inputs for a knowledge-based transformation of education systems and practices.

### RESEARCH UNIT DESCRIPTION

UIDEF is based at the Instituto de Educação includes a significant number of members from other higher-education schools, from other faculties of ULisboa and from elsewhere. Research within UIDEF is organized in three research groups in close relationship to the PhD programs offered at Instituto de Educação: i) Policies of Education and Training, ii) Curriculum, Teacher Education and Technology, and iii) Didactics. This disciplinary-based organization combines with two thematic-based strands: 1) Education XXI, addressing the diversification, modernization and improvement of education; and 2) Change Forces, addressing the processes of change in education, focusing on the coordination, steering and monitoring of change in education systems.

This matrix organization allows UIDEF to better face the complexity of present problems, trends and prospects in

education and training, which require multi-, inter- and transdisciplinary approaches, as well as to strengthen the quality of research, based on a more selective focus of its main contributions. UIDEF aims to publish its results in well-recognized international and national peer review journals and in other relevant scientific publications, to inform and impact public policy, to support and collaborate with practitioners and decision makers, and to develop the research competence of its members and train new generations of researchers.

## Applied Management Research Unit

UNIAG



### WEBSITE

<http://uniag.ipb.pt/>

### DATE OF FOUNDATION

2013

### RESEARCHERS

14

### FUNDING FCT

0, 43 M Euros

### KEYWORDS

- Management
- Regional and Cross-border Development
- Tourism
- Innovation and Entrepreneurship
- Information and Communication Technologies

### STRATEGIC AIMS

The main strategic objectives of the UNIAG are assumed as a reference and alignment matrix with the core of key activities of the R&D Unit. UNIAG, following its responsibilities and competencies, has established the following three main strategic objectives: To intensify the transfer of value-added knowledge to the scientific community; To increase levels of internationalisation; To promote knowledge transfer and innovation to the community.

### RESEARCH UNIT DESCRIPTION

The Applied Management Research Unit (UNIAG) is a Portuguese research unit created in 2013 by a group of researchers from 4 Polytechnic Institutes (Polytechnics of Bragança, Cávado e do Ave, Porto and Viana do Castelo). UNIAG is recognised by the Fundação para a Ciência e a Tecnologia. At the present.

UNIAG is a multidisciplinary R&D unit that combines different scientific areas of expertise. Its mission is to promote and develop applied scientific research, with a focus on tourism, management, regional development, social and corporate sustainability, entrepreneurship, corporate governance and information and communication technologies, in a transversal and multidisciplinary framework. It has been looking to establish a strong bridge between theory and practice, as well as to transfer knowledge to the

broader community. UNIAG's vision is based on consolidating itself at a national and international level as an R&D unit of reference in its area of intervention and on promoting recognition among similar R&D units.

Through a culture embedded in cooperation, responsibility, demand and quality, UNIAG's strategy is based on the following two pillars: (i) Excellence in research; (ii) Engagement with society.



## Business Research Unit

UNIDE

**bru** \_iscte  
Business Research Unit

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://bru-unide.iscte-iul.pt/">http://bru-unide.iscte-iul.pt/</a> | 1994               |

| RESEARCHERS | FUNDING FCT   |
|-------------|---------------|
| 58          | 1234600 Euros |

### KEYWORDS

- Management
- Economics
- Finance
- Business
- Marketing
- Data Analytics

### STRATEGIC AIMS

BRU-Iscte main goal is to establish itself as a leading research center in business and economics scientific areas, both in Portugal and in Europe, via 3 interweaving pillars: Engaging with Society - developing solutions for specific for corporate and societal challenges; excellence in Research - improving sound research in core Business areas that further advances the international scientific literature; world-class Doctoral Programs - attracting promising national and international candidates.

### RESEARCH UNIT DESCRIPTION

Business Research Unit (BRU-Iscte) is a multidisciplinary research center of the ISCTE – University Institute of Lisbon, whose scope spans various Business areas, including Management, Data Analytics, Organizational Behaviour and Human Resources, Economics, Finance, Accounting, Operations and Marketing. Researchers are mainly faculty from the ISCTE Business School (IBS), accredited by AMBA and AACSB, and ranked in the Financial Times European Business Schools ranking, as well as in the Times Higher Education ranking.

At present, BRU-Iscte is organised in 6 Research Groups: Accounting; Data Analytics; Economics; Finance; Marketing and Management and organizational Behaviour and Human Resources.

BRU-Iscte runs 4 accredited doctoral programmes, totally taught in English, enrolling on average 80 students annually of several nationalities: Economics; Finance; Management with 6 Specializations and Doctor of Business Administration (DBA), partly in collaboration with Chinese Universities.

BRU-Iscte is committed to promoting and contributing to the United Nations' Sustainable Development Goals (SDGs), by building on its interdisciplinary potential to explore research trends related to SDGs and invest in transversal SDG-based research across its research groups.

## William James Center for Research

WJCR

**WJCR** WILLIAM JAMES  
CENTER FOR RESEARCH

| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://wjcr.ispa.pt/">http://wjcr.ispa.pt/</a> | 2014               |

| RESEARCHERS | FUNDING FCT   |
|-------------|---------------|
| 28          | 0, 91 M Euros |

### KEYWORDS

- Cognition
- Social
- Development
- Olfaction
- Health

### STRATEGIC AIMS

The WJCR has the following operational objectives: aspire toward ground-breaking research and its applications; integrate with researchers in other Portuguese universities and expand expertise in psychological science; interface fundamental research and its applications and maintain a highly visible presence in the scientific community and the public eye.

### RESEARCH UNIT DESCRIPTION

The William James Center for Research (WJCR) brings together cutting-edge research from Ispa– Instituto Universitário and the University of Aveiro.

The WJCR aims at becoming a center of excellence for research and training in 4 interrelated clusters: cognition, health, social cognition and body odors, and social development. Research conducted at the WJCR focuses on communication and sociality, that is, on how cognitive, affective, and developmental structures adapt to situational demands imposed by a dynamic social and physical environment.

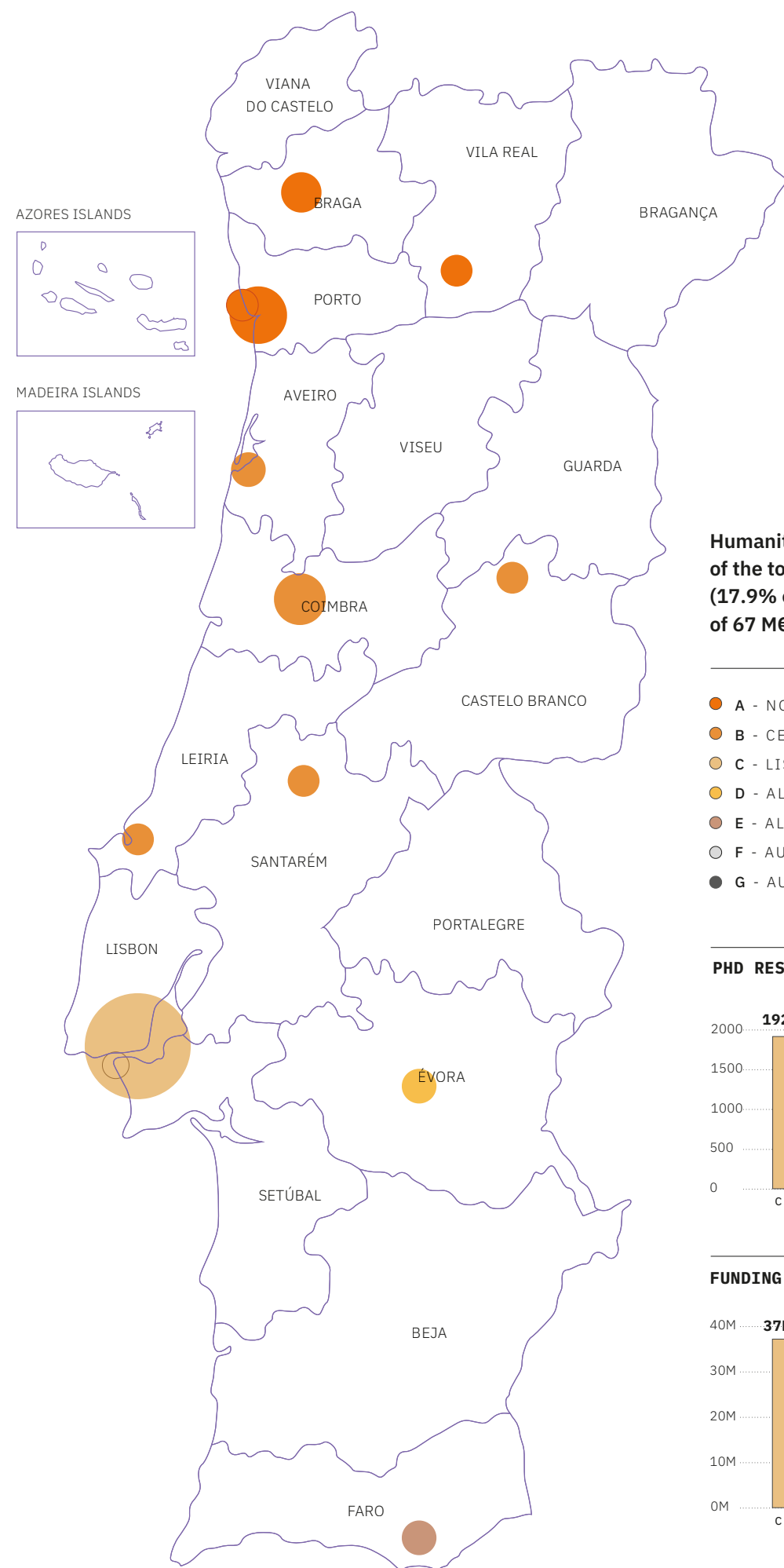
A further focus is placed on Translational Psychology, reflecting thus the contributes of psychological research to a practical approach targeting the promotion and maintenance of health and well-being. The WJCR promotes research collaborations with other research centers and

regularly hosts foreign researchers as well as renowned international scholars for open lectures and workshops. Researchers maintain a highly visible presence in the scientific community and the public eye by communicating their research outputs in the media and science forums.

The WJCR has two labs with state-of-the-art research facilities and equipment, and hosts research programmes that stimulate research skills of students in early stages of their educational path by promoting their integration in WJCR projects and in research activities. The WJCR is publicly funded by FCT and was rated as Excellent in the last Multi-Year Funding Program for R&D Units.

# Humanities 5.2.6

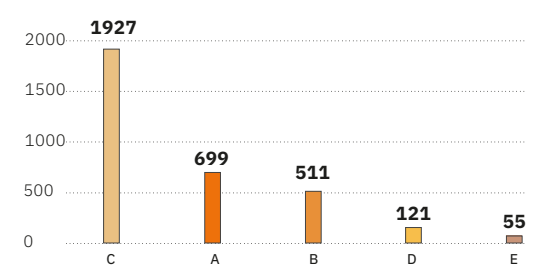
- |              |            |           |               |
|--------------|------------|-----------|---------------|
| ARTIS-IHA    | CET        | CITUA     | IHA/FCSH/NOVA |
| CEAA         | CETAPS     | CIUHCT    | IHC           |
| CEAACP       | CFCUL      | CLEPUL    | ILC           |
| CEAU         | CFUL       | CLLC      | INET-MD       |
| CEAUL/ULICES | CHAIA      | CLP       | LAB2PT        |
| CEAUP        | CHAM       | CLUL      | LIDA          |
| CEC          | CHSC       | CLUNL     | PRAXIS        |
| CECC         | CH-ULISBOA | CLUP      | TECHN&ART     |
| CEC-FLUL     | CIAC       | ESAD-IDEA | UNIARQ        |
| CECH/FL/UC   | CIAUD      | I2ADS     | UNIDCOM/IADE  |
| CEFH         | CIDEHUS.UÉ | ICAREHB   | VICARTE       |
| CEHUM        | CIEBA      | ID+       |               |
| CEIS20       | CIEC       | IEF       |               |
| CEL          | CITAD      | IELT      |               |
| CELGA-ILTEC  | CITAR      | IEM       |               |
| CEPS         | CITCEM     | IF        |               |
| CESEM        | CITTA      | IFILNOVA  |               |



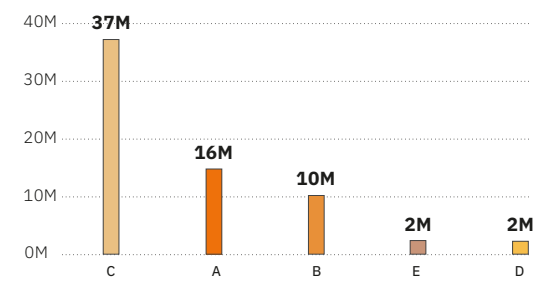
Humanities include 62 R&D Units (19.9% of the total) integrating 3313 researchers (17.9% of the total) and with a FCT funding of 67 M€ (2020-2023).

- A - NORTHERN
- B - CENTRAL
- C - LISBON METROPOLITAN AREA
- D - ALENTEJO
- E - ALGARVE
- F - AUTONOMOUS REGION OF AZORES
- G - AUTONOMOUS REGION OF MADEIRA

PHD RESEARCHERS



FUNDING (M€)



Humanities

## Institute of Art History, School of Arts and Humanities, University of Lisbon

ARTIS-IHA



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.artis.letras.ulisboa.pt">http://www.artis.letras.ulisboa.pt</a> | 2009                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 24                 | 0,32 M Euros       |

### KEYWORDS

- History of Art
- Heritage
- Decorative Arts
- Architecture
- Painting
- Tiles

Today, ARTIS-IHA is a privileged research unit within the field of Art History. It hosts the Az Infinitum, the only existing Portuguese indexation system focused on azulejos, along with a new tool for studying art collections - ORION. The unit is hereby able to provide its researchers and students with useful methodological tools for organizing and improving their work, as well as sharing its results in open access. Its strategic development plan for the coming years is structured according to 3 main axes, based on the principles of open access through the creation of scientific networks, which enhance the social responsibility that has always been favoured by the unit, representing a source of development and an opportunity for innovation.

ARTIS-IHA main achievements include: the creation of Az Infinitum, an azulejo indexation system; the creation and development of the ORION Collections and Art Collectors database in Portugal; the open access and indexed (DOAJ, ERIH PLUS, CROSSREF, LATINDEX) electronic journal, ARTISON; the ARTIS journal, published on paper and aimed at disseminating Art History in society at large.

### STRATEGIC AIMS

ARTIS-IHA main strategic aims are: to conduct research on art collections and market agents, with the aid of the ORION platform, which gathers data concerning Portuguese art collectors and collections in the 19th and 20th centuries; to consolidate the investment in the documentation and study of azulejos, through Az Infinitum - Azulejo Indexation and Referencing System; to contribute to the national focus on the study of Late Gothic and Renaissance Art, through the coordination of an international research network.

### RESEARCH UNIT DESCRIPTION

The ARTIS - Institute of Art History is an R&D unit whose main scientific domain is Art History, understood as an autonomous subject, albeit open to articulation with other areas of knowledge. This field is conceived as a vast area of expertise focused on the study of artistic works and Heritage throughout history, and on the retrieval of their accumulated memories and aesthetic meanings. Through the development of basic and applied research in the domain of Art History, in articulation with other fields of knowledge directly related to its methodology and praxis, ARTIS-IHA covers a variety of working areas, also expressed by the diverse interests of the team's integrated researchers and the many partners with which it collaborates.

## Arnaldo Araújo Research Center

CEAA



|  |                           |
|--|---------------------------|
| <b>WEBSITE</b>                               | <b>DATE OF FOUNDATION</b> |
| <a href="http://www.ceaa.pt">www.ceaa.pt</a> | 2007                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 17                 | 0,35 M Euros       |

### KEYWORDS

- Architecture
- Cinema
- Contemporary Art
- Theory, Criticism, History

### STRATEGIC AIMS

The strategy defined by CEAA encompasses the development of new conceptual and epistemological approaches, the enlargement of the research team, the promotion of scientific employment, and the expansion of national and international scientific networks. It also intends to reinforce internationalization, to foster the interaction with the civil society and the open access and publishing policies, as well as to strengthen the interplay between artistic practices and scientific research.

### RESEARCH UNIT DESCRIPTION

CEAA is a R&D unit hosted by Escola Superior Artística do Porto, which develops research work in the area of Art Studies. Established as part of ESAP's internal structure, in 2007 CEAA became a fully acknowledged unit, funded by the Portuguese Foundation for Science and Technology. It is currently organized in 3 research groups (Architectural Studies, Film Studies, and Art and Critical Studies) and one interdisciplinary research line (Common Place).

Architectural Studies research group is based on the perspective that theory, criticism, history and practice are interrelated fields of knowledge, developing both basic and applied research in the field of Architecture. It is centered on 3 axes: Architecture, Territory, Landscape; Strong relations; and Dramatic Architectures.

Film Studies research group develops research activities in the context of film history, theory and criticism, mainly focused on Portuguese cinema and the way whereby its singularity actively participates in some of the major paradigm shifts of contemporary cinema.

Art and Critical Studies research group conducts research on contemporary art practices, with special focus on visual arts and in its intersections with other epistemological fields. To optimize dialogue between researchers, critics, curators, artists and structures in the art field, to promote theoretical-critical production, applied research and exhibition practice are amongst the objectives to be given privilege.

CEAA notable achievements include: a strong connection with the community, namely through curatorial and performative practices; successful outputs in competitive funded projects both at a regional, national, and international scale; boosting new research areas and methodologies, and exploring cross-disciplinary readings.

## Center for Studies in Archeology, Arts and Heritage

CEAACP

**WEBSITE**  
http://ceaacp.uc.pt

**DATE OF FOUNDATION**  
1993

**RESEARCHERS**  
39

**FUNDING FCT**  
0,89 M Euros

### KEYWORDS

- Archaeology
- Arts
- Arquitecture
- Historical Urban Landscapes
- Archeogeography
- Cultural Heritage

### STRATEGIC AIMS

CEAACP main strategic goals are: the promotion of inclusive and creative societies; to stimulate research on the past founded on Archeology, Art History, Architecture and Archeogeography; to value and promote heritage as a lever to achieve qualified and sustainable development. 'Landscapes' and 'Contacts' are the keywords that blend and associate the investigation of the crosscutting thematic areas that the U&D privileges in this strategic project.

### RESEARCH UNIT DESCRIPTION

CEAACP is an interinstitutional body of research that brings together units at the University of Coimbra and Algarve and the Mértola Archaeological Camp, joined by a unique board of PhD researchers from several institutions, providing the Unit with a supraregional scale of representation and performance, working on Archaeology, Arts, Architecture and Heritage.

CEAACP is structured in 3 Management Unities (MA): UC, CAM e UAlg. These MA present a solidarity dynamics between them while UC is the main unity. Each MA allows the organization of researchers, caring of their institutional and research affairs. After the implementation of a Restructuring Program in 2016, CEAACP's was able to test the dynamics of its interinstitutional organization and to accurate its scientific strategy, within which a strong lab-

oratory component has been promoted, namely the use and application of new technologies in the acquisition, curation, analysis, and dissemination of data; and the advanced training and the attraction of young researchers to national and international doctoral programs. This also enabled CEAACP to tune the mechanisms and the conditions to the accomplishment of interdisciplinary activities and assured the pertinence and the reinforcement of CEAACP's mission, both from a national and international perspective. CEAACP's activities have a national and international impact, contributing to the dialogue between local and supra-local communities and promoting heritage as a spillover of knowledge, socio-economic development and cultural dialogue.

CEAACP main achievements include: Mértolas's Archaeological Camp, which contributed to the creation of 14 museums located both in the city and the hinterland; the conservation plan, Archaeology of the cities of Beja; or the project Loulé's Islamic baths, that revealed a bath complex from Hamman period and its evolution trough time.

## Centre for Studies in Architecture and Urbanism

CEAU

**WEBSITE**  
www.ceau.arq.up.pt

**DATE OF FOUNDATION**  
1994

**RESEARCHERS**  
72

**FUNDING FCT**  
1,17 M Euros

### KEYWORDS

- Architecture
- Urbanism
- Construction
- History
- Architectural Design
- Drawing

### STRATEGIC AIMS

The center aims to promote artistic, scientific, technological and interdisciplinary research (in close relationship with Art, Engineering, Geography, History, Philosophy and Social and Human Sciences) in the fields of architecture, construction, design, urban planning and related areas from an integrated vision of the discipline in close relationship with the didactics and project practices of architecture and urban planning of the School of Porto.

### RESEARCH UNIT DESCRIPTION

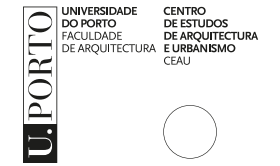
The center is based at the Faculty of Architecture of the University of Porto (FAUP) in its own premises designed for the development of advanced research activities in the area of architecture and urban planning. It has studio-rooms for the research groups and their ongoing projects, as well as for integrating individual researchers who develop research actions in close correlation with the center's activity.

Although the original field of research of the CEAU is Architecture and Urbanism, the center integrates and receives researchers from several other disciplines, namely, Anthropology, Archaeology, Economy, Engineering, Geography, History and Sociology.

The center is structured in eight research groups with the following themes: Architecture: Theory, Project, History

(ATPH); Architecture and Habitation Modes (AMH); Atlas of the House (AdC); Art, Architecture and Image (AAI); Digital Fabrication Laboratory (DFL); Morphologies and Dynamics of the Territory (MDT); Heritage of Architecture, the City and the Territory (PACT); Theory and Project Practices (T2P).

Some of CEAU recent main achievements are: Silent Rupture, a research project on Intersections between Architecture and Cinema; Mapping Public Housing, a research project on Public housing programs and their spatial concretizations; Visual Spaces of Change, a transdisciplinary research project around Contemporary Photography; Keeping It Modern, a research project around the restoration and rehabilitation project of Álvaro Siza's Tidal Pool, funded by a Getty Foundation Conservation Grant; and NEB goes South, a european network of schools of architecture with the aim of co-creating a pole in the New European Bauhaus space.





## University of Lisbon Centre for English Studies

CEAUL/ULICES



|                              |                           |
|------------------------------|---------------------------|
| <b>WEBSITE</b>               | <b>DATE OF FOUNDATION</b> |
| www.ulices.letras.ulisboa.pt | 1982                      |
| <b>RESEARCHERS</b>           | <b>FUNDING FCT</b>        |
| 52                           | 1,00 M Euros              |

### KEYWORDS

- English
- Language
- Literature
- Culture
- Translation

### STRATEGIC AIMS

CEAUL/ULICES strategic aims are: to develop existing and launch exploratory projects; to increase high impact publication; to expand (inter)national partnerships and networks; to encourage young researchers, providing supervision, financial support, and a nurturing environment for innovation; to increment applied research and inclusive activities with high societal impact; to foster a competitive research profile in international academia and contribute towards a Portuguese voice in English Studies.

### RESEARCH UNIT DESCRIPTION

CEAUL/ULICES focuses on the multidisciplinary study of English and the English-speaking world. It explores this vast area of research mindful of its intersection with the Portuguese speaking world, thus seeking to foster informed cross-cultural understandings. As a Humanities R&D unit, ULICES is aware of the challenges currently facing Europe and the world in general, and its research aims to actively contribute to more positive and inclusive communities.

ULICES hosts researchers specialising in literature, culture, linguistics, translation, reception and inter-art studies, among others). It is intent in furthering traditional fields of research, such as medieval studies, as part of English Studies legacy, while developing groundbreaking

topics.

It adopts varied theoretical and methodological approaches and develops both fundamental and applied research with a social impact in areas that call for hermeneutical practices in which interpersonal/intercultural relationships are crucial (e. g. diaspora and post-colonial studies, creative cultures, and medical humanities the unit has six research groups (RGs) engaged in individual and collective projects: RG1. English Studies. Literature; RG2. English Studies. Culture; RG3. American Studies; RG4. Other Literatures and Cultures in English; RG5. Linguistics. Language, Culture, Society; RG6. Reception and Translation Studies. Some of CEAUL/ULICES recent main achievements are: Narrative&Medicine (2009-), a multidisciplinary team project (literature, medicine, philosophy, sociology, etc) that explores intersections between Humanities and Medicine; two open-access peer-reviewed journals: Anglo Saxonica (2019-2021); Messengers from the Stars (2016-); and the Creative Cultures: Cities, Trends, Strategies project, that operates as a plural network of academia and creative economy entities aiming to increase the transferability of knowledge about urban creativity generated in an academic environment, and to provide clues to innovation, thus contributing to the sustainable development of the creative economy.

## Centre of African Studies of the University of Porto

CEAUP



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| www.africanos.eu   | 1997                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 11                 | 0,17 M Euros              |

### KEYWORDS

- African Studies
- Labor History
- Internacional Relations
- Archaeology of Africa
- Tropical Geography
- Educational Studies

### STRATEGIC AIMS

The consolidation of international research networks is a priority for the implementation of all CEAUP projects. CEAUP intends to produce milestone outputs in the following research projects: Geo-spatial Information for Development and Heritage Conservation in South-West; Surveying for Conservation of the Western Sahara Cultural and Natural Heritage; and African Trade Unionism, which includes two special issues of the *Africana Studia* on African Political Parties and Africa and the ODS, and the publication of critical editions of historical sources of Southern Angola.

### RESEARCH UNIT DESCRIPTION

CEAUP is one of the earlier R&D Units for African Societies in Portugal (since 1998). It is a multidisciplinary Unit that includes researchers from Europe, Africa and Brazil. CEAUP develops key interdisciplinary activities on area studies engaging different donors (e.g. ERC, FCT, IPAD). Since 2006 CEAUP is committed to a methodology of action research and has been focused on the following interdisciplinary fields: African Labour; African Politics; Archaeological projects in Africa; Education, Development and Global Citizenship in Africa.

CEAUP has worked as a hub for dissemination of research outputs within its scientific networks along Europe, Africa

and Brazil.

CEAUP main achievements include the interdisciplinary journal *Africana Studia*, and the monographs series *Estudos Africanos*, *Experiencias de África*, and *CEAUP Series on Africa*, published by Peter Lang.

## Centre for Comparative Studies

CEC



| WEBSITE                   | DATE OF FOUNDATION |
|---------------------------|--------------------|
| www.cec.letras.ulisboa.pt | 1999               |
| RESEARCHERS               | FUNDING FCT        |
| 62                        | 1,18 M Euros       |

### KEYWORDS

- Comparatism
- Culture
- Literature
- (Inter)Art Studies

### STRATEGIC AIMS

CEComp's objectives and strategies are based on a reflective notion of Comparative Studies, to be experimented and scrutinized, in its multifarious aspects, within the overarching area of the Humanities in dialogue with the Arts and the Social Sciences. Our version of Comparatism is open to all types of cultural texts, relying on interdisciplinary methods of enquiry to account for the relations between the artistic, the cultural and the social.

### RESEARCH UNIT DESCRIPTION

The Centre for Comparative Studies (CEComp) is a scientific unit of the School of Arts and Humanities, University of Lisbon. Its activities encompass the comparative analysis of literatures, arts and cultures, using interdisciplinary methodologies and highly theorised approaches.

CEComp's scientific identity is strongly grounded in the fields pertaining to Comparatism within the Humanities (Culture Studies, Literary and Artistic/Interart Studies, in dialogue with the Social Sciences). Spatial questions and approaches articulating these with the aesthetic and cultural dimensions of time, history and memory are common to all groups, notwithstanding the variety of approaches and methodological procedures adopted.

CEComp promotes the necessary discussion about the epistemological challenges raised by Comparatism, con-

tinually refocusing the reflection on this field of knowledge. The comparatist practice, situated at an interdisciplinary and interdiscursive focal point, depends on that inward gaze that is the first condition of its possibility. One of the most consolidated features of CEComp is its high-standard international profile in terms of its members and partnerships, attracting a large number of foreign PhD students and postdoctoral researchers, and fostering a significant number of international networks and doctoral schools.

CEComp main recent achievements include: publication of several special issues of international peer-reviewed journals and book contributions for presses of worldwide standing; the last two volumes of the three-part World Literature in Portuguese series; and the promotion and execution of a European-level exhibition on heritage and cultural spaces in Lisbon's Museu Nacional de Etnologia.

## Research Centre for Communication and Culture

CECC



| WEBSITE                           | DATE OF FOUNDATION |
|-----------------------------------|--------------------|
| http://cecc.fch.lisboa.ucp.pt/en/ | 2007               |
| RESEARCHERS                       | FUNDING FCT        |
| 57                                | 1,48 M Euros       |

### KEYWORDS

- Memory
- Mediation
- Narrative
- Translatability
- Literacy
- Conflict

### STRATEGIC AIMS

CECC strategic goals are: to foster high level research, comprehensive internationalization and robust outputs resulting from (inter)national cooperation; to promote recruiting strategies to crossbreed CECC's research with innovative proposals impacting on PhD programs in Culture, Translation and Communication; to further structured internal communication within/across research groups to monitor research relevance and quality; to carry on cooperation with non-academic partners to boost dissemination and outreach.

### RESEARCH UNIT DESCRIPTION

CECC is a global humanities research center, responding to the transdisciplinary challenges brought about by globalization, media change and the growing awareness of the role of culture in the 21st century. Its core mission is the study of culture, the arts and communication as drivers of societal change and the promotion of advanced research training centered on innovative cross-disciplinary challenge-based inquiry. CECC's interest focuses both on old and emerging discursive practices underpinning the strategies of meaning constitution, where the virtual meets the physical and redesigns the very idea of the human.

Aimed at unpacking present-day change and its impact on the circulation of intellectual energies across the globe in

late modernity, CECC organizes its research in two complementary tracks: under the perspective of Digital Humanities, CECC reflects on the impact of technological and digital change on cultural development and the central role of media in the construction of cultural narratives; under the heading of Global Cultures, CECC discusses cultural diversity both as a source of conflict and belonging. These tracks structure the key question guiding the research: How do different locations of culture under the helm of globalization and technological change produce new narratives about humanity? Work at the center is defined by the conviction about the humanities' central role in providing robust answers to this question.

Some of CECC's recent main achievements are: the project 4Cs: From Conflict to Conviviality Through Creativity and Culture, funded by Creative Europe; the project Broadcasting in the Portuguese Empire, funded by FCT and the European Union; the Lisbon Summer School in Culture Studies, and the Lisbon Winter School in Communication Studies; and a high publication rate in prestige publishing houses and indexed journals.

## Centre for Classical Studies

CEC-FLUL



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.tmp.letras.ulisboa.pt/cec">http://www.tmp.letras.ulisboa.pt/cec</a> | 1966               |
| RESEARCHERS   | FUNDING FCT        |
| 39  | 1,05 M Euros       |

### KEYWORDS

- Classical Philology (edition/translation of texts)
- Classical Reception in Portugal
- Classics and other Sciences

### STRATEGIC AIMS

The Centre for Classical Studies (CEC) provides an institutional setting for projects on the Greco-Roman heritage in Europe and particularly in the Iberian Peninsula. It has three priorities: to produce internationally excellent research; to attract highly qualified researchers; and to disseminate its research outputs to society. Nine small teams are dedicated to high potential themes of interest to CEC.

### RESEARCH UNIT DESCRIPTION

The CEC is a Portuguese research centre based in the School of Arts and Humanities at the University of Lisbon. We focus not only on the study of ancient Greek and Roman texts but also their reception over the centuries up to the present age, including the huge set of poorly known or even completely unknown Latin texts from western Iberia. The Centre's four thematic areas are as follows: *Classica* deals with Greco-Roman themes and texts; *Hispania Latina* studies Latin post-classical Iberian and Portuguese texts; *Rescripta* explores the literary reception of classical themes and texts in Portuguese; *Dia/logos* focusses on interdisciplinary projects that explore the adaptation and reshaping of ancient models.

Within the aforementioned thematic areas, the following research teams focus on a range of topics that exhibit particular promise for scholarly innovation and development:

1. *Classica*: Greek mythography and Flavian-Antonine literature; 2. *Byzantium*: Late Antique Greek and Byzantine literature; 3. *Medievalia*: Late Antique and Early Medieval Iberian texts; 4. *Epigraphica*: Epigraphy, languages and archaeological and cultural contexts in Western Iberia; 5. *Humanistica*: Portuguese Humanism; 6. *Sinica*: Portuguese Jesuit Latin texts concerning Asia; 7. *Episteme*: Science and scientific culture in the Medieval and Renaissance ages; 8. *Portuguese Women Writers*; 9. *Information Sciences*. The CEC not only fosters an international dimension to its research activities but also offers a collegial and cooperative environment to researchers who wish to work on its research teams.

CEC's most notable achievements include: numerous high-quality publications disseminated by international publishing houses and journals; projects funded by the FCT, including *Late Achilles in Classroom and Court*, *Gynecia*, and *Res Sinicae*; distinguished, promising researchers (several with FCT grants) who have joined the Centre; high-impact outreach activities via tv, radio, Google, and schools through community partnerships.

## Center for Classical and Humanistic Studies of the Faculty of Letters of Coimbra University

CECH/FL/UC



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.uc.pt/en/iii/research_centers/CECH">http://www.uc.pt/en/iii/research_centers/CECH</a> | 1967               |
| RESEARCHERS   | FUNDING FCT        |
| 51  | 0,94 M Euros       |

### KEYWORDS

- Corpus
- Cultural Heritage
- Reception
- Hermeneutics

### STRATEGIC AIMS

CECH strategic aims are to produce and promote, nationally and internationally, the highest quality lusophone research in Classical and Humanistic Studies, strongly oriented towards the democratisation of knowledge, applied to civil society; to establish itself as a "scientific hub"; to cooperate institutionally to offer opportunities for advanced study and other specialised and non-specialised courses; to align its research activities with national public policies concerning European and Global Research, Development and Innovation.

### RESEARCH UNIT DESCRIPTION

The CECH distinguishes itself by strongly focusing on Greek and Latin Philology (in the areas of language, literature and culture). Its structuring scientific profile in Philology interacts with and is enriched by research developed in those areas of knowledge that, since their Ancient Greek genesis, have contributed to the Humanist education: Literature, Philosophy, the Arts and History. In recognition of the role played by Classical Studies in world heritage and culture, forming identities and alterities in Europe (particularly in Portugal) and other affiliated countries, another key scientific pillar of the CECH is the study of Classical and Portuguese Cultural Heritage.

As a hub of research and development in the field of Gre-

co-Latin Studies, as well as in Medieval and Renaissance Lusophone Studies, CECH adopts a firm strategy of internationalisation, and is increasingly responsible for facilitating bilateral communication between the North and the South (through the triangulation of Europe, the United States and Latin America), and for knowledge production and dissemination in the Classical and Humanistic Studies.

CECH's most notable achievements are a cutting-edge research in its specific scientific areas, reflected in publications and the organization and participation of researchers in relevant multilingual international initiatives, as well as the training of young researchers, the dissemination of open science, or the transfer of knowledge to the pre-university school community and to civil society.

## Centre for Philosophical and Humanistic Studies

CEFH



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://braga.ucp.pt/cefh/en/">http://braga.ucp.pt/cefh/en/</a> | 2007               |
| RESEARCHERS   | FUNDING FCT        |
| 39  | 0,60 M Euros       |

### KEYWORDS

- Complex systems
- Ethics
- Cultural memory
- Language
- Intersubjectivity
- Human development

### STRATEGIC AIMS

CEFH investigates, from an interdisciplinary perspective, the relationships between Nature, Person and Society, considering the new concepts of human being and of interpersonal relationships that emerge from cognitive science. The Unit integrates Philosophy, Linguistics, Communication Sciences, Literary Studies and Psychology and promotes the dialogue between philosophical traditions (e.g. phenomenology, philosophy of religion/nature) and the contemporary cognitive sciences.

### RESEARCH UNIT DESCRIPTION

CEFH explores three research topics (RT) of the person's relationship with others and with the world: (1) causal processes, complex systems and emergence; (2) ecologies of the human: identity, otherness, happiness; and (3) cognition, intersubjectivity and human development.

The RT1 focuses on the causal influence of the complex systems on their constituents. A special emphasis is placed on top-down causality and on physical systems, as well as on the neurological and brain networks and their relationships with the physical and biological substrates. The emergent properties in complex systems, particularly thought, language and religion are also explored.

The RT2 explores the notions of personal identity and community identity, seeking to describe the factors that

contribute to its consolidation or erosion, in the contemporary context, marked by the (dis)encounter of cultures and by the possibilities of communication of the digital age. In this context, the implications for hospitality and human fulfilment are also studied.

The RT3 explores the relationships between language, cognition and society, by analysing the interplay between psychological and sociocultural factors of meaning construction; and also the knowledge about psychobiological, psychosocial, emotional and behavioural processes, by analysing the role of sociodemographic, cultural and intersubjective factors on the promotion of healthy, and by exploring ways of promoting well-being and the person's dignity.

CEFH most notable achievements are the *Revista Portuguesa de Filosofia* (founded in 1947), indexed in Scopus; the development, application and evaluation of preventive programs (e.g. cannabis); assessing the effect of interventions to promote well-being while exploring the underlying psychophysiological factors involved; and the publication of more than 100 books and 600 scientific papers, 77 scientific events and 13 students finishing their PhD.

## Research Centre for Humanities

CEHUM



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ceh.ilch.uminho.pt">http://ceh.ilch.uminho.pt</a> | 1994               |
| RESEARCHERS   | FUNDING FCT        |
| 40  | 0,91 M Euros       |

### KEYWORDS

- Literature studies
- Linguistics
- Cultural studies
- Performance studies
- Digital humanities
- Comparative studies

### STRATEGIC AIMS

CEHUM aims at producing impactful scientific work in diverse fields of the Humanities. Central aims are to develop multidisciplinary research on migrations and marginalization, gender and post-colonial studies, on identity, intermediality and interart poetics; to foster the well-established research on theoretical and experimental linguistics and Portuguese and Lusophone literature; to expand emerging research areas such as Digital Humanities, Performance Studies and research on Asian linguistics and culture.

### RESEARCH UNIT DESCRIPTION

CEHUM is a research unit of the School of Arts and Humanities (ELACH), conducting research in the areas of Literature, Linguistics, Culture, Arts (Music and Theatre) and Philosophy, the main fields of expertise of ELACH.

CEHUM's members lead their activities in 11 mono- and multidisciplinary research teams, with the aim of developing fundamental and competitive projects with international impact in diverse fields of the Humanities. Important vectors of research that strive to combine expertise in the above-mentioned domains include studies on migrations and marginalization, on gender and arts, post-colonial studies, and research on identity (human, animal, machine), intermediality and interart poetics. As a kind of

backbone, the multidisciplinary teams guarantee the cohesion of CEHUM in its diversity, empowering the dynamics between scholars in different domains. A multidisciplinary approach coexists with monodisciplinary research with a central focus on theoretical, experimental and applied linguistics. The research team devoted to Portuguese and Lusophone Literature continues the seminal essence of CEHUM. Emerging areas with impacting new work in the last few years are Digital Humanities, Asian studies and Performance studies, which combines sustained artistic practice with academic research.

CEHUM most notable achievements are 10 funded projects in the last 10 years in the areas of Digital Humanities, Comparative Literature, Linguistics, and Arts; CEHUM's book collections (*Hespérides*, and *Poliedro*), and its 3 indexed scientific journals (*Diacrítica*, *Revista 2i*, and *Revista HD*); the (re)edition of several relevant works of Portuguese literature (*Sophia de Mello Breyner*, *Eduardo Lourenço*, *Camilo Castelo Branco*, among others); its international networks on diverse topics (*Animots*, *Heritage Language Consortium*, etc.); and the high degree of transfer to society, with literature courses, teacher training & development, translation workshops, and participated theatre.



## Centre of 20th Century Interdisciplinary Studies

CEIS20



|                      |                           |
|----------------------|---------------------------|
| <b>WEBSITE</b>       | <b>DATE OF FOUNDATION</b> |
| www.uc.pt/iii/ceis20 | 1998                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 109                | 1,45 M Euros       |

### KEYWORDS

- Contemporaneity
- Society
- Culture
- Interdisciplinarity

### STRATEGIC AIMS

CEIS20 work is particularly focused on determining contemporaneity and dedicated especially to the study of contemporary societies, paying particular attention to the Lusophone sphere as a scientific reference. Its goals are: to study Portuguese society within the framework of the enduring force of the liberal matrix, in its multiple and contradictory political, social, economic and cultural configurations; and to analyze how the Portuguese specificities of that liberal matrix defined its position in the world during contemporaneity.

### RESEARCH UNIT DESCRIPTION

The Center for Interdisciplinary Studies of the 20th Century - CEIS20 is a research unit of the University of Coimbra, linked to the Institute of Interdisciplinary Research, and funded since 1998 by FCT. The Center is organized into seven transdisciplinary groups: History and Memory; Europeism, Atlanticity and Globalization; History and Sociology of Science and Technology; Artistic Currents and Intellectual Movements; Educational Policies and Organizations and Educational Dynamics; Communication, Journalism and Public Space; Digital Humanities. This structure has been further strengthened by two Thematic Lines (intergroup, interdisciplinary): Two centuries of Liberalism, 1820-2020: forms of state, social movements and subjectivation devices; and Movement: people and ideas

between places.

The dynamics of both the groups and the thematic lines on CEIS20 Advanced Studies materialized in the PhD in Contemporary Studies, a Post-Doctoral Course, and Advanced Short Courses (for civil society, e.g., school teachers, municipality staff, etc.). This effects are also present in CEIS20 editorial production, with three peer-review journals (Estudos do Século XX, Debater a Europa, and Mediapolis), one peer-review collection (Cadernos do CEIS20), and seven editorial collections in partnership with UC Press and two other Portuguese publishers.

CEIS20 is a reference center in the field contemporary studies, establishing a strong relationship with other research centers and universities, as well as with public entities, business and civil society at local, regional, national and international levels. As an example of this are some of CEIS20 main achievements: the project CreativeCH - Creative Cooperation in Cultural Heritage, funded by European Commission, in a partnership with institutions from Italy, Spain, Germany, Romania, and Austria; the project "Inter-municipal Program for the Prevention of Early School Leaving and Promotion of Equal Access to Education", of the Inter-municipal Community of Coimbra; and the creation and development of the "Portuguese Contemporary History Network", in partnership with six other Portuguese research centers.

## Center for the Studies in Letters

CEL



|  |                           |
|--|---------------------------|
| <b>WEBSITE</b>   | <b>DATE OF FOUNDATION</b> |
| http://www.utad.pt/vPT/Area2/investigar/CEL/Paginas/cel.aspx | 2003                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 23                 | 0,68 M Euros       |

### KEYWORDS

- Portuguese Linguistics
- Historiography of Linguistics
- Historiography of Missionary Linguistics
- Literary Studies

### STRATEGIC AIMS

CEL's strategic aims are to triplicate the number of papers published in indexed journals; to start the Digital Humanities project Portugaliae Monumenta Linguistica, which will make important metalinguistic texts available online; to organize 3 conferences of international relevance – International Colloquium "450 years De institvtione grammatica libri três" (09/2022); XXXII. Internationales Kolloquium des Studienkreis SGdS (2023); and 2024 Annual Colloquium of the Henry Sweet Society (2024) –; and to apply for the organization of the 2024 International Conference on Missionary Linguistics.

### RESEARCH UNIT DESCRIPTION

CEL is an R&D unit established in 2003, headquartered in Vila Real at UTAD (main management institution), with a second management institution at UÉvora, since 2007. CEL is focused on Language Sciences and, in an interdisciplinary and collaborative way, on Literary Studies. CEL is the only R&D unit in Portugal dedicated to History of the Language Sciences and Missionary Linguistics, especially metalinguistic works produced within the Portuguese Patronage, particularly of Africa, America and Asia. CEL is a member of the Permanent International Committee of Linguists (CIPL), and a member organization of UNESCO's International Council for Philosophy and Human Sciences.

In recent years, CEL has undergone a profound restructuring and, with the establishment of clear, objective, and quantifiable goals, has achieved a consolidation and an increase in productivity and international recognition by peers. The partnership between CEL researchers and other international research centers has also increased significantly and on several continents. The most relevant international collaboration occurred with the Laboratoire d'Histoire des Théories Linguistiques (France), particularly in the Corpus de Textes Linguistiques Fondamentaux project, to which CEL researchers have contributed with the online publication of a considerable number of biobibliographical records and semidiplomatic editions of Portuguese grammars published between 1536 and 1891.

## Research Centre for General and Applied Linguistics

CELGA-ILTEC



|                       |                           |
|-----------------------|---------------------------|
| <b>WEBSITE</b>        | <b>DATE OF FOUNDATION</b> |
| http://celga.iltec.pt | 2015                      |
| <b>RESEARCHERS</b>    | <b>FUNDING FCT</b>        |
| 37                    | 1,16 M Euros              |

### KEYWORDS

- Applied Linguistics
- LinguisticResources
- Computational Linguistics

### STRATEGIC AIMS

CELGA-ILTEC (C-I) main goals are: the development of linguistic resources and knowledge for Portuguese as a pluricentric language and for languages in contact with it; the development and supply of linguistic resources (LRs) and services to the R&D community, to public and private institutions and to the general public; to foster fundamental and applied research in different linguistic subfields; and to the development of linguistic knowledge bases, corpora and resources of reference.

### RESEARCH UNIT DESCRIPTION

C-I started operating in mid-2015, resulting from the merger of two previously existing units, CELGA and ILTEC. C-I is organized in five work groups: History of the Portuguese Language and History of Linguistic Awareness (HPL/HLA), devoted to studying normalization resources across Portuguese-speaking countries throughout time; Lexicon and Computational Modelling (LMC), developing tools and resources for the description of Portuguese, its normalization and for linguistic policy support; Portuguese in Contact (PC), centered on languages in contact with Portuguese and Portuguese as an L2 (PL2); Bridging Communities (BC), focusing on resources; and Discourse and Academic Discursive Practices (DPDA), aimed at researching L1 instructional materials and text produced in

an academic context. The aims of these WGs respond to identifiable societal needs otherwise not fulfilled by other units in the Portuguese R&D context, aiming at providing knowledge, tools and resources that fill in existing voids and aid policy and decision making, answering demands for services and knowledge both in Portuguese-speaking countries and in foreign PL2 learning contexts. Our approach is markedly pluricentric, and increasingly focuses on varieties other than European and Brazilian Portuguese. C-I results include language corpora and databases, instructional materials, official standardization resources, written and oral instruction texts and training for teachers and students from primary to tertiary levels, as well as transdisciplinary resources for translation studies, law and health services, marketing and branding. Some of C-I main achievements are: “Portal da Língua Portuguesa” (portaldalinguaportuguesa.org), a linguistic knowledge interface with lexical, morphological and lexicographical resources of reference; the “VOC - Vocabulário Ortográfico Comum da Língua Portuguesa” (voc.cplp.org), currently the official word list for spelling for Portuguese, and the first resource in history to fulfill that role internationally; and TEITOK (teitok.org), a corpus management environment that allows for the creation and distribution of richly annotated corpora in the TEI/XML standard.

## Centre for Ethics, Politics and Society

CEPS



|                         |                           |
|-------------------------|---------------------------|
| <b>WEBSITE</b>          | <b>DATE OF FOUNDATION</b> |
| www.ceps.ilch.uminho.pt | 2017                      |
| <b>RESEARCHERS</b>      | <b>FUNDING FCT</b>        |
| 14                      | 0,75 M Euros              |

### KEYWORDS

- Philosophy
- Politics
- Ethics, Social

### STRATEGIC AIMS

CEPS is the only research Centre in Portugal specializing in the areas of Political Theory and Applied Ethics. The aim of the Centre is to provide high-quality research, knowledge, and training in these two fields of expertise and, in particular, in questions of social and distributive justice, basic income, human rights, democratic accountability, public interest, and the treatment of non-human animals and the environment.

### RESEARCH UNIT DESCRIPTION

CEPS members are organized into two main research groups. The Political Theory Group deals with normative and applied political philosophy, the critical theory tradition, and the history of political thought. The members of this group work on topics such as social justice, human rights, immigration and tolerance, universal basic income and property-owning democracy, democratic accountability and public interest, political rhetoric and populism, and various issues in the history of political philosophy. The Applied Ethics Group conducts research in matters of ethical theory that could affect the way we act. In particular, it focuses on how theoretical issues in population ethics and techno-science are important for real-world decisions affecting future generations, such as our treatment of non-human animals, the environment, gender issues, resource

prioritization, and biomedical enhancement.

CEPS is home to Ethics, Politics & Society, an international open-access peer-reviewed journal publishing high-quality contributions in the areas of the Centre’s expertise. Both the Master’s Programme in Political Philosophy and the Ph.D. in Philosophy at the University of Minho are led by members of CEPS. The Centre also organizes a rich series of international events, among which are the Meetings on Ethics and Political Philosophy, and the Summer School in Political Philosophy and Public Policy.

Some of CEPS more recent notable achievements are the Meeting On Ethics and Political Philosophy, which is an annual gathering for ethicists and political philosophers from around the world; the UBIEXP project – the Political Philosophy and Epistemology of Basic Income Experiments, and the PUBINT project – The Public Interest. A Politico-Philosophical Investigation, both funded by FCT; and the II Sapientia Prize, and the Philosophical Essay Prize, both awarded in 2019 to CEPS members, Estanqueiro Rocha and Roberto Merrill, respectively.

## Centre for the Study of the Sociology and Aesthetics of Music

CESEM



### WEBSITE

<http://cesem.fcsh.unl.pt/>

### RESEARCHERS

87

### FUNDING FCT

1,65M Euros

### KEYWORDS

- Musicology
- Music Psychology and Pedagogy
- Music Technologies, Theory and Composition
- Philosophy and Sociology of Music
- Musical Heritage: Identification and Preservation
- Music Creation and Practice: Contexts and Dynamic

### STRATEGIC AIMS

CESEM main strategic goals are: databases for research on Iberian repertoires and sources, studies on Luso-Brazilian music, and research on music communication in infancy; to reinforce its leadership in the areas of preservation of contemporary art, sociology of music, and intermediality; to further develop studies on Mediterranean and Atlantic musical connections and cultural transfer, musical iconography, opera and musical theatre, contemporary composition and performance, music and literature.

### RESEARCH UNIT DESCRIPTION

CESEM is a research unit committed to studies on Music, both disciplinary and interdisciplinary, and its relations to other social and cultural fields, addressing a variety of approaches - sociological, aesthetic, historical, philological, compositional, and performative - and engaging with the most recent perspectives and methodological trends in the Social and Human Sciences. Based at NOVA FCSH, CESEM includes associated research teams organised as formal extensions at the Polytechnic Institutes in Lisbon and Oporto, and the University of Évora. Research at CESEM is structured in five groups: Early Music Studies; Music in the Modern Period; Contemporary Music; Critical Theory and Communication; and Education and Human Development. Members of these groups further cooperate

in six transverse thematic lines: Palaeography and Editing of Music; Opera Studies; Luso-Brazilian Studies; Musical Iconography; Music and Literature; and Therapeutic Effects of Music. CESEM runs three laboratories at NOVA FCSH, equipped for specific tasks: LIM-Music Computing Lab, a facility for electroacoustic research, spatial manipulation of sound and software developed as basis for new electronic instruments. LAMCI-Music and Communication in Infancy Lab, which joins research, training and artistic creation in a unique way. LAPEM-Palaeography and Music Editing Lab, which supports source studies, specialized databases and palaeographic and music editing tasks. CESEM's library is also the most comprehensive musicological resource in the country, including 5 open-access databases.

Some of CESEM's achievements are: crucial developments in the knowledge of Medieval Iberian vernacular song, namely the 13th-century "The Cantigas de Santa Maria" repertory; Project GermInArte, in a partnership with Companhia de Música Teatral, which provided professional caregivers, students, and family members effective means to interact with babies and infants via music; and the preservation of 20th and 21st century Portuguese composers' music collections.

## Centre for Theatre Studies

CET



### WEBSITE

<http://www.tmp.letras.ulisboa.pt/cet>

### RESEARCHERS

30

### DATE OF FOUNDATION

1994

### FUNDING FCT

0,68 M Euros

### KEYWORDS

- Digital Humanities
- Theatre
- History
- Cultural Heritage
- Performing Arts
- Theatre Iconography

### STRATEGIC AIMS

CET's objective is the scientific investigation and training of researchers for the study of theatre and performance. Historical and sociological investigation; the collection and fixation of materials; and a critical questioning of the contemporary theatrical scene have been the fields privileged the Research Unit. Our work to date has taken full advantage of new technologies to make documents more readily and rigorously available, in open access, to a wider audience.

### RESEARCH UNIT DESCRIPTION

The CET is a research unit of the School of Arts and Humanities, University of Lisbon, created in 1994 by Osório Mateus. CET's research is divided into three lines.

1) Critical Discourses in Performing Arts aims at producing a critical questioning of contemporary performing arts. It departs from an interdisciplinary logic and a principle that aims to bring creative knowhow closer to the recent perspectives of critical thinking.

2) History of Theatre and Performance aims at researching the theatrical systems that over the centuries have organized theatrical activity in Portugal, and the aesthetic conventions that marked it; the edition of the entire corpus of the plays of Portuguese authors and theatrical poetics; and the collection and analysis of documents that allow to

(re)compose the History of Theatre in Portugal, establishing relationships between them and making them available digitally.

3) Theatre and Image proposes as an object of study the imagery materials associated with the performative activity. It aims at analyzing the relationship between theatre and image, as well as the contamination of the theatre space by the cinematographic image, calling for a theoretical reflection on the statute of the image and the technological conditions of its production.

Among CET most notable achievements are the publication of a specialized journal in performing arts and theatre studies – Sinais de Cena – since 2004; making most of its research results available through open access databases in CET's website; and a regular scientific collaboration with several structures of theatrical production and creation (festivals and theatre companies), and the participation in international theatre and performance studies networks.



## Centre for English, Translation, and Anglo-Portuguese Studies

CETAPS



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.cetaps.com">http://www.cetaps.com</a> | 2007               |
| RESEARCHERS   | FUNDING FCT        |
| 49  | 1,17 M Euros       |

### KEYWORDS

- Literature
- Culture
- Translation
- Languages teaching
- English language

### STRATEGIC AIMS

CETAPS strategic aims are: a research culture that values quality; an organizational model based on a transparent policy; national/international recognition for its training programmes; international acknowledgement of its excellence in advancing knowledge; to increase its visibility while investing in wide impact outreach activities/ citizen science/ open access policies; to participate in international networks and extend the range of its research and research outputs; and the transfer of knowledge and technology by means of Digital Humanities.

### RESEARCH UNIT DESCRIPTION

CETAPS is a dynamic research centre that brings together members from 11 Portuguese institutions of higher education, promoting research and activities with high national and international reach. CETAPS runs 8 open access databases, publishes 4 open access electronic journals (one of which has been recently indexed by Scopus), and has a Digital Laboratory which is the result of the R&D+i unit's commitment to the development of the Digital Humanities.

CETAPS has also been involved in MA and PhD programmes, both national and international (eg. Erasmus Mundus Joint Doctorate TEEME – Text & Event in Early Modern Europe, and Erasmus Mundus Masters Crossways in Cultural Nar-

ratives), and has consistently invested in a considerable number of high impact outreach activities. Additionally, it offers scholarships and training programmes to young researchers and benefits from the energy and commitment of the Junior Researchers in Anglo-American Studies Platform (JRAAS) to promoting activities connected with the literature, culture and the arts of the anglophone world. CETAPS most notable recent achievements are: over the last 6 years, 90 organized conferences, 217 books/book chapters, and 310 published papers; the CIPSH Chair on Digital Humanities in Education (2020-25); the translation of William Shakespeare's dramatic works; the development of 6 databases (EDTL, BBP, DPT, LTSB, Shakespeare TM & English Travellers in Portugal); and the participation in international networks & projects (MOVES, UTOPIA500, ICEPELL, CANDIICE, ITELAB).

## Center for Philosophy of Sciences of the University of Lisbon

CFCUL



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://cfcul.ciencias.ulisboa.pt/">https://cfcul.ciencias.ulisboa.pt/</a> | 2003               |
| RESEARCHERS   | FUNDING FCT        |
| 47  | 0,90 M Euros       |

### KEYWORDS

- Philosophy of Science
- Philosophy of Natural and Life Sciences
- Science and Art
- Science, Ethics and Politics
- Interdisciplinarity
- Epistemology

### STRATEGIC AIMS

CFCUL is an interdisciplinary research unit that aims to be a reference for excellence in the area of Philosophy of Science at national and international level. Its strategic objectives are to promote research, advanced training, internationalization, and dissemination of knowledge in the area of Philosophy of Science, attracting international talents, and fostering creative and critical thinking.

### RESEARCH UNIT DESCRIPTION

Founded in 2003, the Center for Philosophy of Sciences of the University of Lisbon (CFCUL) is a permanent R&D Unit of the University of Lisbon, located in the Faculty of Sciences. Its mission is to promote top quality, international and interdisciplinary research, advanced training and dissemination of knowledge in the area of Philosophy of Science, including outreach for non specialised audiences.

CFCUL has a wide research profile, and aims to analyze the metaphysical, ethical, political and aesthetic dimensions and implications of scientific rationality, scientific practice and science's technological applications. This diversity of research areas is grounded in a broad understanding of Philosophy of Science, which takes into account both the "analytic" and "continental" traditions, thus spanning from formalized to historical and phenomenological approaches to science and its technological applications. It

is also reflected in its multidisciplinary and inter-faculty research team, which brings together researchers with different backgrounds and expertise at differing career stages.

CFCUL is organised in three Research Groups (RG): Philosophy of the Formal Sciences, Methodology and Epistemology; Philosophy of Natural Sciences; Philosophy of Technology, Human Sciences, Art and Society. Each RG formulates its own research program with specific objectives and plans, and researchers collaborate in specific Research Lines across different RGs, covering diverse topics, such as logic, epistemology and methodology; the metaphysics of science; the study of concepts such as emergence, the organism and the self; the social, political and ethical implications of science and technology; the relations between science and art.

Some of CFCUL's recent main achievements are the project INTERSELF, funded by FCT; the project "It's a Kind of Magic", funded by Templeton Charity Foundation / Duke University (SSNAP); and the project "Emergence in the Natural Sciences", funded by FCT.



## Centre of Philosophy, University of Lisbon

CFUL



|                               |                           |
|-------------------------------|---------------------------|
| <b>WEBSITE</b>                | <b>DATE OF FOUNDATION</b> |
| http://cful.letras.ulisboa.pt | 1989                      |
| <b>RESEARCHERS</b>            | <b>FUNDING FCT</b>        |
| 52                            | 0,95 M Euros              |

### KEYWORDS

- Epistemology
- Philosophy of Mind
- Philosophy of Language
- Practical Philosophy
- History of Philosophy

### STRATEGIC AIMS

CFUL aims at promoting high-standard research; publishing rigorous translations of classical philosophical works, stimulate monographic studies and the submission of papers to peer-reviewed journals; stimulating the connection of our researchers with their peers via the participation in international scientific gatherings and via the publication of four journals (Disputatio, Philosophica, Phainomenon, and philosophy@lisbon); providing young researchers with the conditions to integrate research teams and projects.

### RESEARCH UNIT DESCRIPTION

CFUL was founded in 1989 with the following goals: (a) promoting excellence in research by supporting the production of ground breaking, wide spanning philosophical investigation; (b) providing a dedicated environment for the advanced training of graduate students and early career researchers; (c) fostering interdisciplinary cooperation with other humanities and sciences, e.g. cognitive science, environmental studies and jurisprudence; (d) allowing the awards of philosophy to reach beyond academic circles, engaging broader audiences in philosophical enquiry.

Since its foundation, CFUL's activities have been centred on three main lines of research: (i) research on core issues in the fundamental areas of philosophy; (ii) translation

and commentary of the classic works of the western philosophical tradition; (iii) reflection on societal challenges. These lines of research are now implemented by three research groups: History of Philosophy (HPhil); Language, Mind and Cognition (LanCog); Practical Philosophy (Praxis).

CFUL's recent most notable achievements are the translation to Portuguese and the commentary of the Complete Works of Aristotle (obrasdearistoteles.net); the publication of an online companion to Analytic Philosophy (compendioemlinha.letras.ulisboa.pt); the project "De Restitutione", and the project "Emergence in the Natural Sciences", both funded by FCT; and the publication of journals Disputatio (classified with Q1), Philosophica, Phainomenon, and philosophy@LISBON.

## Centre for Art History and Artistic Research

CHAIA



|                     |                           |
|---------------------|---------------------------|
| <b>WEBSITE</b>      | <b>DATE OF FOUNDATION</b> |
| www.chaia.uevora.pt | 1987                      |
| <b>RESEARCHERS</b>  | <b>FUNDING FCT</b>        |
| 50                  | 0,95 M Euros              |

### KEYWORDS

- Heritage
- History of Art
- Arts
- Landscape
- Architecture
- Archaeology

### STRATEGIC AIMS

CHAIA aims at developing basic and applied research activities, its diffusion, advanced training, and university extension in the areas of artistic, architectural, and landscape heritage, of artistic and design practices, and of arts, communities, and identities.

### RESEARCH UNIT DESCRIPTION

CHAIA - Center for Art History and Artistic Research is a multidisciplinary research unit of the University of Évora that promotes, supports and develops activities in the thematic areas of artistic, architectural and landscape heritage; artistic and design practices; and arts, communities and identities.

It is organized in 6 research groups (History of Art, Archaeology, Architecture, Visual Arts and Design, Landscape and Theatre and Performance Studies) that converge transdisciplinarily, bringing together past and present, in order to critically approach heritage as a cultural and social process of representation, re-signification and use of cultural heritage and identities, collective or individual.

The geography of its study themes extends from Évora and the Alentejo region to the Mediterranean and Portuguese-speaking countries. Worthy of mention are the themes of megalithic heritage and rock art; city, architecture, and landscape (from Romanization to the present);

history of painting and tiles (16th-18th centuries); puppet theater (repertoires and practices); art, science, and technique; social arts and design; digital heritage; art historiography; and heritage history and theory. It is linked to 4 doctoral programs (Archaeology, Architecture, Landscape Arts and Techniques and History of Art) and since 2021 it is part of IN2PAST - Associated Laboratory for Research and Innovation in Heritage, Arts, Sustainability and Territory.

## Centre for the Humanities

CHAM



|                              |                           |
|------------------------------|---------------------------|
| <b>WEBSITE</b>               | <b>DATE OF FOUNDATION</b> |
| http://www.cham.fcsh.unl.pt/ | 1992                      |
| <b>RESEARCHERS</b>           | <b>FUNDING FCT</b>        |
| 131                          | 2,30 M Euros              |

### KEYWORDS

- Globalization
- Identities
- Innovation
- Interactions
- Heritage
- Representations

### STRATEGIC AIMS

CHAM aims at cultivating the Humanities as a constitutive legacy of higher-education institutions as well as the foundation of contemporary democratic societies; promoting original research into the historicity of human representations and actions, through specialized teams and programs, and according to a multidisciplinary orientation; promoting advanced academic training in several fields of humanistic studies; and disseminating knowledge within the framework of the critical debate, and in open dialogue with society.

### RESEARCH UNIT DESCRIPTION

CHAM – Centre for the Humanities is an inter-university research unit of Faculdade de Ciências Sociais e Humanas da Universidade NOVA de Lisboa and of Universidade dos Açores supported by Fundação para a Ciência e a Tecnologia.

In recent years, it has become one of the largest Portuguese research centres in the field of the Humanities. In a multi-cultural and collaborative environment, the centre brings together researchers trained in different eras (from Antiquity to the Modern and Contemporary period), various disciplinary fields (Archaeology, Art History, Heritage, Literature, Philosophy and History of Ideas) and areas of History (Economic, Social, Cultural, Religious, Political,

Science, Books and Reading Practices), as well as specialists in the history of different geographic spaces.

“Borders” are the central theme of CHAM’s strategic project. Based on a solid historiographical base, this project is organized around three structural problems: the frontier as a spatial division; the border as an intellectual demarcation; and the boundary and the construction of identities.

Due to its cross-cultural approach, and the use of comparative and multidisciplinary approaches, CHAM asserts itself as a research centre ready to deal with the challenges and needs of today’s society, attentive to the past and with a vision of the Humanities to the future.

CHAM most notable achievements are: the project 4-OCEANS: Human History of Marine Life, the first ERC Synergy to the Humanities awarded in Portugal; UNESCO Chair in The Ocean’s Cultural Heritage held by NOVA; RIC Portal - Periodical Literature on Ideas and Culture, which provides access to Portuguese cultural journals, using digital humanities methodologies & tools; the e-learning master of arts in the History of the Portuguese empire, offered by NOVA FCSH with CHAM’s scientific supervision.

## Center for the History of Society and Culture

CHSC



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| http://chsc.uc.pt/ | 1976                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 43                 | 0,78 M Euros              |

### KEYWORDS

- The value of the past in building the future
- Production, spreading and preservation of science
- History and configurations of a maritime empire
- History and historiography

### STRATEGIC AIMS

CHSC seeks at creating knowledge with theoretical and practical results, based on the study of several aspects of the History of Portugal, from a comparative perspective.

### RESEARCH UNIT DESCRIPTION

The Centre of History of Society and Culture (CHSC) is an R&D unit of the Univ. of Coimbra. It was established in 1976 under a different name, which was changed to the current one in 1994. Most researchers are History faculty members of several national and international universities who research different thematic areas and different time frames. The extended diachrony and multiplicity of themes structures CHSC’s activity.

CHSC’s research develops in three levels of approach: the first is oriented towards Local and Regional History; the second concerns multi-thematic Portuguese history with a national/European range, from economic history to cultural history; and a third one covering research on the history of the empire and Portuguese colonialism, re-evaluating the relationship (and confrontation) between Portugal and other (oriental and Atlantic) spaces. Research conducted by CHSC also includes more focused areas: one related to Historiography, history and historiographical knowledge theory, its protagonists and their “Schools”; a second one targeted at the studying, publishing and dissemination of

sources and archive, having as a basis the valuable documental/bibliographical sources available at UC; and a third area, focused on the History of UC, which aims to study this important Portuguese cultural institution, not just as a scholarly body, but also its connection to the city, the country as a whole, to Europe and to the Portuguese world, from its creation to the present day.

CHSC’s main achievements include: the open access academic journal Revista de História da Sociedade e da Cultura (RHSC), available in the University of Coimbra Press; the cooperation with the research group Investigación del Siglo de Oro (GRISO), from the University of Navarra (Spain), in the co-edition of a special issue of the Revista de História da Sociedade e da Cultura; and the organization of the International Congress AHLiST, in cooperation with the University of Purdue (USA), the main centre for the aforementioned association (ahlist.org).

## Centre for History of the University of Lisbon

CH-ULISBOA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.centrodehistoria-flul.com/">http://www.centrodehistoria-flul.com/</a> | 1958               |
| RESEARCHERS   | FUNDING FCT        |
| 80  | 1,13 M Euros       |

### KEYWORDS

- Comparative and Connected History
- Mobilities
- Transitions
- Environment
- Identities
- Social Memories

### STRATEGIC AIMS

The strategic plan of CH-ULisboa is based on the fundamental idea that analysing societies from a connective perspective deepens our understanding of the past. Within this framework, the main objectives are: 1) Contribute to advance knowledge in cross-cultural studies; Modern uses of the past; Environment history; Maritime History: History of Lisbon; 2) Boost internationalization; 3) Improve Digital Humanities practices and digital edition; 4) Knowledge transfer to society.

### RESEARCH UNIT DESCRIPTION

Founded by Virgínia Rau in 1958, CH-ULisboa is a research unit articulated with the Department of History of the School of Arts and Humanities of the University of Lisbon (FLUL), and its graduate and postgraduate programmes. Thus, the core team is composed of faculty members and research students affiliated with the Department.

Since 2015, a renewal of the team was supported by the integration of career researchers from the former Instituto de Investigação Científica Tropical (IICT), by PhD researchers through the Scientific Employment funding programmes, as well as by a growing number of funded PhD candidates and postdoctoral scholarship holders. The unit frequently hosts international academic visitors (PhD holders and candidates), many from outside the EU, and

others through mobility programmes. CH-ULisboa works with more than one hundred affiliated researchers from other research units and cooperates with institutions and researchers through national and international research networks. Also, CH-ULisboa develops partnerships with public institutions and NGO's.

At present, the core activities of the Centre are organised around 5 established Research Groups: Uses of the Past, Building and Connecting Empires, Cultural Encounters and Intersecting Societies, Court Studies and Diplomacy, and Military History.

CH-ULisboa recent main achievements are: 9 ongoing funded research projects (2020-2021), including one ERC, one European Project, and one EU funded; participation in 6 new international networks (2020), of which 4 with founding or coordinating members; co-organization of 45 international meetings, and publication of 103 international papers (2020); Centre for History Editions, in line with the best practices in refereeing and Open Access edition; and Digital Humanities based projects with publication of primary sources for dissemination.

## Research Centre for Arts and Communication

CIAC



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://ciac.pt/">https://ciac.pt/</a> | 2008               |
| RESEARCHERS                                     | FUNDING FCT        |
| 40  | 0,89 M Euros       |

### KEYWORDS

- Open Access
- Cultures at the Margins
- Literacies
- Digital Culture
- Archival Memory
- Creation

### STRATEGIC AIMS

CIAC aims at promoting advanced training; conducting research on supports of artistic, media and communicative phenomena, and within the forms of appropriation of artistic and media languages; developing applied research in creative labs and artistic teaching; promoting articulation with the local and national businesses, fostering the exchange and production of knowledge; disseminating the knowledge produced in the Centre or by the surrounding society, in the areas of Arts and Communication.

### RESEARCH UNIT DESCRIPTION

CIAC integrates researchers from the University of Algarve (host institution), the School of Theatre and Cinema (Lisbon Polytechnic Institute), the Higher Institute of Maia, the Santarém Polytechnic Institute, the Superior Institute of Advanced Technologies, and the Aberta University. Currently, it has three active poles: at the Escola Superior de Teatro e Cinema; at the Polytechnic Institute of Santarém, dedicated to digital literacy and social inclusion; and at the Aberta University, associated with the PhD Program in Digital Media-Art.

CIAC has developed innovative research in the fields of artistic studies (visual arts, cinema, theatre) and cultural studies, communication and, more recently, literary studies (digital archives, critical digital editions), connecting

the creation of platforms and the forms of communication of scientific knowledge in the designated areas. Since its inception, it has maintained an interdisciplinary character. Since its foundation, it has promoted and actively participated in the artistic and cultural activities of Algarve through specific protocols of collaboration with Municipalities, Cultural Associations and with the Algarve Regional Direction of Culture: it is now a relevant stakeholder for the region. The research produced at CIAC is discussed in various international networks and disseminated by the surrounding community through multiple outreach activities.

CIAC's main achievements are: the production of new languages, training, preservation of literary, scientific or artistic collections in the area of Literacy of Arts and Media; the dissemination of knowledge through platforms promoting the collecting, archiving and disseminating of the cultural, artistic and scientific heritage; the consolidation of the PhD in Digital Media-Art; the promotion of the economic and touristic use of theatrical activity; and the bridge established with other R&D units (Brazil, Spain, France, Belgium, Colombia, Mozambique, and Cape Verde).

## Research Centre for Architecture, Urban Planning and Design

CIAUD



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ciaud.fa.utl.pt/index.php/pt/">http://ciaud.fa.utl.pt/index.php/pt/</a> | 2006               |
| RESEARCHERS   | FUNDING FCT        |
| 171   | 2,75 M Euros       |

### KEYWORDS

- Architecture
- Urban Planning
- Design
- Ergonomics

### STRATEGIC AIMS

For 2020-2023, CIAUD has set 5 strategic aims: promoting the transversality and critical dimension of research projects and their integration in research groups, as well as establishing partnerships; guiding the publications towards indexation and disseminating the production to the scientific community, civil society, and other stakeholders; promoting scientific research in Lusophony; offering better support structures to the Researchers; making the centre Excellent.

### RESEARCH UNIT DESCRIPTION

CIAUD is based at the Lisbon School of Architecture of the Universidade de Lisboa (FA-ULisboa), and was established in 2006. The Centre has a cohesive and diverse team of collaborating and integrated Researchers, which includes professors and PhD students at the FA-ULisboa and of PhDs from other Schools. CIAUD is managed by an Executive Committee and supported by a group of Consultants with recognized international merit in CIAUD's areas of focus.

CIAUD's mission is to promote the production, development, and innovation of scientific, technological, and artistic knowledge in four units – architecture, urbanism, design, and ergonomics –, which interact with other disciplinary areas, as well as with teaching and with society as

a whole, enabling their intersection by means of more than 20 trans- and interdisciplinary Research Groups. Linking research to local society and to the needs of decentralized regions, and promoting dynamism in regions of Portugal where it is still difficult to develop research, CIAUD has extended its activity to four Poles that establish the beginning of a network at a national level, with the intention of contributing to the creation of future research centres. CIAUD is also supported by several technical structures, including a support team, a Library, and Workshops, as well as 3D Scanning, Rapid Prototyping, Colour, Textile and Ergonomics and User Experience Laboratories.

## Interdisciplinary Centre for History, Culture(s) and Society

CIDEHUS.UÉ



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.cidehus.uevora.pt">www.cidehus.uevora.pt</a> | 1994               |
| RESEARCHERS  | FUNDING FCT        |
| 71   | 1,25 M Euros       |

### KEYWORDS

- History
- Cultural Heritage
- Demography
- Digital Humanities
- Tourism
- Libraries and Information Science

### STRATEGIC AIMS

CIDEHUS investigates societal changes in Southern Portugal and Europe, Mediterranean region and other areas connected to Iberia. Its mission is translated into 7 key-actions: providing quality research on societal changes; hosting and developing research projects; ensuring a high quality standard in advanced studies and development of researchers' early careers; disseminating research results; cooperating with local, national and international academic institutions; communicating research results.

### RESEARCH UNIT DESCRIPTION

CIDEHUS is an interdisciplinary research unit based on History. CIDEHUS gathers a group of researchers from several specializations: apart from historians, it integrates demographers, philologists/linguists, anthropologists, architects, computer scientists, librarians, archivists, literary studies specialists and tourism researchers. About half of CIDEHUS members are doctoral students, from all across Portugal and from other countries. Since the end of 2014, the team has been focused on the study of societal changes, having as a privileged area of observation the South (of Portugal, Europe and the historical connected geographies). CIDEHUS embodies a multidisciplinary approach, and adopts territories, process analysis, and the categories inclusion/exclusion as observation axes.

CIDEHUS is structured in two thematic lines and an articulation group: L1 Societal changes; L2 Heritage and intercultural understanding; LPT Literacy and textual heritage. L1 is divided in 2 groups: Demography and Social Vulnerability (sd); and Societies, Power and Identities (sp). The same with L2: Intangible Heritage and Social Cohesion (pi); and Heritage, Material Culture and Landscape (pm). The group pi hosts a UNESCO Chair on "Intangible Heritage and Traditional Know-how: Linking Heritage"; the group sd, a Demographic Lab; and the pm, a Tourism Lab. CIDEHUS also created a spin-off, AlentApp, in 2014.

CIDEHUS is associated to 5 PhD courses and 2 Erasmus Mundus, the Master TPTI (Techniques, Patrimoine, Territoires de l'Industrie); a PhD Program Phoenix (JDP Dynamics of Health and Welfare). CIDEHUS also integrates the OpenEdition consortium, and is associated to 4 international academic journals: e-Journal of Portuguese History; Hamsa: Journal of Judaic and Islamic Studies; Host; and Midas. Over the last years CIDEHUS invested in making the knowledge about the past an active resource for future building and providing open access outcomes as a way to contribute to the global community.



## Artistic Studies Research Center

CIEBA



### WEBSITE

<http://cieba.belasartes.ulisboa.pt/>

### RESEARCHERS

94

### FUNDING FCT

1,54 M Euros

### KEYWORDS

- Heritage and conservation
- Design
- Visual Arts
- Art education
- New Media

### STRATEGIC AIMS

CIEBA's five strategic goals are: to facilitate meaningful engagement with relevant audiences, enrolling younger and mature practitioners and researchers towards an advanced education; to deepen thematic research; to ensure research placement and its curation and safekeeping; to enhance relevant interactions and meaningful creative interventions with cultural and social impact; to facilitate meaningful engagement between art, and innovation, through the transfer of knowledge and technology.

### RESEARCH UNIT DESCRIPTION

CIEBA is organized in 8 research groups corresponding to the scientific areas of FBAUL: Sciences of Art and Heritage; Design; Painting; Communication Design; Drawing; Sculpture; New Media Art; Artistic Education. In addition to these, CIEBA has research lines corresponding to areas of master and PhD specialization. This structure and articulation has produced more than 150 PhD thesis.

CIEBA publishes several internationally indexed periodicals, running: *Estúdio* (QUALIS A2); *CROMA - Estudos Artísticos* (QUALIS B1); *GAMA* (QUALIS B1); *Matéria-Prima* (QUALIS B1); *Arte-Teoria*; and *Convocarte*. CIEBA has published, or sponsored more than 50 books and monographs authored by its researchers since 2013. There are 7 periodical International Congresses (with academic peer

review) and numerous colloquia, which attract more than 600 foreign researchers annually to CIEBA with impact.

CIEBA's Laboratories, both "Projectlab" (composed of *infolabb*, *openlab*, *fablab*), and the Conservation Laboratory "Heritage LAB" have been gathering importance in the economic and scientific fields. Projectlab has developed prototypes through its advanced 3D modeling capacities and other laser cutting and prototyping machines. Heritage LAB also responds to requests within its scope, in articulation with private and institutional collections, contributing to the preservation of patrimonial works of art and documents of historical value. Both laboratories are articulated with the curricular areas of FBAUL (Areas of Sciences of Art and Heritage and Product & Interior Design), allowing for professional internship conditions for undergraduate and graduate students.

Other CIEBA's main achievements are: on her activity as contemporary artist, Ângela Ferreira has been awarded the NOVO BANCO PHOTO 2015 prize, one of the most prestigious international contemporary art awards; and Susana Sousa Dias, was awarded different international prizes for her feature film "Luz Obscura" (2017), as the 'Mention Spéciale du prix du documentaire' at "Les Rendez-vous de l'histoire" (France, 2017).

## Interuniversity Centre for Camonian Studies

CIEC



### WEBSITE

<http://ciec.uc.pt>

### DATE OF FOUNDATION

1993

### RESEARCHERS

13

### FUNDING FCT

0,27 M Euros

### KEYWORDS

- Camonian Studies
- Reception
- Lusophony and Globalization
- Critical edition, commentaries, sources
- Comparative and interarts studies
- Camonian poetics and pragmatics

### STRATEGIC AIMS

CIEC is specifically dedicated to the work of critical editing and commentary, contextualization and analysis of the reception of Camões' work and the civic-cultural presence of the Camonian myth in the becoming of Portuguese, European and Universal History. It is also designed to be a meeting place for all the professors and researchers interested in Camonian studies.

### RESEARCH UNIT DESCRIPTION

In order to comply as a R&D unit with the statutory objectives that governed its founding in 1993, CIEC is specifically dedicated to the work of critical editing and commentary, contextualization and analysis of the reception of Camões' work and the civic-cultural presence of the Camonian myth in the becoming of Portuguese, European and Universal History. The recent and current activity of CIEC is largely governed by the logic of projects included in the thematic lines as editorial projects, Wits and Arts, Science and Musicology, Camões in the World, and Camões in the city and at school.

The Scientific Council and the CIEC Coordinator ensure a global articulation of the activities of knowledge creation and transfer of knowledge, as well of their societal effects of identity value and inclusive value. The design of projects and the training of the respective teams are not only

the result of CIEC's Integrated Members, but also of the intense activity of foreign Collaborating Members that extend CIEC's international scope.

CIEC main achievements include: the organization of Seminar series on the "Commentary of Camões"; participation of CIEC members in the international Colloquium "Camões today. (Trans)formations", held at the University of Zürich; an extension of knowledge course in the Far East, promoted by the Pedagogical and Scientific Center of the Portuguese Language of the Polytechnic Institute of Macao.

## Planning of Territory, Architecture and Design Research Centre

CITAD

**WEBSITE**

<http://citad.ulusiada.pt>

**RESEARCHERS**

74

**FUNDING FCT**

0,86 M Euros

**KEYWORDS**

- Architecture and Urbanism
- Sustainability
- History
- Architecture Technologies
- Design

**STRATEGIC AIMS**

CITAD strategic goals are: to develop research areas that bring together the fundamental scientific areas of Territory, Architecture, and Design, working with diverse researchers of various origins, universities, municipalities, industries, and companies, with the aim of disseminating findings for the benefit of the scholarly community and society.

**RESEARCH UNIT DESCRIPTION**

The CITAD - Center for Research in Territory, Architecture, and Design is composed of four Research Groups (RG) - RG 1: Architecture and Urbanism; RG 2: Architecture Technologies; RG 3: Theory, History, and Contemporary Interdisciplinary Thought; RG 4: Innovation, Design, and Culture (I) Material. Each Research Group contains Research Lines (RL), according to a specific theme, of which Research Projects are a part. Thus, RG 1 has the RL 1 Transdisciplinarity in architectural thought and practice and RL 2 "The city and landscape in contemporaneity". RG 2 has the RL1 "Sustainable construction", the RL 2 "Heritage", RL 3 "Color in architecture", and the RL 4 "Light in architecture". RG 3 has the LI 1 "The observatory and study" and the RL 2 "Philanthropic architecture". RG 4 has the RL 1 "User experience design".

CITAD's strategy is Architecture for Development, devel-

opped in four themes: Urban Regeneration, Sustainable Construction, Housing and Heritage, and Design. The need to articulate the management of natural resources in the face of the development of human activities, with a view to the sustainability of societies, leads to the development of new research themes in which the Environment and Man are reference points of observation. In this sense, universities and their research units can play a very significant role in finding sustainable, innovative, and creative solutions for efficient intervention in the areas of cities, new buildings, and the rehabilitation of built heritage.

CITAD's main achievements include: the project "Prefabricated modular system of exterior wall", with National Patent of Invention number 109679; the collective book "Sustainable Construction", published by Caleidoscópio; the organization of International "Congress of Innovation on Sustainable Construction", from Plataforma para a Construção Sustentável (of Universidade de Aveiro); and Aires Mateus' feature long documentary film, Matter in Reverse (2017).

## Research Center for Science and Technology of the Arts

CITAR

**WEBSITE**

<http://citar.artes.porto.ucp.pt/>

**RESEARCHERS**

46

**DATE OF FOUNDATION**

2004

**FUNDING FCT**

1,12 M Euros

**KEYWORDS**

- Art, Science and Technology
- New Media Art
- Digital Arts and Humanities
- Art and Cinema
- Heritage, Preservation, Restoration
- Sound Studies, Computer Music; Musicology

**STRATEGIC AIMS**

The overall strategic plan aims to target and consistently secure our visibility at the international level as a reference center for science and technology of the arts dedicated to interdisciplinary, art-based theory and practice research. We organize our contributions in 6 major interdisciplinary inquiries: 1) Artistic Gest(ure); 2) The Present in our Past; 3) Practices in Contemporary Creation; 4) Sustainable Conservation; 5) Audience Development and Diversity; 6) Preservation of Digital Art.

**RESEARCH UNIT DESCRIPTION**

CITAR is committed to the development of artistic research informed by practices and concepts inscribed in human-driven impulses of our postdigital era, the challenges and possibilities of the digital arts and humanities, in tandem with the complexity of analogue art forms and technologies. Our research and goals are articulated in four focus-based areas: Sound and Music, New Media Art, Cinema and Cinematic Art, and Heritage and Conservation Restoration.

We organize our contributions in 6 major interdisciplinary inquiries: 1. Artistic Gest(ure): to better understand why gesture is a crucial human element in expression, embodiment, sense and empathy induction. 2. The Present in our Past: to better understand how our evolving present(ist)

condition influences our renewed visions and hearings of past artistic achievements. 3. Practices in Contemporary Creation: to foster mechanisms of art creation through a better understanding of narrative strategies, and the functioning of intuition. 4. Sustainable Conservation: to develop methodologies and digital applications in response to the challenges of geriatric and gentrification culture consumption, tourism, and climate change. 5. Audience Development and Diversity: to study the conditions and foster the opportunities for audience development through artistic "encounters" as a research agenda. 6. Preservation of Digital Art: to contribute in the launching of a field-shaping incubator for this emerging area.





## Transdisciplinary Research Centre - Culture, Space and Memory

CITCEM



| WEBSITE        | DATE OF FOUNDATION |
|----------------|--------------------|
| www.citcem.org | 2007               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 184         | 2,55 M Euros |

### KEYWORDS

- Cultural inclusiveness
- Digital culture
- Historical narrative
- Memory and heritage
- Migration and permeability
- Sustainable transitions

### STRATEGIC AIMS

CITCEM aims to promote a multidimensional appreciation and awareness of territory, culture, literature, history and heritage, at a local and regional level, combining it with global perspectives. CITCEM's priorities are the expansion of its collaboration with specialized training programs, the establishment of partnerships with industries and other external entities, the recruitment of national and international post-graduate researchers, and the strengthening of international networks.

### RESEARCH UNIT DESCRIPTION

CITCEM is an R&D unit based at FLUP, which currently encompasses more than 400 researchers, both integrated and non-integrated. Anchored in the field of Humanities and Social Sciences, CITCEM acts as a platform for transdisciplinary research, exploring the close relationships between various disciplinary areas, such as History, Archaeology, History of Art, Cultural and Literary Studies, Demography, Information, Communication, and Heritage Sciences, among others.

CITCEM focuses on the transdisciplinary study of themes related to Memory and Heritage, in articulation with the interactive and evolutionary construction of identities and economic, social, political and cultural spaces. This focus encompasses the study of identity memories, cultural her-

itage in its material and immaterial forms, environmental history, rural and urban landscapes, population mobility, religious and literary practices, among other related research topics.

Since its origin, CITCEM has collaborated with local entities and independent institutions, implementing a strong regional connection that allows catalysing successful national and international partnerships, while ensuring knowledge transfer between academic research and communities.

CITCEM's recent most notable achievements are: two COST Actions – Women on the Move, and Language in the Human-Machine Era –; the History Lab for European Civic Engagement, an open e-Toolkit to train History Teachers on Digital teaching and Learning, funded by Erasmus+; two exploratory projects “Letters in the Cloister” and “The reconstruction of monastic archives in Northern Portugal”, funded by FCT (2021); and MOVES – Migration and Modernity, a European Joint Doctorate (Marie Curie Action).

## Research Centre for Territory, Transports and Environment

CITTA



| WEBSITE                | DATE OF FOUNDATION |
|------------------------|--------------------|
| http://citta.fe.up.pt/ | 2012               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 45          | 1,79 M Euros |

### KEYWORDS

- Spatial Planning
- Urban Policy and Planning
- Transport Planning and Engineering
- Environmental Policy and Management

### STRATEGIC AIMS

CITTA seeks to develop inter and multidisciplinary applied research, policy and design oriented, in the fields of Spatial Planning, Environmental Policy, and Transport Planning and Engineering, focusing on the roles of cities, urban systems and their transport infrastructure and services, under a distinctive post carbon paradigm perspective, able to feed and influence the international research agenda without jeopardizing the potential of knowledge generation associated to the specific nature of local, regional and national planning and transport issues.

### RESEARCH UNIT DESCRIPTION

CITTA is a FEUP and FCTUC research unit dedicated to the advancement and dissemination of knowledge in the fields of Spatial Planning, Environmental Policy, and Transport Planning and Engineering. It is the result of the merging of a smaller homonymous FEUP unit, with the Spatial Planning and Transport Engineering group from FCTUC's Civil Engineering Research Centre (CIEC). CITTA is located in the Civil Engineering Departments of the two universities, comprising dedicated office spaces, meeting rooms and laboratory areas (GIS Lab in Oporto, Traffic Analysis Labs in Oporto and Coimbra, and Geotechnical Engineering and Pavement Mechanics Labs in Coimbra). CITTA is organized into four Research Groups: Planning and Environmental Assessment (PEA); Urban Planning and Housing (UPH); Transport Analysis and Planning (TAP); and

Transport Engineering and Management (TEM). CITTA's team of researchers have backgrounds in Civil Engineering, Architecture, Environmental Engineering, Geography, Landscape Architecture, Spatial Planning, and Sociology, and are affiliated to various Portuguese Universities and Polytechnic Institutes.

Over the last five years, CITTA has been strongly involved in 26 EU-, COMPETE- and FCT-funded research projects, in 30 studies contracted by public and private entities, and two Doctoral Programmes (Spatial Planning and Transport Systems), both funded by FCT. A significant part of this activity has been done in collaboration with leading research universities such as MIT, Carnegie Mellon U, EPF Lausanne, ETH Zurich, Imperial College and U Cambridge. The research performed by CITTA has led to two books being published by major international publishing houses, 181 full articles in ISI or Scopus journals, and 33 PhD theses. It has also consolidated itself as the foremost Centre in the national Planning and Transports context (approximately 40% of Portuguese articles included in ISI and SCOPUS databases are authored by members of the Centre). In a European context, CITTA's position is also well established: within a 25-country sample of the 100 most influential European Research Centres in the Planning and Transports fields, CITTA's overall productivity, measured in ISI or Scopus articles per year and number of researchers holding a PhD degree, was 0.80, against a European average of 0.58.



## Centre for Innovation in Territory, Urbanism and Architecture

CITUA



|                                 |                           |
|---------------------------------|---------------------------|
| <b>WEBSITE</b>                  | <b>DATE OF FOUNDATION</b> |
| http://citua.tecnico.ulisboa.pt | 2020                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 24                 | 1,08 M Euros       |

### KEYWORDS

- Territory
- Urbanism
- Architecture
- Built Environment
- Consolidated city
- Peripheral City

### STRATEGIC AIMS

CiTUA's mission is to carry out high quality cross-disciplinary and collaborative research and knowledge development on urban territories; to collect and process rich and varied territorial, urban and architectural data; to understand the interactions between the built fabric of urban territories and their social, economic, cultural and environmental dynamics; to disseminate the work carried out in publications, conferences, seminars and other type of outreach activities; to establish links between the research outputs and high quality educational programmes, promoting also collaborative dynamics with the industry and public authorities.

### RESEARCH UNIT DESCRIPTION

CiTUA integrates an interdisciplinary approach to understand current changes and challenges. CiTUA's thematic lines are: Knowledge Environments, Heritage, Landscape as a Social-Ecological System, Planning and Management for the Enlarged City, Spatial Justice and Practice-Based Research. CiTUA adopts a strategic framework based on active collaboration among researchers and strategic partnerships with other R&D centres and institutions, being an added value for research. CiTUA allows its researchers access to an international scientific atmosphere, as well as to a stimulating and collaborative internal dynamics. To this

inspiring and creative environment contributes much the concern to attract researchers with diverse backgrounds able to enrich the discussions and fundamental research taking place at CiTUA.

CiTUA favours an interdisciplinary approach to current problems facing the city and territories and seeks innovative and integrated solutions to them, assuming as mission: to understand the interactions between the built fabric of urban territories and its potential social, economic, cultural and environmental dynamics; to contribute to the creation of conditions to ensure urban cohesion and habitability; to formulate answers to respond or recover from contemporary challenges and threats. CiTUA establishes links between research results and the syllabus of high quality courses, promoting continuous knowledge sharing inside and outside the university.

CiTUA's main achievements include: active intellectual collaboration among researchers with varied backgrounds and perspectives; strategic partnerships and cooperation with other R&D centres and institutions; introducing young researchers to large-scale collaborative research ventures. diffusion of scientific results through publications and scientific meetings; and new and diversified outreach activities based on the concept of open science and innovation.

## Interuniversity Center for the History of Science and Technology

CIUHCT



|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| http://ciuhct.org/ | 2007                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 39                 | 1,22 M Euros       |

### KEYWORDS

- History of Science, Technology and Medicine
- Circulation, Appropriation and Innovation
- Instruments, Practices, and Material Culture
- Experts, Institutions and Globalization

### STRATEGIC AIMS

CIUHCT strategic goals are: to inscribe Science, Technology and Medicine (STM) in historical narratives; to increase the international presence of Portuguese History of STM (HSTM); to foster transdisciplinary STM approaches; to assess contemporary issues through the HSTM lenses.

### RESEARCH UNIT DESCRIPTION

CIUHCT is the result of the merging of two previous units in the area of History of Science and Technology: Centro de História e Filosofia da Ciência e da Tecnologia (CHFCT) and Centro de História das Ciências da Universidade de Lisboa (CHCUL). Since its foundation in 2007, CIUHCT asserted itself as a leading unit in the history and material culture of Science, Technology and Medicine (HSTM) in Europe and the better positioned in Portugal to dialogue with scholars in the international scenario.

CIUHCT is organized in 2 research groups, working together: Instruments and Practices, Material and Visual Cultures; and Experts, Institutions and Globalization. CIUHCT's multiple disciplinary expertise allows a wide approach, by using both humans (experts and networks) and nonhuman actors (institutions, books, instruments, collections, spaces of STM production of knowledge and practices) in an extended timeline (16th to 21st centuries) and in a diversified geography (Portugal and its former empire

in a worldwide arena). By bringing together in the same research unit and under the same conceptual umbrella an array of diversified topics, CIUHCT became the hub for new perspectives on the role of STM in a globalized world. CIUHCT also strongly contributes to the consolidation of a strong scientific community by actively participating in the training of students, participating in one MSc and 2 PhD programs.

CIUHCT's notable achievements include: the publication of HoST - Journal of History of Science and Technology, an open-access peer-reviewed international journal (De Gruyter/Sciendo), the only published in Portugal devoted to HSTM; an ERC Starting Grant for the project "MEDEA-CHART"; participations in 4 major H2020 projects - MARINA (ocean pollution), HERACLES (heritage), BIO-VOICES (sustainability) and InsSciDE (science, technology and diplomacy); and the Exhibition 360° Science Discovered (at Calouste Gulbenkian Foundation) which had more than 70.000 visitors, and was awarded several prizes, including the "Best Exhibition of the year 2013" by APOM (Portuguese Association of Museums).

## Centre for Lusophone and European Literatures and Cultures

CLEPUL

|                    |                           |
|--------------------|---------------------------|
| <b>WEBSITE</b>     | <b>DATE OF FOUNDATION</b> |
| www.clepul.eu      | 1975                      |
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b>        |
| 116                | 1,43 M Euros              |

### KEYWORDS

- Literature
- Culture
- Lusophony
- Europe

### STRATEGIC AIMS

CLEPUL's main strategic goal is to reveal sources and publish titles of national interest in Lusophone historiography and literatures, with critical and annotated editions, while associating the Portuguese language to the other Romance languages and, in an innovative way, with the Slavic languages.

### RESEARCH UNIT DESCRIPTION

CLEPUL is one of the oldest and largest Portuguese Research Centers dedicated to literary studies, with more than one hundred PhD members, and one of the highest number of young researchers with projects and leading functions among national centers. Along with the edition of unpublished sources and reference works, CLEPUL has established a dialogue between various fields of knowledge and the Lusophone and European universes, with studies on cultural identity and on Iberian-Slavonic inter-culturality. Presently composed of 8 Research Groups, the Centre also has 6 associated Poles in both national and foreign universities, and a wide network for scientific exchange with a significant number of signed cooperation protocols. CLEPUL became known for combining large-scale scientific works (collective works and international conferences pioneering in their transversal approach and multidisciplinary focus) with smaller ones (individual works, critical

anthologies, exhibitions). CLEPUL has strongly invested in Portuguese Culture and Literature, making previously unpublished sources available and encouraging innovative approaches: 1. Preparation and publication of unpublished sources, reference works (e.g. dictionaries) and complete works; 2. Accomplishment of its internationalization plan, with the translation of an anthology of texts of Father António Vieira in 21 languages; 3. Organization of conferences, seminars and courses abroad; 4. Expansion and consolidation of its cooperation networks, with emphasis in Lusophone and Ibero-Slavonic countries; 5. Reinforcement of its vocation as hosting institution by attracting foreign researchers; 6. Renewed presence in schools and in the civil society (city councils, associations, etc.), through conferences and sessions for the dissemination of scientific results.

CLEPUL main achievements include: the 30 volume edition of the Complete Works of Father António Vieira, both in Portugal (Círculo de Leitores) and Brazil (Edições Loyola); the collective book *Intende, Lector - Echoes of Myth, Religion and Ritual in the Ancient Novel* (de Gruyter); and the Luso-Brazilian 100 Orpheu Congress held at Lisbon and Brazil.

## Centre for Languages, Literatures and Cultures

CLLC


 universidade de aveiro **cllc** centro de línguas, literaturas e culturas

|                       |                           |
|-----------------------|---------------------------|
| <b>WEBSITE</b>        | <b>DATE OF FOUNDATION</b> |
| http://www.ua.pt/cllc | 1994                      |
| <b>RESEARCHERS</b>    | <b>FUNDING FCT</b>        |
| 40                    | 0,83 M Euros              |

### KEYWORDS

- Moving Texts
- Literary Hermeneutics
- Cultural Hermeneutics
- Linguistic Variation
- Translation
- Language Contact

### STRATEGIC AIMS

CLLC strategic aims are: to make the CLLC a Centre of excellence for research and interdisciplinary studies in the humanities through publication, dissemination of results and organizing colloquia; to enlarge our active participation in international communities of researchers in the arts and linguistic sciences; to train young researchers so that a new generation of scholars can emerge and our traditions and interests can be maintained; to serve the surrounding community with knowledge and expertise in arts and languages.

### RESEARCH UNIT DESCRIPTION

Based in the Dept of Languages and Cultures, University of Aveiro, CLLC is an intercultural research unit in the Humanities, with a strong inter and transdisciplinary orientation. It is organised into three research groups (RG) whose work centres on a theme of literary, cultural and linguistic mobility: RG Between Texts – Literary Hermeneutics; RG Between Cultures – Cultural Hermeneutics; and RG Between Languages – Variation, Translation, Learning.

The CLLC's research programme is carried out by senior and junior researchers in collaboration with external academics. The teams working in the different projects work with other research units and networks, thus strengthening collective efforts. A solid training for graduates and

postgraduates from the DLC is one of the missions of this R&D unit, which is clearly reflected in its organization and its strategic programme.

Recognising the importance of a connection to wider society, CLLC promotes several activities in connection with schools, cultural organisations and businesses.

CLLC is run by a Scientific Board, a Coordinating Committee, Coordinators (Anthony Barker and Teresa Alegre) and a General Assembly.

CLLC recent notable achievements are the creation of an international university network in Cultural Studies (RIEC), based in Aveiro; the conferences cycle "From manuscript to Book"; III Meeting of Young Researchers in Comparative Literature (EJICOMP); congresses on Romance language linguistic variation and European Minority Languages; the project on Cultural Transformations in 'new media', which included the publication *Body and Text* (Spriger,2019).

## Centre of Portuguese Literature

CLP



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.uc.pt/fluc/clp">http://www.uc.pt/fluc/clp</a> | 2003               |
| RESEARCHERS   | FUNDING FCT        |
| 32  | 0,71 M Euros       |

### KEYWORDS

- Portuguese Literature
- Literary Theorie
- Digital Culture
- Comparative Studies

### STRATEGIC AIMS

CLP's mission is to promote the study, preservation, understanding and value of Portuguese literature, as both patrimony and ongoing practice, focusing upon basic research, with the support of digital processing languages and technologies.

### RESEARCH UNIT DESCRIPTION

The Centre for Portuguese Literature (CLP) is a Unit of Research and Development funded by FCT since 2003. The Centre is located at the Faculty of Arts and Humanities at the University of Coimbra, and it includes researchers based both at the University of Coimbra and at other research institutions.

CLP is structured around certain research domain, understood to be fundamental elements of its identity, concentrated into three broad groups: Literary Heritage; Theory of Literature; and Digital Mediation and Materialities of Literature. In the heritage domain, a priority is given to research activities that contribute to the preservation of texts that safeguard the literary memory in the Portuguese language, extending to other countries where it is the official language, and to the teaching of literature. In the domain of theory of literature, the objective is conceptual inquiry, epistemological problematization and interdisciplinary correlation, with connections to the multiple

areas of applied research. While the digital mediation domain conducts research related to the materiality of literary texts in various aspects (text editing, digital literature, transfer between formats, etc). Group interaction has always been a homogeneizing factor for the Centre. Of its various joint activities, special mention must be made to *Revista de Estudos Literários* ("Journal of Literary Studies"), and to *MatLit*, both peer-reviewed open access journals, published by Coimbra University Press.

CLP has also pursued its educational mission with post-graduate programmes, with CLP members teaching on three MA and PhD Programmes, involving over 50 students: Portuguese Language Literature; Modern Cultures and Literatures; Materialities of Literature.

Other CLP's notable achievements are: critical editions of the works of Almeida Garrett and Eça de Queirós; the "LdoD Archive" collaborative digital archive of the *Book of Disquiet* by Fernando Pessoa, which in addition to reading and comparing transcriptions allows users to collaborate in creating virtual editions of the work; and the "Dicionário de Personagens da Ficção Portuguesa" ([dp.uc.pt](http://dp.uc.pt)).

## Center of Linguistics of the University of Lisbon

CLUL

| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.clul.ulisboa.pt/en/">www.clul.ulisboa.pt/en/</a> | 1932               |
| RESEARCHERS  | FUNDING FCT        |
| 72   | 1,51 M Euros       |

### KEYWORDS

- Grammar
- Processing
- Linguistic Resources
- Language Variation
- Language Acquisition
- Digital Humanities

### STRATEGIC AIMS

CLUL's strategic research agenda encompasses eight key research areas linked to the strategic goal of furthering CLUL's role as the leading international center for the study of Portuguese and related creole languages: resources and applications for Portuguese; spatial and historical language variation; digital humanities and critical edition; language processing and language acquisition; language impairments in development and ageing; educational linguistics; translation; formal models of grammar.

### RESEARCH UNIT DESCRIPTION

CLUL is a public R&D institution founded in 1932, and is a unit of the School of Arts and Humanities of the University of Lisbon. CLUL is committed to leading research on Portuguese, including Portuguese-related creoles, aiming at contributing to understand language knowledge, acquisition, and use, from the mental representation of grammar(s) to oral and written language processing, and from language acquisition and development to language variation across time, regions and people.

By combining theory-oriented and applied research, laboratorial investigation, fieldwork, and archive and computer-based treatment of linguistic data, the center has a long tradition of producing, updating, refining and disseminating linguistic resources to the scientific community and to

the general public. The outcomes of CLUL's research on educational linguistics, language acquisition and language impairments have direct impact on societal challenges and target a more inclusive society. With this mission in mind, CLUL positions itself as the international reference center for the study of Portuguese and Portuguese-related languages.

Among CLUL's main achievements are the the development of corpora of Portuguese varieties (L1/L2) and Portuguese-based creoles around the world; the publication of the critical edition series of Fernando Pessoa and Camilo Castelo Branco's works; the creation of linguistic resources for research on geographical and historical variation of Portuguese; psycholinguistic research to characterize profiles of (a)typical oral and written language processing; and innovative research on early language development in typical and atypical infants and toddlers.

## Centre of Linguistics of NOVA University of Lisbon

CLUNL



|                                     |                                    |
|-------------------------------------|------------------------------------|
| <b>WEBSITE</b><br>clunl.fcsh.unl.pt | <b>DATE OF FOUNDATION</b><br>2000  |
| <b>RESEARCHERS</b><br>36            | <b>FUNDING FCT</b><br>0,78 M Euros |

### KEYWORDS

- Language acquisition
- Grammar and text
- Lexicology and lexicography
- Language and cognition
- Formal and experimental linguistics
- Terminology

### STRATEGIC AIMS

CLUNL's strategic lines for 2020-2023 are: fostering the advancement of knowledge and fundamental research and pursue new areas of knowledge application and response to societal challenges; investing in advanced training and scientific initiation of students and recruitment of young researchers; promoting and developing the dissemination and transfer of knowledge and resources; making open and online language resources available.

### RESEARCH UNIT DESCRIPTION

CLUNL is a research unit that aims at promoting research in theoretical and applied Linguistics, to develop the advanced training of researchers, and to promote the dissemination of scientific data about the nature of language and the functioning of languages and texts. The work developed at CLUNL since its creation, in 2000, has made a relevant and distinctive contribution to the study of linguistics in Portugal, in areas such as language acquisition (native language and non-native language), discourse analysis, lexicology and lexicography, text theory and terminology, while investigating domains such as lexicon and vocabulary (general and specialized), historical linguistics, morphology, syntax, and semantics.

Currently, CLUNL's researchers are organized in three research groups: LiFE – Formal and Experimental Linguis-

tics; LLT – Lexicology, Lexicography and Terminology; G&T – Grammar & Text. These groups are committed to investigating specific research topics, specially: L1 and L2 acquisition; forms and constructions in Portuguese; lexicography and lexicology; multimodality, multilingualism; approaches to language teaching (L1 and L2); natural language processing; theories of texts and discourses; terminologies and ontologies.

## Centre of Linguistics of the University of Porto

CLUP



|                               |                                    |
|-------------------------------|------------------------------------|
| <b>WEBSITE</b><br>www.clup.pt | <b>DATE OF FOUNDATION</b><br>1976  |
| <b>RESEARCHERS</b><br>25      | <b>FUNDING FCT</b><br>0,77 M Euros |

### KEYWORDS

- Linguistics
- Structures
- Discourse
- Uses
- Applications

### STRATEGIC AIMS

The main strategic goals of CLUP are to keep furthering the research conducted so far, and to open it in other areas, promoting cross-disciplinary approaches, in domains such as Forensic Linguistics, Computational, Educational and Clinical Applications, and Studies of Gesture and of Portuguese Sign Language.

### RESEARCH UNIT DESCRIPTION

CLUP, which has conducted its research over the past 40 years, is the only research Centre in Northern Portugal exclusively dedicated to linguistics. Our team brings together senior and junior researchers, reputed nationally and internationally in the field of Linguistic Structures and their uses, as well as in the realm of Linguistic Applications. These are the two main dimensions of CLUP's activity: 1) Linguistic Structures and 2) Linguistic Applications. The group is responsible for a high volume of national/international publications mainly in the following areas: specialised communication, discourse, phonology, historical linguistics/linguistic historiography, text linguistics, applied psycholinguistics, semantics, syntax, and forensic linguistics. Our areas of application include the production of learning materials for the teaching of Portuguese and other languages, linguistic corpora, natural language processing tools, translation, and forensic linguistics. CLUP

regularly promotes scientific and formative activities and is responsible for several regular publications (including 4 scientific journals). CLUP is a founding member of LINGUATECA, an interinstitutional project for the development of computational linguistic tools. It is responsible for language datasets, most of which are freely available through CLUP's webpage, such as the Dialect Archive, composed of hundreds of sound recordings of Contemporary European Portuguese from different regions. Although most of our research focuses on Contemporary European Portuguese, much of our work also includes other languages and a wide range of (geographical, historical, social) varieties of Portuguese.

Other of CLUP recent notable achievements are: in recent years, CLUP members participated as PIs/co-PIs in 6 funded research projects; and the publication 4 open access peer-reviewed academic journals (Linguística; ElingUP; Language and Law; Redis).



## Esad idea, Research in Design and Art

ESAD-IDEA

esad—idea

|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="https://esadidea.pt/">https://esadidea.pt/</a> | 2013                      |
| <b>RESEARCHERS</b>                                      | <b>FUNDING FCT</b>        |
| 20  | 0,56 M Euros              |

**KEYWORDS**

- Design

**STRATEGIC AIMS**

ESAD-IDEA's strategic aims include the contribution to knowledge production, application and transfer; exhibitions and shows curatorship; conferences, forums and workshops organisation; network creation and internationalisation; dissemination and reaching out to new audiences, in the major fields of research for design, research through design, research into design, and contextual research, focusing on process innovation (epistemological, social, scientific and technological).

**RESEARCH UNIT DESCRIPTION**

ESAD-IDEA is a R&D centre managed by the non-profit association Associação para a Promoção da Investigação em Design e Artes created in 2014 that forefronts the research from ESAD, an art and design college created in 1989. ESAD-IDEA encompasses practice-led, practice based and theoretical research, consulting, programming, and design practice aiming to enhance the regional, national and international impact.

ESAD-IDEA has four areas of research: product design innovation; architecture and design; design studies; multi-scalar design. One of its main aims is to promote research and internationalisation of Portuguese design, its history and identity and innovate its projects and products, aiming to enhance its cultural, productive and commercial

sustainability. Even though ESAD-IDEA is a recent Centre, it achieved the following outputs: over 100 conferences; over 50 workshops; over 10 exhibitions; over 30 publications, and 50 design projects. ESAD-IDEA positions itself as an important partner for the development of its regional context through the organisation of initiatives that use knowledge, technical and scientific capacities of its academic and external community. It also manages council interventions, namely, Casa do Design de Matosinhos and Incubadora de Design do Mercado de Matosinhos, and the executive management of Porto Design Biennale. From 2014 to 2017 ESAD-IDEA developed over 50 research projects self-raising funds such as R&D projects with national (DGArtes) and international (Erasmus+) funding, enterprises funding and through applied practice mainly in the councils of Matosinhos, Porto, Paredes, and Santo Tirso. ESAD-IDEA features partnerships with publishers and has its own publishing seal with an online bookstore ([store.esad.pt](http://store.esad.pt)) and periodical publication.

ESAD-IDEA focuses a scientific culture for the development of network projects with a critical agenda comprehensive of social responsibility, sustainability, social innovation, and critical knowledge production issues with a network of institutional partnerships with educational and research centers and businesses from Europe, Asia and South America.

## Research Institute in Art, Design and Society

I2ADS



|   |                           |
|---|---------------------------|
| <b>WEBSITE</b>  | <b>DATE OF FOUNDATION</b> |
| <a href="https://i2ads.up.pt">https://i2ads.up.pt</a> | 2011                      |
| <b>RESEARCHERS</b>                                    | <b>FUNDING FCT</b>        |
| 26  | 0,67 M Euros              |

**KEYWORDS**

- Art
- Design
- Arts education
- Music and performing arts
- Drawing
- Artistic studies

**STRATEGIC AIMS**

i2ADS strategic aims are: to create a body of researchers who promote relevant research on the national and international scene; to carry out research in articulation with other institutions, through partnerships, consortiums and networks; to ensure the articulation of research with post-graduate training; to provide services of artistic and scientific relevance to the community; to disseminate the knowledge produced; to promote mobility and artistic and scientific exchange between similar institutions.

**RESEARCH UNIT DESCRIPTION**

i2ADS' mission is to promote research in Fine Arts, Design, Drawing and Performing Arts, with an emphasis on the practical and educational impact of artistic research in society. The main goals are the creation of a shared research culture between artistic areas to inform and enhance its practice and the promotion of debates regarding the social, cultural and technological frames of art and design. I2ADS focus its activity on the development of the 'knowledge triangle' in Art and Design - research, education and innovation - following the Vienna Declaration on Artistic Research. i2ADS' team is composed of integrated researchers from the Faculty of Fine Arts and Architecture of UPorto and the School of Music and Performing Arts (Polytechnic of Porto), and of more than thirty PhD FCT grants.

I2ADS' organization comprises Research and Art-Based Labs structured around six Programs: Arts education, critique and society; Art Practice, politics and social engagement; Artistic production, processes and technological Studies; Computation, hybrid practices and culture; Drawing across disciplines; Interculturality and Society. The Unit supports two Doctoral Programs (Fine Arts and Arts Education) and is actively involved in the promotion of a research culture among master's and BA's Programs at FBAUP. i2ADS is also an Institutional and Portal member of the Society of Artistic Research (SAR) and the European Educational Research Association (EERA).

I2ADS' main achievements include: CREAARTE - Creative Primary School Partnerships with Visual Artists ([createar.te.up.pt](http://createar.te.up.pt)); the project "Social inclusion & Well-being through the Arts and Interdisciplinary Practices" ([swaiaproject.lhi.is](http://swaiaproject.lhi.is)); IDENTIDADES\_Colectivo de Acção/Investigação ([identidades.up.pt](http://identidades.up.pt)); and the book Post-Digital Letterpress Printing: Research, Education and Practice, published by Routledge.

## Interdisciplinary Center for Archaeology and Evolution of Human Behavior

ICAREHB



**WEBSITE**  
www.icarehb.com

**DATE OF FOUNDATION**  
2014

**RESEARCHERS**  
15

**FUNDING FCT**  
1,48 M Euros

### KEYWORDS

- Human Evolution
- African Archaeology
- Prehistoric coastal archaeology
- Complex societies
- Prehistory
- History of Archaeological Science

### STRATEGIC AIMS

The core mission of the ICArEHB is to develop an integrative understanding of past human adaptations. We seek to establish interdisciplinary perspectives to address key aspects of the human journey by investigating the archaeological record and using present analogs, including extant primates, to model past human evolution and adaptation through time.

### RESEARCH UNIT DESCRIPTION

Since its start, in 2014, the conceptual framework behind ICArEHB was very different from the more traditional Portuguese archaeological research centers: it unites a group of young researchers with the overarching goal of attaining a holistic understanding of our unique evolutionary path. To achieve this, ICArEHB integrates a diverse group of researchers, many of which with an international career and with multidisciplinary expertise.

Research is grouped into four main topics: African Archaeology and Human Evolution; Prehistoric Coastal Adaptations; Development of Complex Societies; and History of Archaeological Science. These groups are not independent from each other since their scientific inquiry and applied methodologies frequently overlap and overflow between research lines. In line with our scientific questions, the geographic scope embraces several key research are-

as in Europe, Africa and in the Near East.

In addition to researcher-specific facilities, ICArEHB has six main laboratories that serve the research center and perform external public services: the Laboratory of Archaeological Materials (LAM), the Laboratory for Analysis of Raw Materials and Ancient Tools (LARMAT), the Microscopy and Digital Archaeology Laboratory, the Laboratory for Experimental Archaeology (LExA), the Human Osteology and a Evolution Lab (HOEL), and the Paleo-environmental and Diet Laboratory (paleoED).

## Research Institute for Design, Media and Culture

ID+



**WEBSITE**  
http://www.idmais.org

**DATE OF FOUNDATION**  
2007

**RESEARCHERS**  
68

**FUNDING FCT**  
1,20 M Euros

### KEYWORDS

- Contemporary media, culture and creativity
- Design literacy and history
- Societal impact of the investigation
- Design for entrepreneurial development
- Regional networks for valuing design and culture
- Research through design and art

### STRATEGIC AIMS

ID+ strategic aims are: to intervene in the production and application of knowledge, enhancing cultural mediation through Design, social questioning and poetic innovation through Art; to demonstrate the importance of Design & Art in the definition and multidisciplinary implementation of scenarios for sustainable growth; to validate Design & Art as ethical agents of a demanding, critical and participated citizenship; to scrutinise the contemporaneity of cultural heritage, in its relation with technology and media.

### RESEARCH UNIT DESCRIPTION

ID+ is a research unit focused on the area of Design, but with intervention in other creative areas of Art and Culture. It is the result of a formal cooperation agreement between the Universities of Aveiro (Department of Communication and Art), Porto (Faculty of Fine Arts) and the Polytechnic Institute of Cávado and Ave (School of Design), extending to ten other national higher education and research institutions. In the most recent FCT evaluation, ID+ obtained the classification of Very Good.

The ID+ team of researchers is organised in 11 groups, which cover specific perspectives, preserving the capacity for reconfiguration and cooperation according to various projects and challenges: CAOS - interfaces with local industries; DESIS LAB - social innovation and sustainability

networks; LUME - laboratory for unexpected media; MADE. PT - critical design for growth and prosperity; PRAXIS & POIESIS - art practice and theory; SD LAB - strategy and design management; THEME - theory and memory; PERIPHERIES - design, nature, culture and tourism (at the University of Madeira); OIKOS - design for eco-systemic spaces; HEAD: design and health; CINEMAS: cinema and digital narratives.

Some of ID+ notable achievements are the joint PhD programme in Design between the Universities of Aveiro and Porto; the implementation and development of a Portuguese Design Observatory (DESIGNOBS.PT); several funded projects (9 Erasmus+, 3 Creative Europe, 4 FEDER, 7 FCT); the community outreach projects “Art on Chairs” (Paredes/RegioStars Prize), and “Future Places”; and the participation in two international networks - DESIS Network (coordination), and European Academy of Design. In addition to these, nearly one third of the PhDs in Design carried out in Portugal were supervised by ID+ members.

## Institute for Philosophical Studies

IEF



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.uc.pt/fluc/uidief">http://www.uc.pt/fluc/uidief</a> | 2016               |
| RESEARCHERS   | FUNDING FCT        |
| 14  | 0,18 M Euros       |

### KEYWORDS

- History of Philosophy and Ethics
- Aesthetics, Philosophy of Art
- Philosophy of Technics

### STRATEGIC AIMS

The IEF aims to articulate the philosophical thought with the social and cultural contents raised by contemporary life, especially those concerning the dynamics of “caring”. Taking as an anchor the idea that the renewal of philosophy is closely linked to a permanent updating of its themes, and without neglecting the history of philosophy, the IEF assumes as its strategic goal the creation of interdisciplinary processes among various areas of scientific knowledge.

### RESEARCH UNIT DESCRIPTION

The IEF is dedicated to research in Philosophy. Based at the Faculty of Arts and Humanities of the University of Coimbra, the IEF integrates members from other higher education institutions. Its main line of research is the philosophy of care. The IEF privileges the intersection of this theme with all the traditional fields of philosophy, such as ontology and metaphysics, ethics and aesthetics, politics and society, logic and argumentation, science and anthropology, hermeneutics and religion. It also attends to the disciplinary intersections that imply care with human thinking, doing and acting, in the world of health, social work, the environment and the horizons of ecology, politics and law, the digital society and its challenges, cultural heritage and curatorship.

Attentive to the history of philosophy and the dialogue with its texts, the IEF also embraces the mission of stimulating philosophical thinking and conceptualization in Portuguese language and the recovery, deepening and international dissemination of the philosophical heritage linked to the “School of Coimbra”. The IEF develops an open-access editorial activity and offers a range of other activities, mainly supporting the training of young researchers, encouraging masters and doctoral degrees and hosting post-doctoral projects in multiple areas of Philosophy. Some of IEF main achievements are the creation of the eQVODLIBET Philosophical Series, intended for the publication in digital format of philosophical works; the creation of the international digital repository Conimbricenses.org, dedicated to the dissemination of the Aristotelian tradition of Coimbra; and the execution of the first national research project dedicated to the “philosophy of care”.

## Institute for the Study of Literature and Tradition

IELT



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.ielt.fcsh.unl.pt">www.ielt.fcsh.unl.pt</a> | 2003               |
| RESEARCHERS  | FUNDING FCT        |
| 90   | 1,28 M Euros       |

### KEYWORDS

- Literature
- Tradition
- Heritage
- Art
- Culture

### STRATEGIC AIMS

IELT strategic aims are: to stimulate the creation and the development of research projects, integrating young researchers through the attribution of scholarships; to promote the insertion of UI in national and international scientific networks; to support the publication of monographs in open access; to encourage the organization of international scientific meetings, including with non-academic institutions; to provide advanced training for 2nd and 3rd cycle students and lifelong learning courses.

### RESEARCH UNIT DESCRIPTION

IELT is a research unit recognized by FCT that focuses on the centrality of the literary phenomenon (regardless of its form, register, mode of transmission and reception) within an interdisciplinary reflection on tradition and cultural identity.

IELT privileges: 1. The study of literature with memorial register and oral transmission and its persistence in the formation, consolidation and dissemination of identity, cultural and literary matrices; 2. The relations between literary modernity, memory and tradition and the status of modernity as tradition; 3. The study of the literary phenomenon as an expansive space through its relationship with other arts and discursive modalities; 4. The archive as a space of confluence between memory, tradition and

reinvention and a privileged space for the articulation between literature and tradition.

This scientific reflection is structured in 3 research axes: a) Immaterial heritage and symbolic imaginary; b) Literary tradition, texts, arts and culture; c) Spatialities of literature, arts and culture. In this permeable, collaborative and dynamic tripartition, the different scientific projects of the IU are articulated, focusing on the problems of the IELT’s mission, developed by interdisciplinary teams, in many cases international or linked to informal cosmopolitan networks.

Some of IELT’s main achievements are the development and maintenance of 9 databases for publication of research results; the periodical publication of 4 digital scientific journals with scientific arbitration/peer review; and 13 national projects, 1 H2020 project, and 1 Marie Skłodowska-Curie Individual Grant.

# Institute of Medieval Studies

IEM



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://iem.fcsh.unl.pt">http://iem.fcsh.unl.pt</a> | 2002               |
| RESEARCHERS   | FUNDING FCT        |
| 49  | 1,36 M Euros       |

#### KEYWORDS

- Middle Ages
- Medieval Studies
- Local & Global in the Middle Ages
- Historical & Cultural Heritage
- Mobilities in the Middle Ages

#### STRATEGIC AIMS

IEM aims at promoting critical thinking and debate in Medieval Studies; emphasizing interdisciplinarity and comparative approaches; stimulating the production of innovative knowledge on Medieval topics; training researchers and promoting researcher's autonomous participation in the Institute; disseminating research results to diversified audiences and increasing exchanges and networking; and collaborating with FCSH on educational offer.

#### RESEARCH UNIT DESCRIPTION

The Institute for Medieval Studies is a research unit founded in 2002 from the Núcleo Científico de Estudos Medievais da FCSH (Scientific Group for Medieval Studies), which, in the 1990s, brought together most of the Faculty's researchers dedicated to Medieval Studies in a pluridisciplinary approach. The Institute benefits from a prestigious heritage both in the national and international context, associated above all with its founders – José Mattoso and Luís Krus –, while also revealing a strong identity of its own, as it is the only research unit in Portugal exclusively devoted to Medieval Studies, bringing together Archaeology, History, History of Art, History of Music and Literature. It has a specificity of its own due to its methodological comprehensiveness and to its inter- and multidisciplinary, which extends beyond the scope of the social

sciences and humanities.

Having the NOVA University of Lisbon – School of Social Sciences and Humanities (NOVA FCSH) as host institution, its mission is integrated in the statutory principles of this organic unit, which charges the RUs with promoting the development of scientific research and culture in their specific area, the training of researchers and the provision of services to the community. The IEM was evaluated in 2019 with the classification of EXCELLENT by FCT.

Some of IEM main achievements are the PhD in Medieval Studies, which is the first national doctorate degree centered on Medieval Studies; the International Conference Medieval Europe in Motion; *Medievalista*, which is the sole Portuguese journal exclusively on Medieval Studies; and the project VINCULUM, funded by an ERC Consolidator Grant.

# Institute of Philosophy

IF



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://ifilosofia.up.pt/">http://ifilosofia.up.pt/</a> | 1997               |
| RESEARCHERS   | FUNDING FCT        |
| 57  | 1,26 M Euros       |

#### KEYWORDS

- Philosophy
- History of Philosophy
- Epistemology
- Political Philosophy
- Metaphysics
- Aesthetics

#### STRATEGIC AIMS

IF aims at developing international level research in Philosophy with different orientations and engaging with ongoing debates around two main areas: Medieval and Early Modern Philosophy, and Contemporary Philosophy – with the connection between the areas is also a permanent objective. The research comprises metaphysics, epistemology, philosophy of mind and language, aesthetics, ethics, philosophical anthropology and political philosophy.

#### RESEARCH UNIT DESCRIPTION

The Institute of Philosophy of the University of Porto is a Research and Development Unit specialized in Philosophy. The research activity is divided in two Thematic Lines – Medieval & Early Modern Philosophy, and Modern & Contemporary Philosophy – with 6 Research Groups (RGs): RG1 Aristotelica Portugalensia - the Reception of Aristotle in Portugal until the 18th Century; RG2 Reason, Politics and Society in Medieval and Early Modern Philosophy; RG3 Aesthetics, Politics and Knowledge; RG4 Mind, Language and Action Group; RG5 Roots and Horizons of Philosophy and Culture in Portugal; RG6 Philosophy and Public Space. All IF six research groups cooperate between them, and develop the research activity in articulation with international specialists and/or groups.

Some of IF most recent notable achievements are: the

book *The Logical Alien. Conant and His Critics* (2020). Edited by Sofia Miguens. Harvard University Press; the chapter “City and Common Space” (Paula Cristina Pereira) in *The Routledge Handbook of Philosophy of the City* (2019). Routledge; the project “From Data to Wisdom. Philosophizing Data Visualizations in the Middle Ages and Early Modernity (13th-17th Century)””; the book *A Ciência Metafísica. Itinerários de um conceito* (2018). Edited by Oliveira e Silva, P., Rebalde, J., Poncela, A. Afrontamento; and the book *De Portugal a Macau: Filosofia e Literatura no Diálogo das Culturas* (2017). AAVV. FLUP.



## NOVA Institute of Philosophy

IFILNOVA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://www.ifilnova.pt">http://www.ifilnova.pt</a> | 1993               |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 56          | 1,87 M Euros |

### KEYWORDS

- Values
- Argumentation
- Nietzsche
- Aesthetics
- Dissemination
- Philosophy of Language

### STRATEGIC AIMS

IFILNOVA's main purpose is to develop research programs focused on the philosophical investigation of Value(s), particularly by investigating the nature of value, the role of values in human action, as well as their normativity as constituted through public argumentation and reasoning in the ethical, political, and aesthetic fields. It aims also to apply philosophical theories to social practices and problems.

### RESEARCH UNIT DESCRIPTION

Having started as a research unit dedicated to the Philosophy of Language, IFILNOVA was created in 1993 and, in recent years, has consolidated its commitment to research with a single thematic line, also expanding the approaches to the philosophical problems in question. With such a strategic framework, it has achieved international recognition in argumentation theory, pragmatics, history of philosophy, and philosophy of education. The application of groundbreaking theoretical insights to social practices led IFILNOVA to being awarded funding from Horizon 2020. The goal of the institute is pursued at different levels (theory, application, outreach) through four distinct strategies: 1. Fundamental research on philosophical problems. 2. Development of classic theories. 3. Development and application of new theories to empirical fields. 4. Direct inter-

vention into social practices. These goals are pursued by four Laboratories with distinct methods and perspectives. ArgLab considers the problem of Value from a formal perspective; CultureLab considers the problem of Value from a material and historical perspective; EPLab inquires into the role that values play in a variety of contemporary individual and collective experiences; CineLab is dedicated to the philosophical thinking through of the moving image. IFILNOVA main achievements include: the Horizon 2020 project "DIALLS - Dialogue and Argumentation for Cultural Literacy Learning in Schools", in a consortium composed of nine Universities; the international open access peer-reviewed journal, Cinema: Journal of Philosophy and the Moving Image ([cjpmi.ifilnova.pt](http://cjpmi.ifilnova.pt)); the 1st European Conference on Argumentation (ECA), which gathered 230 international scholars; and the FCT-funded R&D project "Values in Argumentative Discourse".

## Art History Institute

IHA



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="https://institutodehistoriadaarte.wordpress.com">https://institutodehistoriadaarte.wordpress.com</a> |                    |

| RESEARCHERS | FUNDING FCT  |
|-------------|--------------|
| 58          | 1,16 M Euros |

### KEYWORDS

- Art History
- Visual and Material Culture
- Cultural Transfers in a Global Perspective
- Lisbon Studies
- Museums, Exhibitions, Curatorship and Art Markets
- Heritage, Memory and Citizenship

### STRATEGIC AIMS

IHA strategic aims are: to foster and consolidate research in the broad field of art history, museum studies, heritage and conservation, art theory, contemporary art practices, while articulating the expertise of our scientific community with NOVA FCSH's art historical education; to promote the international visibility of research made in Portugal; to ensure the training of young researchers by integrating them into research teams via fellowships and internships; to stimulate scientific employment; to reinforce multidisciplinary approaches and collaborative work.

### RESEARCH UNIT DESCRIPTION

IHA operates in the broad field of art history, intersecting the worlds of museum studies, urban studies, heritage and conservation, art theory, and the study of visual and material culture and artistic practices. Our work is project-oriented and cultivates the collaborative and international dimensions of research. IHA is committed to high standard basic and applied research, supporting both scientific employment and advanced research training. IHA's scientific community is also closely articulated with art historical education.

The Institute is hosted by NOVA FCSH and a full member of the RIHA network. In the 2018-2019 FCT's evaluation process IHA was rated as "Excellent", distinguished with

the highest assessment mark in all evaluation parameters. We publish *Revista de História da Arte* and *Revista de História da Arte – Série W* (both indexed in ERIH PLUS). IHA's work is committed to Portuguese art history, but is by no means confined to it, since the interrogations prompted by Portuguese art history entwine with general art historical questions. Moreover, Portuguese historical relations with other parts of the globe are conspicuous. IHA cultivates a democratic footprint boosted by the autonomy of its five research groups: Pre-Modern visual and material cultures; Lisbon studies; Museum studies; Contemporary art studies; and Art theory, historiography and criticism. Two thematic lines intersect and connect groups' activities: Cultural transfers in a global perspective and The exhibition: theory and practices. Multidisciplinary perspectives and encounters are encouraged, especially via clusters' activities (flexible platforms that foster external collaborations).

# Institute of Contemporary History

IHC



|                                   |                           |
|-----------------------------------|---------------------------|
| <b>WEBSITE</b>                    | <b>DATE OF FOUNDATION</b> |
| Institute of Contemporary History | 1990                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 140                | 1,96 M Euros       |

#### KEYWORDS

- Modern Portugal
- Comparative and Transnational Histories
- Imperial Histories
- History and Memory
- Digital Humanities
- Social Changes

#### STRATEGIC AIMS

IHC strategic aims are: to develop and promote the study and research of modern and contemporary History, both in the national and international settings, adjusting the principles and priorities of its scientific programme to the training of researchers and the dissemination of their results; to contribute to the promotion of historical culture, through projects with a scientific and disseminating nature, using various communication platforms, from conventional publications to new information technologies.

#### RESEARCH UNIT DESCRIPTION

The Institute of Contemporary History, a NOVA FCSH and University of Évora R&D Unit, is a research centre dedicated to the conceptualisation, contextualisation, and interpretation of the historical reality for the period between the nineteenth century and the present time. The research developed at the Institute benefits from the inputs of a diversified group of 140 PhD researchers, both foreign and Portuguese, coming from fields such as history (the majority), anthropology, archaeology, philosophy, biology, archival and documental sciences, among others.

Since 2021, the Institute is part of the first Associate Laboratory dedicated to cultural heritage research – IN2PAST, Associate Laboratory for Research and Innovation in Heritage, Arts, Sustainability, and Territory. Researching

the past of territories and populations, as well as current modes of using those pasts, IN2PAST will be a fundamental instrument for research and innovation aimed not only at the identification and safeguarding of cultural heritage, but also at the promotion of an inclusive cultural identity and civic memory. The Institute also relies on its Digital Humanities Laboratory, which develops research using digital methods (such as spatial analysis and network analysis for historical data) and provides researchers support regarding digital tools.

Some of IHC's recent notable achievements are the creation of IN2PAST; 33 PhD students with funded scholarships in the fields of History, Social Sciences, and Humanities; 30 researchers and 12 postdoctoral fellows exclusively dedicated to research; research projects funded by the FCT and European Commission on the the origin of foreign collections in Portuguese archaeological museums, the political and environmental history of the large wildfires in Portugal, censorship, and the Portuguese and Spanish prisoner of nazis; and the creation of the Digital Humanities Lab.

# Institute for Comparative Literature

ILC



|                |                           |
|----------------|---------------------------|
| <b>WEBSITE</b> | <b>DATE OF FOUNDATION</b> |
| www.ilcml.com  | 1999                      |

|                    |                    |
|--------------------|--------------------|
| <b>RESEARCHERS</b> | <b>FUNDING FCT</b> |
| 22                 | 0,60 M Euros       |

#### KEYWORDS

- Comparative Literature
- Interart Studies
- Gender and Feminist Studies
- Cultural Studies

#### STRATEGIC AIMS

ILC aims at promoting the study of Literature in its various forms and the intercultural, interartistic and interdiscursive relationships it establishes; strengthening research and teaching of Literature(s) and Culture(s); fostering dialogue and collaboration across disciplines and increasing the public value of the Humanities; enhancing social engagement, working to build an inclusive, informed and participatory community.

#### RESEARCH UNIT DESCRIPTION

The Institute for Comparative Literature Margarida Losa (ILC), a Research Unit based at the Faculty of Arts and Humanities of the University of Porto, has been developing research on Comparative Literature since 1999, fostering conversations across cultures and disciplines. ILC has consistently promoted work in the fields of Literary Studies, Interarts and Intermedial Studies, Cultural Studies, Feminist Studies, Utopian Studies, and Digital Humanities, in articulation with other scientific areas. It has also been committed to increase the interaction between academia and the community, promoting the importance and the public role of the Humanities.

ILC brings together a team of integrated members and several dozens of collaborators (young doctorate candidates, post-doctorates and researchers based in foreign

universities). The team is organized around three internal and interconnected research groups: Inter/Transculturalities; Intermedialities; and Intersexualities.

ILC runs 4 databases and publishes 3 electronic journals, 2 digital book series, and 4 print series; some of those books were awarded-winning or short-listed essays in national competitions. The team also collaborates in graduate and post-graduate teaching programs, international projects, and outreach activities with cultural institutions. FCT External Evaluation has granted the ILC the higher possible grades for the periods between 2008-2014 (Excellent) and 2015-2019 (Outstanding).

Some of ILC's most notable achievements are: the peer-reviewed, indexed journal *Cadernos de Literatura Comparada* (running since 2000); the Series Studies in Comparative Literature (the list includes winning and shortlisted essays); being a partner institution in Erasmus+ project "LEA! Reading in Europe Today"; two international projects on the New Portuguese Letters, funded by FCT; and the transdisciplinary project *Utopian Foodways*, funded by FCT.

## Ethnomusicology Institute - Center for Studies in Music and Dance

INET-MD

**WEBSITE**

www.inetmd.pt

**RESEARCHERS**

104

**FUNDING FCT**

2,15 M Euros

**KEYWORDS**

- Ethnomusicology and Popular Music Studies
- Ethnochoreology
- Cultural Musicology
- Music Acoustics and Sound Studies
- Creation, Performance and Artistic Research
- Education and Music in the Community

**STRATEGIC AIMS**

INET-md's main objectives are: to carry out transdisciplinary research on music and dance; to develop collaborative partnerships with local groups and communities, artists, policy makers and national and international institutions; to promote research that fosters relations between countries and regions with historical links with Portugal; to develop artistic research on music and dance performance and composition; to consolidate research in sound production and perception based on physical and psycho-acoustic principles.

**RESEARCH UNIT DESCRIPTION**

The INET-md is a transdisciplinary research unit with headquarters at the FCSH-UNL and three branches at Universidade de Aveiro, Faculdade de Motricidade Humana, Universidade de Lisboa, and Instituto Politécnico do Porto. INET-md fosters a culture of excellence in advanced training, transdisciplinary research, performance, creation and artistic research, and awareness of the social responsibility of researchers and artists. Research activities take place within and across the following six research groups (RG): 1. Ethnomusicology and Popular Music Studies. 2. Historical and Cultural Studies in Music. 3. Dance Studies. 4. Creation, Performance and Artistic Research. 5. Music Acoustics and Sound Studies. 6. Education and Music in

Community. The RGs assure the collaboration between scholars and PhD students through research projects, regular seminars, colloquia, workshops and doctoral forums. In addition, each RG is active in international research networks, in some cases occupying leadership positions. Some of INET-md most notable achievements are: two international open access peer-reviewed journals, RPM - Portuguese Journal of Musicology (rpm-ns.pt), the only refereed music journal published in Portugal, in partnership with CESEM and SPIM, and ÍMPAR - Online Journal for Artistic Research; the contribution toward curating (with local institutions) sound, audiovisual and written sources of music and dance heritage, and making them accessible through 4 public digital platforms.

## Landscapes, Heritage and Territory Laboratory

LAB2PT

**WEBSITE**

https://www.lab2pt.net

**DATE OF FOUNDATION**

2013

**RESEARCHERS**

58

**FUNDING FCT**

1,82 M Euros

**KEYWORDS**

- Architecture and Urbanism
- Archaeology and Heritage
- History and Archives
- Art and Design
- Construction and Technology
- Tourism and Development

**STRATEGIC AIMS**

Lab2PT strategic aims are: to deepen fundamental multi-disciplinary research; to foster applied research with territorial and social impact for development services; to extend the articulation between research and postgraduate training; to expand the internationalization of the team, projects and the results of research.

**RESEARCH UNIT DESCRIPTION**

Lab2PT, Landscapes, Heritage and Territory Laboratory, is a R&D unit of the University of Minho, created in late 2013, funded by FCT since 2015 and currently evaluated as "excellent". Focused on the Social Sciences and the Humanities, it gathers a wide research team from different scientific areas (Archaeology, Architecture and Urbanism, Design, Geography, Geology, History and the Visual Arts) converging to the common interest for the study of the territory, its landscapes and heritage, which are understood as the material, spatial and cultural expressions of societies over time.

Lab2PT's truly interdisciplinary basis of research is ensured by its organic articulation with two schools of the University of Minho - the School of Architecture, Art and Design, and the Institute of Social Sciences, through its History and Geography Departments, merging research and teaching programmes.

This unit develops fundamental and applied research, thriving on its researchers' skills and laboratorial capacity used on the analysis, understanding and interpretation of territories and their natural and cultural landmarks, assumed as heritage resources that can and should promote economic and social strategies within regional, national and international spheres of networking contexts.

## Arts and Design Research Lab

LIDA



**WEBSITE**  
http://lida.ipleiria.pt

**DATE OF FOUNDATION**  
2020

**RESEARCHERS**  
18

**FUNDING FCT**  
0,48 M Euros

### KEYWORDS

- Art and design studies
- Practice based research
- Digitisation impacts on design and art
- Design and art practices

### STRATEGIC AIMS

LIDA's mission is to develop applied research activities, experimental development and knowledge transfer in its thematic areas, seeking to carry out research projects in cooperation with companies, public entities or other national and international research institutions, contributing to greater public awareness of the role of Design, Arts and Culture as forms of knowledge and socio-cultural intervention.

### RESEARCH UNIT DESCRIPTION

LIDA is a Research Unit oriented towards the professional practices and the experimental development of knowledge and design processes and artistic practices, in an interdisciplinary perspective. Is located at the School of Arts and Design of Caldas da Rainha, Polytechnic Institute of Leiria (ESAD.CR), with access to state-of-the-art equipment and workshop and laboratory spaces. LIDA seeks to develop artistic, scientific and technological research activities, experimental development and knowledge transfer in the areas of design and the arts, including artistic and cultural studies in its practical aspects, heritage studies and the cities, and its theoretical expressions, cultural, social and ecological impact.

LIDA's members contribute to its mission and objectives by participating in funded projects in the areas of eco

design, circular design, inclusive design and health and well-being, by developing innovative graphical interfaces, new technological applications, and by systematizing the study of industrial technological heritage, involving actively undergraduate and graduate students together with the institutions and industries. LIDA members integrate international exhibitions' panels, are curators of design and art exhibitions, promoting the local culture and industry in international networks. Over the next five years LIDA's activity will focus on developing the intersection of art, design and technology, and on promoting the advancement of knowledge and its application in the circular economy, in the heritage study and valuation, well-being, artistic practice and application of design processes to the digitization of industry and services.

LIDA recent main achievements include: the CP2S project – Ceramics, Heritage and Sustainable Product, in partnership with Tomar Polytechnic, Caldas da Rainha Municipality and CENCAL (Professional Training Centre for the Ceramic Industry); the Degren project – Cross-border Centre for Innovation in Eco-design, with the main objective being the creation of a cross-border Ecodesign Centre in the EUROACE region (Extremadura-Alentejo-Centro); and the research on the use of new fabrics to help elderly people improve their performance in hydrogymnastics, and 3D printing to create new interfaces for the visually impaired.

## Centre for Philosophy, Politics and Culture

PRAXIS



**WEBSITE**  
http://www.praxis.ubi.pt

**DATE OF FOUNDATION**  
2017

**RESEARCHERS**  
26

**FUNDING FCT**  
0,38 M Euros

### KEYWORDS

- Ethics
- Political Philosophy
- Democracy
- Phenomenology
- Culture
- Action

### STRATEGIC AIMS

The main purpose of PRAXIS is to develop research programs in the field of practical philosophy, namely, ethics, political philosophy and culture philosophy. The Centre pays particular attention to the study of works by philosophers of the phenomenological movement, without neglecting the works of important philosophers of all tendencies, specially from the areas of the philosophy of action, ethics, political philosophy and social philosophy.

### RESEARCH UNIT DESCRIPTION

PRAXIS, a recently set-up research unit, comes in the wake of a unit set up in 2003, active until 2014, named Practical Philosophy Institute (IFP), and Practical Philosophy Group (GFP), an autonomous research group within the unit Labcom.IFP, active 2015-2017.

PRAXIS' main research areas are phenomenology, philosophy of action, ethics and political philosophy. In the area of phenomenology, besides the study of works by relevant philosophers of this philosophical movement, the researchers dedicate special attention to the theme of intersubjectivity, namely in the perspective of the application of this phenomenological theory in ethics and political philosophy. More recently, an interdisciplinary project has begun to be developed which aims to apply several intersubjectivity theories to the field of psychotherapy. In

the area of ethics, research is focused on the foundation of morals, carried out from several different philosophical perspectives (naturalism, deontology, virtue ethics, existential phenomenology). Concerning action theory, work is being developed which bears in mind both classical authors (Aristotle), and modern (Arendt, Davidson, Ricoeur). There is a project under development about practical rationality and motives for action. In the area of political philosophy, research focuses on the categories of the political and power, as well as on questions about rationality, motivation, and legitimacy of political action.

PRAXIS most notable achievements include: the project "Practical Rationality, Judgment and Moral Motivation", a two-year bilateral research project (2014-2015) in partnership with the Centre de Philosophie Contemporaine (Université de Paris I-Sorbonne), which aim to analyse the structures of practical judgment in connection with moral motivations of action; the companion Teorias Políticas Contemporâneas [Contemporary Political Theories] (2015), edited by J. M. Santos and J. Gomes André, with several contributions from PRAXIS members; and Irene Borges Duarte's book Arte e Técnica em Heidegger [Art and Technology in Heidegger] (2015).



## Technology, Restoration and Arts Enhancement Center

TECHN&ART



**WEBSITE**

www.techneart.ipt.pt

**DATE OF FOUNDATION**

2018

**RESEARCHERS**

21

**FUNDING FCT**

0,56 M Euros

**KEYWORDS**

- Heritage
- Sustainability
- Preservation
- Didactics
- Innovation

**STRATEGIC AIMS**

TECHN&ART undertakes research (both fundamental and applied) in the fields of Artistic and Cultural Heritage Safeguard and Enhancement, promoting a scientific culture that adopts the procedures required to fulfil the principles of good research practices: integrity, transparency, impartiality, independence and cooperation that are crucial to produce high-quality scientific research.

**RESEARCH UNIT DESCRIPTION**

TECHN&ART aims at developing innovative and creative research strategies as well as methods, using a sustainable, holistic and multidisciplinary approach.

The safeguard area consists of two lines of action: (1) Conservation and Restoration, which is based on conservation/restoration studies and interventions carried out on cultural heritage, both tangible and intangible, where issues related to methodologies, materials, technology and ethics are matters of constant debate; (2) Characterization and Contextualization of Heritage Assets, which is grounded on cultural, archaeological, historic, artistic, literary studies as well as on the physical, chemical and biological characterization of materials, taking into account its origin and preservation.

The Promotion and Enhancement area includes the action lines: Didactics, Technology and Communication, which

aims at educating, raising awareness and disseminating cultural and artistic heritage and its protection, through a symbiosis between didactics, gamification, information and communication technologies, heritage and sustainable tourism; Design and Innovation, which deals with creative, technological, social, economical and cultural aspects, to preserve artistic and cultural forms of expression and manifestations, as well as to decode and re-interpret heritage in the light of current theories, conceptions and languages.

TECHN&ART main achievements include: the development of the innovative methodology of the Creative Conservation; several Best Paper awards (e.g., Congreso Internacional Científico-Profesional de Turismo Cultural); and several artistic productions, ranging from documentaries to exhibitions, visual essays and or installations (e.g. Dodging Nostalgia | Filming and dealing with facts in industrial heritage sites).

## Centre for Archaeology University of Lisbon

UNIARQ



**WEBSITE**

www.uniarq.net

**RESEARCHERS**

34

**FUNDING FCT**

0,73 M Euros

**KEYWORDS**

- Archaeology
- History
- Cultural Heritage
- Museology

**STRATEGIC AIMS**

UNIARQ aims at further developing a proactive policy of knowledge dissemination visible in local impact of its research, contributing to identity empowerment and sustainable development. Strengthening our critical mass by attracting young researchers, with better hosting conditions within a creative research environment, is also major goal.

**RESEARCH UNIT DESCRIPTION**

UNIARQ is a research unit of the School of Arts and Humanities (SAH) of the University of Lisbon (UL) dedicated to archaeological research. UNIARQ's main scope of research is studying past human societies in the Iberian Peninsula (IP), from the first hominids until Late Roman/early medieval period.

UNIARQ is organized in three working groups: WG1 - Hunter-gatherers and Ancient peasant societies in Western IP; WG2 - Interactions in Iron Age and Roman Times in Western IP; and WG3 - Public Archaeology, Science and Society. We develop our research activities (i.e. fieldwork, post-excavation processing and lab analysis) in Portugal and Spain, namely at the unit's Labs and offices, local museums or the National Museum of Archaeology (NMA) and other units and universities. Our strategic partnership with the NMA is a priority, as we incorporate the study of muse-

um collections in UNIARQ's research, and our researchers are consultants and curators of exhibitions. The outcomes of our research are applied to implement public land-use policies and add value to cultural heritage, in the framework of innovative and sustainable economic and social development programs of local communities.

Some of UNIARQ main achievements are: the discovery, study and publication of two fossils –Neandertal/modern, “hybrid” child skeleton from the Lagar Velho rock-shelter (Leiria), and 400,000 year-old cranium from Gruta da Aroeira (Torres Novas) – that were key pieces in the last 20 years of paleoanthropological debates; identification in the large estuaries of Portugal of dense settlement patterns in cultural and trading networks, that places Portugal in the forefront of the debate on Phoenician colonial strategies in the Far West; and the organization of “Roman Lusitania - Origin of two people”, exhibited in Mérida, Lisbon, and Madrid, and the production of its 3 catalogues, giving a comprehensive overview of Lusitania as a relevant province in the Roman Empire.

## Research Unit in Design and Communication

UNIDCOM/IADE



| WEBSITE   | DATE OF FOUNDATION |
|---|--------------------|
| <a href="http://unidcom.iade.pt/">http://unidcom.iade.pt/</a> | 2000               |
| RESEARCHERS   | FUNDING FCT        |
| 40  | 0,80 M Euros       |

### KEYWORDS

- Design
- Human-Centred
- Creative Technologies
- Marketing & Communication
- Social innovation and Sustainability
- Arts, culture and Design history

### STRATEGIC AIMS

The strategic objectives of UNIDCOM/IADE are: (i) to contribute to the advancement of research in Design, acting at the confluence with the fields of Communication, Media, Arts and Technology; (ii) to contribute to the advancement of Design theory, philosophy and practice; (iii) to increase Design culture and recognition of the area; (iv) to contribute to the construction of a sustainable future, by design, which guarantees the dignity and flourishing of humanity, in harmony with the planet.

### RESEARCH UNIT DESCRIPTION

UNIDCOM/IADE, Design and Communication Research Unit, is a research and development centre of IADE - Faculty of Design, Technology and Communication da Universidade Europeia, based in Lisbon, and focused on promoting the broad area of Design. Its research team conducts mainly applied and interdisciplinary research, exploring the intersections between Design, Communication, Media, Art, Science and Technology, with applications in various fields and contexts.

UNIDCOM/IADE was established in the year 2000 and became accredited by FCT in 2003, having currently the classification of "Very Good". UNIDCOM/IADE's vision is to be an international reference in Design research, with the double mission of boosting the growth of this area of

knowledge, simultaneously contributing to the resolution of the great societal challenges that threaten humanity. Besides hosting and supporting research projects, independently or in consortia, UNIDCOM/IADE promotes training, communication and dissemination of knowledge actions, both nationally and internationally. The transfer of knowledge is also a priority, having created laboratories for this purpose, that function as an interface between the university and entities of the productive, social and cultural fabric and are accelerators of applied research.

Some of UNIDCOM/IADE main achievements are the bi-annual international conference on design, Senses & Sensibility, held since 2003; MOMOWO - Women's Creativity Since the Modern Movement (European project - Creative Europe); Design in Portugal (1960-1974): actions, actors, and repercussions of NAAI and INII (project funded by FCT); and Blue Circular Post Branding – Design and circular economy with marine plastic litter (A2S/Mar2020).

## Glass and Ceramic for the Arts

VICARTE



| WEBSITE  | DATE OF FOUNDATION |
|--|--------------------|
| <a href="http://www.vicarte.org">www.vicarte.org</a> | 2002               |
| RESEARCHERS  | FUNDING FCT        |
| 20   | 0,68 M Euros       |

### KEYWORDS

- Glass
- Ceramics
- Art
- Science
- Cultural Heritage
- Design

### STRATEGIC AIMS

The mission of the Research Unit VICARTE is to promote excellence in the study of glass and ceramics at a local and global level. Our primary goal is to develop innovative research exploring the dialogue between Art and Science.

### RESEARCH UNIT DESCRIPTION

VICARTE research unit is a partnership between NOVA School of Science and Technology and the Faculty of Fine Arts of the Universidade de Lisboa. The research at VICARTE connects the present and the past, by developing new materials for glass and ceramics contemporary art, and by studying the traditional and historical production practices and the exploration of different aesthetic concepts in art. VICARTE joins specialists in art, science, design, history, archaeology and conservation of glass and ceramics. It develops its activities through research projects, exhibitions, training programs, collaboration with the public, private institutions and industry, and outreach and dissemination initiatives.

VICARTE objectives are structured around two research pillars – Glass and Ceramics in Contemporaneity, and Glass and Ceramics in Cultural Heritage – exploring synergies and maximizing their combined impact.

VICARTE is in a unique position to strongly contribute to the education and promotion of art making and design us-

ing glass and ceramic as a medium of creative expression. VICARTE is committed to ensure scientific and technical support to MSc and PhD programs related to Glass and Ceramics.

Some of VICARTE notable achievements are the development and engineering of other sustainable and low-environmental impact glasses and glass-ceramics in collaboration with Vista Alegre and EPAL; research on craft skills heritage and their potential to greatly benefit local ecosystems in the framework of two different European projects; the project Detention Gallery, on the relation between art, natural materials, sustainability, high and low tech and architecture; the systematic and comprehensive study of painted glass slides for projection with Magic Lanterns, with CESEM, ANIM and MUHNAC; the study and characterization of the terracotta sculptures from Convento dos Capuchos (Sintra) to provide data to outline the Conservation and Restoration strategy.

# Annexes

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## R&D Units

| ACRONIM                 | NAME   | WEBPAGE                                |
|-------------------------|--|--|
| <b>NATURAL SCIENCES</b> |  |  |
| ALGORITMI               | ALGORITMI Research Center  | algoritmi.uminho.pt/                   |
| BioISI                  | Biosystems and Integrative Sciences Institute                            | www.BioISI.pt                          |
| C2TN                    | Center for Nuclear Sciences and Technologies                             | c2tn.tecnico.ulisboa.pt/               |
| CAMGSD                  | Center for Mathematical Analysis, Geometry and Dynamical Systems         | camgsd.tecnico.ulisboa.pt/index.php/en |
| CBMA                    | Centre of Molecular and Environmental Biology                            | cbma.bio.uminho.pt                     |
| CCMAR                   | Algarve Centre for Marine Sciences                                       | ccmar.ualg.pt                          |
| ce3c                    | Centre for Ecology, Evolution and Environmental Changes                  | ce3c.ciencias.ulisboa.pt/              |
| CEAFEL                  | Center for Functional Analysis, Linear Structures and Applications       | ceafel.tecnico.ulisboa.pt/             |
| CEAUL                   | Centre of Statistics and its Applications                                | www.ceaul.fc.ul.pt/                    |
| CeFEMA                  | Center of Physics and Engineering of Advanced Materials                  | cefema.tecnico.ulisboa.pt              |
| CEFITEC                 | Centre of Physics and Technological Research                             | www.cefitec.fct.unl.pt/                |
| CEMAT                   | Center for Computational and Stochastic Mathematics                      | cemat.tecnico.ulisboa.pt               |
| CENTRA                  | Center for Astrophysics and Gravitation                                  | centra.tecnico.ulisboa.pt/             |
| CESAM                   | Centre for Environmental and Marine Studies                              | www.cesam.ua.pt                        |
| CFE                     | Centre for Functional Ecology - Science for People & the Planet          | cfe.uc.pt/                             |
| CFisUC                  | Center for Physics of the University of Coimbra                          | cfisuc.fis.uc.pt/                      |
| CFTC                    | Center for Theoretical and Computational Physics                         | cftc.cii.fc.ul.pt                      |
| CFTP                    | Center for Theoretical Particle Physics                                  | cftp.tecnico.ulisboa.pt                |
| CF-UM-UP                | Physics Center of Minho and Porto Universities                           | www.cf-um-up.pt                        |
| CGEO                    | Geosciences Center   | www.uc.pt/fctuc/ID/Geo                 |
| CIBB                    | Center for Innovative Biomedicine and Biotechnology                      | www.cibb.uc.pt                         |
| CICGE                   | Centre for Research in Geospace Science                                  | www.fc.up.pt/cicge                     |
| CIDMA                   | Center for Research and Development in Mathematics and Applications      | cidma.mat.ua.pt/                       |
| CIIC                    | Research Center in Informatics and Communications                        | ciic.ipleiria.pt                       |
| CIIMAR                  | Interdisciplinary Centre of Marine and Environmental Research            | www.ciimar.up.pt                       |
| CIMA                    | Research Centre for Mathematics and Applications                         | www.cima.uevora.pt/                    |
| CIMA UALG               | Centre for Marine and Environmental Research                             | www.cima.ualg.pt                       |
| CIQUP                   | Chemistry Research Unit of University of Porto                           | ciqup.fc.up.pt                         |
| CISUC                   | Centre for Informatics and Systems of the University of Coimbra          | www.cisuc.uc.pt                        |
| CITEUC                  | Centre for Earth and Space Research of the University of Coimbra         | geofisico.dyndns.org/                  |
| CMA/FCT/UNL             | Center for Mathematics and Applications                                  | www.cma.fct.unl.pt/en                  |
| CMAFCIO                 | Center for Mathematics, Fundamental Applications and Operations Research | cmaficio.campus.ciencias.ulisboa.pt/   |
| CMAT                    | Center of Mathematics of the University of Minho                         | www.cmat.uminho.pt                     |
| CMA-UBI                 | Center of Mathematics and Applications of University of Beira Interior   | www.cma.ubi.pt                         |
| CMUC                    | Center for Mathematics, University of Coimbra                            | cmuc.mat.uc.pt/rdonweb/                |
| CMUP                    | Centre of Mathematics of the University of Porto                         | cmup.fc.up.pt/main/                    |
| CQC                     | Coimbra Chemistry Center   | uc.pt/fctuc/dquimica/Investigacao/CQC  |
| CQE                     | Structural Chemistry Center  | cqe.tecnico.ulisboa.pt                 |
| CQM                     | Madeira Chemistry Research Centre  | cqm.uma.pt                             |
| CQ-UM                   | Chemistry Center - University of Minho                                   | cq.uminho.pt                           |
| CQVR                    | Chemistry Center - Vila Real   | cqvr.purpleprofile.pt/                 |
| GeoBioTec               | GeoBioSciences GeoTechnologies and GeoEngineering                        | ua.pt/geo/PageText.aspx?id=17534       |
| GFMUL                   | Group of Mathematical Physics of the University of Lisbon                | gfm.cii.fc.ul.pt/?set_language=en      |
| GILT                    | Games, Interaction & Learning Technologies                               | gilt.isep.ipp.pt/                      |
| HERCULES                | Hercules Laboratory - Cultural Heritage, Studies and Safeguard           | www.hercules.uevora.pt                 |
| IA                      | Institute of Astrophysics and Space Sciences                             | www.iastro.pt/                         |
| IBEB                    | Institute of Biophysics and Biomedical Engineering                       | www.ibeb.fc.ul.pt                      |
| ICT                     | Institute of Earth Sciences  | www.ict.org.pt/                        |
| IDL                     | Institute Dom Luiz   | idl.campus.ciencias.ulisboa.pt         |

| ACRONIM        | NAME   | WEBPAGE                               |
|----------------|--|---------------------------------------|
| IFIMUP         | Institute of Physics for Advanced Materials, Nanotechnology and Photonics                                    | www.ifimup.up.pt                      |
| InBIO          | Research Network in Biodiversity and Evolutionary Biology  | http://inbio-la.pt                    |
| IPFN           | Institute for Plasmas and Nuclear Fusion   | www.ipfn.tecnico.ulisboa.pt           |
| IVAR           | Research Institute for Volcanology and Risks Assessment  | http://www.ivar.azores.gov.pt         |
| LIBPhys        | Laboratory for Instrumentation, Biomedical Engineering and Radiation Physics                                 | http://libphys.uc.pt                  |
| LIP            | Laboratory of Instrumentation and Experimental Particle Physics  | http://www.lip.pt                     |
| MagIC          | Information Management Research Center   | www.novaims.unl.pt/docentes-investiga |
| MARE           | Marine and Environmental Sciences Centre   | http://www.mare-centre.pt/en          |
| MOSTMICRO-ITQB | Molecular, Structural and Cellular Microbiology - Instituto de Tecnologia Química e Biológica António Xavier | http://www.itqb.unl.pt/mostmicro      |
| NOVA LINCS     | NOVA Laboratory for Computer Science and Informatics   | http://nova-lincs.di.fct.unl.pt/      |
| Okeanos - UAc  | Okeanos R&D Centre - University of the Azores  | www.okeanos.uac.pt                    |
| QFM-UC         | Molecular Physical-Chemistry R&D Unit  | www.ci.uc.pt/qfm/                     |
| REQUIMTE       | Associated Laboratory for Green Chemistry - Clean Technologies and Processes                                 | www.requimte.pt/laqv/                 |
| UCIBIO         | Applied Molecular Biosciences Unit   | www.ucibio.pt                         |

### ENGINEERING AND TECHNOLOGY SCIENCES

|                |   |                                      |
|----------------|---|--------------------------------------|
| 2Ai            | Applied Artificial Intelligence Laboratory  | www.2ai.ipca.pt                      |
| 2C2T           | Centre for Textile Science and Technology   | www.2c2t.uminho.pt                   |
| C2I2           | Smart Cities Research Center  | www.ipt.pt                           |
| CDRSP          | Centre for Rapid and Sustainable Product Development  | www.cdrsp.ipleiria.pt                |
| CEB-UM         | Centre of Biological Engineering of the University of Minho                                     | https://www.ceb.uminho.pt/           |
| CeDRI          | Research Centre in Digitalization and Intelligent Robotics                                      | http://cedri.ipb.pt/                 |
| CEFT           | Transport Phenomena Research Center   | paginas.fe.up.pt/ceft/Welcome.html   |
| CEMPRE         | Centre for Mechanical Engineering, Materials and Processes                                      | uc.pt/en/iii/research_centers/CEMPRE |
| CENSE          | Center for Environmental and Sustainability Research  | https://www.cense.fct.unl.pt         |
| CENTEC         | Centre for Marine Technology and Ocean Engineering  | www.centec.tecnico.ulisboa.pt/en/    |
| Centre Bio     | Centre Bio: Biorefineries, Bioindustries and Bioproducts  | http://blc3.pt/                      |
| CEOT           | Center for Electronics, Optoelectronics and Telecommunications                                  | www.ceot.ualg.pt                     |
| CERENA         | Center for Natural Resources and Environment  | www.cerena.pt                        |
| CERIS          | Civil Engineering Research and Innovation for Sustainability                                    | http://ceris.pt                      |
| CICECO         | Aveiro Institute of Materials   | www.ciceco.ua.pt                     |
| CIEPQPF        | Chemical Process Engineering and Forest Products Research Centre                                | www.uc.pt/fctuc/deq/ciepqpf          |
| CIETI          | Center for Innovation in Industrial Engineering and Technology                                  | www.cieti.isep.ipp.pt                |
| CISE           | Electromechatronic Systems Research Centre  | http://www.cise.ubi.pt/              |
| CISTER         | Research Centre in Real-Time and Embedded Computing Systems                                     | www.cister.isep.ipp.pt               |
| C-MADE         | Centre of Materials and Building Technologies   | https://cmadeubi.wordpress.com       |
| C-MAST         | Centre for Mechanical and Aerospace Science and Technologies                                    | www.aerospace.ubi.pt/new/index.html  |
| CMEMS-UMinho   | Microelectromechanical Systems Research Unit  | www.mem.s.dei.uminho.pt              |
| CONSTRUCT      | Institute of R&D in Structures and Construction   | www.fe.up.pt/construct               |
| COPELABS       | Cognitive and People-centric Computing R&D Unit   | http://copelabs.ulsofona.pt          |
| CTAC           | Centre for Territory, Environment and Construction  | http://ctac.uminho.pt/               |
| CTS            | Centre of Technology and Systems  | www.cts.uninova.pt                   |
| FibEnTech      | Fiber Materials and Environmental Technologies  | ubi.pt/Entidade/FibEnTech            |
| GECAD          | Research Group on Intelligent Engineering and Computing for Advanced Innovation and Development | http://www.gecad.isep.ipp.pt/        |
| i3N            | Institute of Nanostructures, Nanomodelling and Nanofabrication                                  | www.i3n.org                          |
| iBB            | Institute for Bioengineering and Biosciences  | http://ibb.tecnico.ulisboa.pt        |
| ICVS/3B's - LA | ICVS/3B's - Associate Laboratory  | http://icvs3bs.pt/                   |

| ACRONIM       | NAME  | WEBPAGE                             |
|---------------|---|-------------------------------------|
| IEETA         | Institute of Electronics and Informatics Engineering of Aveiro                            | http://www.ieeta.pt                 |
| INESC Coimbra | Institute for Systems Engineering and Computers at Coimbra                                | www.inescc.pt                       |
| INESC MN      | INESC Microsystems and Nanotechnologies   | www.inesc-mn.pt                     |
| INESC TEC     | INESC TEC- Institute for Systems and Computer Engineering, Technology and Science         | www.inesctec.pt                     |
| INESC-ID      | Institute for Systems and Computer engineering, Research and Development                  | www.inesc-id.pt                     |
| IPC           | Institute for Polymers and Composites   | www.ipc.uminho.pt                   |
| ISISE         | Institute for Sustainability and Innovation in Structural Engineering                     | www.isise.net                       |
| ISR-UC        | Institute of systems and Robotics - COIMBRA   | https://www.isr.uc.pt/              |
| ISTAR-IUL     | Information Sciences, Technologies and Architecture Research Center                       | http://istar.iscte-iul.pt/          |
| IT            | Institute of Telecommunications   | http://www.it.pt                    |
| LAETA         | Associate Laboratory of Energy, Transports and Aeronautics                                | https://www.idmec.ist.utl.pt/laeta/ |
| LARSys        | Laboratory of Robotics and Engineering Systems  | http://www.larsys.pt/               |
| LASIGE        | Extreme Computing   | http://www.lasige.di.fc.ul.pt/      |
| LEPABE        | Laboratory for Process Engineering, Environment, Biotechnology and Energy                 | http://www.fe.up.pt/lepabe          |
| LIACC         | Artificial Intelligence and Computer Science Laboratory                                   | https://web.fe.up.pt/~liacc/        |
| LSRE-LCM      | Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and Materials | lsre-lcm.fe.up.pt                   |
| MEtrICS       | Mechanical Engineering and Resource Sustainability Center                                 | www.metrics.unl.uminho.pt           |
| proMetheus    | Research Unit in Materials, Energy and Environment for Sustainability                     | http://prometheus.ipv.pt            |
| RISCO         | Risks and Sustainability in Construction  | http://www.ua.pt/risco              |
| SYSTEC        | Research Center for Systems and Technologies  | https://systec.fe.up.pt/            |
| TEMA          | Centre for Mechanical Technology and Automation   | https://www.ua.pt/tema/             |
| UNIDEMI       | Research and Development Unit for Mechanical and Industrial Engineering                   | www.unidemi.com                     |
| VALORIZA      | Research Center for Endogenous Resource Valorization                                      | http://valoriza.ipportalegre.pt/    |

### MEDICAL AND HEALTH SCIENCES

|            |  |   |
|------------|--|---|
| CBIOS      | Research Center for Biosciences & Health Technologies  | http://cbios.ulsofona.pt                |
| CCUL       | Cardiovascular Centre at the University of Lisbon  | http://ccul.pt/                         |
| CHRC       | Comprehensive Health Research Center - Research, Education, Training and Innovation in Clinical research and Public Health | chrc.nms.unl.pt                         |
| CIAFEL     | Research Center in Physical Activity , Health and Leisure  | http://ciafel.fade.up.pt                |
| CIBIT      | Coimbra Institute for Biomedical Imaging and Translational Research  | http://www.uc.pt/en/uid/cibit/          |
| CICS-UBI   | Health Sciences Research Centre  | http://www.cics.ubi.pt/                 |
| CIDAF      | Research Unit for Sport and Physical Activity  | www.uc.pt/fcdef/Investigacao/CIDAF      |
| CIDESD     | Research Center in Sports Sciences, Health and Human Development   | http://www.cidesd.utad.pt               |
| CIFI2D     | Center of Research, Education, Innovation and Intervention in Sport  | http://www.fade.up.pt/cifi2d/           |
| CiiEM      | Egas Moniz Interdisciplinary Research Center   | http://ciiem.egasmoniz.edu.pt           |
| CI-IPOP    | IPO Porto Research Center  | ipoporto.pt/centro-de-investigacao/     |
| CIIS       | Center for Interdisciplinary Research in Health  | http://ics.lisboa.ucp.pt/pt-pt          |
| CINTESIS   | Center for Health Technology and Services Research   | http://cintesis.eu/                     |
| CIPER      | Interdisciplinary Center for the Study of Human Performance  | ciper.fmh.ulisboa.pt                    |
| CIR        | Research for Rehabilitation Center   | http://cir.ess.ipp.pt/                  |
| ciTechCare | Center for Innovative Care and Health Technology   | http://sites.ipleiria.pt/citechcare/    |
| CR         | Champalimaud Research Programme  | research.fchampalimaud.org/en/research/ |
| EPIUnit    | Epidemiology Research Unit - Institute of Public Health, University of Porto   | http://ispup.up.pt/research/epiunit/    |
| GHTM       | Global Health and Tropical Medicine  | http://ghmt.ihmt.unl.pt/                |
| H&TRC      | Health and Technology Research Center  | https://htrcenter.wordpress.com         |
| i3S        | Institute for Research and Innovation in Health  | http://www.i3s.up.pt/                   |
| iBiMED     | Aveiro Institute of Biomedicine  | www.ua.pt/ibimed                        |



| ACRONIM      | NAME   | WEBPAGE                             |
|--------------|--|-------------------------------------|
| IGC          | Instituto Gulbenkian de Ciência                    | www.igc.gulbenkian.pt               |
| iMed.Ulisboa | Research Institute for Medicines                   | http://imed.ulisboa.pt/             |
| iMM          | Institute of Molecular Medicine                    | https://imm.medicina.ulisboa.pt/pt/ |
| iNOVA4Health | Programme in Translational Medicine                | www.inova4health.com                |
| ISAMB        | Environmental Health Institute                     | http://isamb.medicina.ulisboa.pt/   |
| MedInUP      | Center for Drug Discovery and Innovative Medicines | www.medinup.pt                      |
| ToxOmics     | Centre for Toxicogenomics and Human Health         | www.toxomics.unl.pt                 |
| UICISA: E    | Health Sciences Research Unit: Nursing             | http://www.esenfc.pt/pt/uicisa      |
| UMIB         | Unit for Multidisciplinary Research in Biomedicine | https://www1.icbas.up.pt/umib/      |
| UnIC         | Cardiovascular Research and Development Center     | http://unic.med.up.pt/              |

### AGRICULTURAL SCIENCES

|                |  |   |
|----------------|--|---|
| CBA            | Biotechnology Centre of Azores   | http://cba.uac.pt                       |
| CBQF           | Centre of Biotechnology and Fine Chemistry   | www.cbqf.esb.ucp.pt/en/                 |
| CECA           | Center for the Study of Animal Science   | www.iceta.up.pt                         |
| CECAV          | Veterinary and Animal Science Research Centre  | http://www.cecav.utad.pt/               |
| CEF            | Forest Research Centre   | https://www.isa.ulisboa.pt/en/cef/about |
| CERNAS         | Research Center in Natural Resources, Environment and Society                        | http://www.cernas.org/                  |
| CIISA          | Centre for Interdisciplinary Research in Animal Health                               | www.ciisa.fmv.ulisboa.pt                |
| CIMO           | Mountain Research Center   | cimo.ipb.pt                             |
| CISAS          | Center for Research and Development in Agrifood Systems and Sustainability           | http://cisas.ipvc.pt                    |
| CITAB          | Centre for the Research and Technology of Agro-Environmental and Biological Sciences | www.citab.utad.pt                       |
| GREEN-IT       | Bioresources for Sustainability  | http://www.itqb.unl.pt/green-it         |
| GreenUPorto    | GreenUPorto - Research Center in Sustainable Agri-food Production                    | https://www.fc.up.pt/greenuporto        |
| IITAA (CITA-A) | Institute of Agricultural and Environmental Research and Technology                  | http://iitaa.uac.pt/                    |
| LEAF           | Linking Landscape, Environment, Agriculture and Food                                 | https://www.isa.ulisboa.pt/en/leaf      |
| Med            | Mediterranean Institute for Agriculture, Environment and Development                 | www.med.uevora.pt                       |

### SOCIAL SCIENCES

|         |   |  |
|---------|---|--|
| APPsy   | Applied Psychology Research Centre - Capabilities & Inclusion | www.ispa.pt                                      |
| CAPP    | Centre for Public Administration and Public Policies          | http://capp.iscsp.ulisboa.pt                     |
| CARME   | Centre of Applied Research in Management and Economics        | www.carme.ipleiria.pt                            |
| CEAD    | Research Centre on Adult Education and Community Intervention | https://cead.ualg.pt                             |
| CeBER   | Centre for Business and Economics Research                    | http://www.uc.pt/en/uid/ceber                    |
| CECS    | Communication and Society Research Centre                     | www.cecs.uminho.pt                               |
| CEDH    | Research Centre for Human Development                         | http://www.fep.cedh.porto.ucp.pt/                |
| CEDIS   | Law and Society Research Center                               | http://cedis.fd.unl.pt/                          |
| CEEApIA | Center of Applied Economic Studies of the Atlantic            | ceeapla.uac.pt/index.php?static=ceeapla          |
| cef.up  | Center for Economics and Finance at the University of Porto   | http://cefup.fep.up.pt                           |
| CEFAGE  | Center for Advanced Studies in Management and Economics       | http://www.cefage.uevora.pt/                     |
| CEG     | Centre of Geographical Studies                                | http://ceg.ulisboa.pt/                           |
| CEGE    | Research Center in Management and Economics                   | catolicabs.porto.ucp.pt/pt/cege-estudos-projetos |
| CEG-IST | Centre for Management Studies of Instituto Superior Técnico   | fenix.tecnico.ulisboa.pt/investigacao/ceg-ist    |
| CEGOT   | Centre of Studies in Geography and Territorial Planning       | http://www.cegot.pt/pt/                          |

| ACRONIM        | NAME  | WEBPAGE  |
|----------------|---|--|
| CEID-CRCFL     | Católica Research Centre for the Future of Law                                    | http://www.direito.ceid.porto.ucp.pt/en/about-en-ceid                        |
| CeiED          | Interdisciplinary Research Centre for Education and Development                   | http://www.ceied.ulusofona.pt/pt/  |
| CEI-IUL        | Center for International Studies  | http://cei.iscte-iul.pt/   |
| CEJEA          | Centre for Legal, Economics and Environmental Studies                             | http://cejea.ulusiada.pt   |
| CEOS.PP        | Center of Organizational and Social Studies of Polytechnic of Porto               | http://iscap.pt/ceos/  |
| CES            | Centre for Social Studies   | www.ces.uc.pt  |
| CETRAD         | Centre for Transdisciplinary Development Studies                                  | https://cetrad.utad.pt/  |
| CI&DEI         | Centre for Studies in Education and Innovation                                    | http://www.ipv.pt/cidei/   |
| CIAS           | Research Centre for Anthropology and Health                                       | http://cias.uc.pt/   |
| CICANT         | Centre for Research in Applied Communication, Culture and New Technologies        | http://cicant.ulusofona.pt/  |
| CICF           | Research Centre on Accounting and Taxation  | http://www.cicf.ipca.pt  |
| CICP           | Research Center in Political Science  | www.cicp.eeg.uminho.pt   |
| CICPSI         | Research Center for Psychological Science   | www.psicologia.ulisboa.pt/investigacao/centro-de-investigacao/               |
| CICS.NOVA      | Interdisciplinary Centre of Social Sciences                                       | http://www.cics.nova.fcsh.unl.pt/  |
| CIDEEFF        | Centre for Research in European, Economic, Financial and Tax Law                  | www.cideeff.pt   |
| CIDP           | Lisbon Centre for Research in Public Law  | http://www.icjp.pt/cidp  |
| CIDPCC         | Research Centre for Criminal Law and Criminal Sciences                            | www.cidpcc.pt  |
| CIDTFF         | Research Centre Didactics and Technology in the Education of Trainers             | www.ua.pt/cidtff   |
| CIE            | Center for Research in Education  | http://www4.uma.pt/cie-uma/  |
| CIEB           | Research Center in Basic Education  | www.cieb.es.ipb.pt   |
| CIEC-UM        | Research Centre on Child Studies  | http://www.ciec-uminho.org   |
| CIEd           | Research Centre on Education  | http://www.cied.uminho.pt  |
| CIEG           | Interdisciplinary Centre for Gender Studies                                       | cieg.iscsp.ulisboa.pt  |
| CIE-ISPA       | Centre for Educational Research   | http://cie.ispa.pt/  |
| CIEP-UCP       | Research Centre of the Institute for Political Studies                            | http://www.iep.lisboa.ucp.pt/ciep  |
| CIEP-UE        | Centre for Research in Education and Psychology                                   | http://www.ciep.uevora.pt/   |
| CIEQV          | Life Quality Research Centre  | www.cieqv.com  |
| CIES-IUL       | Centre for Research and Studies in Sociology                                      | www.cies.iscte-iul.pt  |
| CIICESI        | Center for Research and Innovation in Business Sciences and Information Systems   | estg.ipp.pt/investigacao/ciicesi   |
| CIIE - U.Porto | Centre for Research and Intervention in Education                                 | http://www.fpce.up.pt/ciie/  |
| CIJE           | Centre for Legal and Economic Research  | www.cije.up.pt   |
| CINEICC        | Center for Research in Neuropsychology and Cognitive and Behavioural Intervention | uc.pt/en/fpce/research/CINEICC   |
| CinTurs        | Research Centre for Tourism, Sustainability and Well-being                        | https://cinturs.pt/site/   |
| CIP            | Psychology Research Center  | cip.autonoma.pt  |
| CIPD           | The Psychology of Positive Development Research Center                            | http://cipd.ulusiada.pt  |
| CIPES          | Center for Research in Higher Education Policies                                  | www.cipes.pt OU www.ua.pt/cipes/   |
| CIPsi          | Psychology Research Centre  | www.psi.uminho.pt/en/Research  |
| CISeD          | Research Centre in Digital Services   | http://www.ipv.pt/cised/   |
| CIS-IUL        | Centre for Psychological Research and Social Intervention                         | http://www.cis.iscte-iul.pt/   |
| CiTUR          | Centre for Tourism Research, Development and Innovation                           | http://citur.ipleiria.pt/  |
| CLISSIS        | Lusíada Research Center on Social Work and Social Intervention                    | http://clissis.ulusiada.pt   |
| COMEGI         | Research Centre in Organizations, Markets and Industrial Management               | http://comegi.ulusiada.pt  |
| CPUP           | Center for Psychology at University of Porto                                      | http://www.fpce.up.pt/cpup/  |
| CRIA           | Centre for Research in Anthropology   | http://cria.org.pt   |
| CSG            | Research in Social Sciences and Management  | https://csg.rc.iseg.ulisboa.pt/en/   |
| CUBE           | Católica Lisbon Research Unit in Business and Economics                           | clsbe.lisboa.ucp.pt/faculty-knowledge/research/research-catolica-lisbon-cube |
| DigiMedia      | Digital Media and Interaction Research Center                                     | http://digimedia.web.ua.pt/  |

| ACRONIM         | NAME   | WEBPAGE   |
|-----------------|--|---|
| DINÂMIA'CET-IUL | Centre for Socioeconomic and Territorial Studies               | <a href="https://www.dinamiacet.iscte-iul.pt/">https://www.dinamiacet.iscte-iul.pt/</a>                                     |
| GOVCOPP         | Research Unit on Governance, Competitiveness and Public Policy | <a href="https://www.ua.pt/govcopp/">https://www.ua.pt/govcopp/</a>   |
| HEI-Lab         | Digital Human-Environment and Interactions Labs                | <a href="https://hei-labs.ulusofona.pt/">https://hei-labs.ulusofona.pt/</a>   |
| ICNOVA          | NOVA Institute of Communication                                | <a href="http://icnova.fcsh.unl.pt">http://icnova.fcsh.unl.pt</a>   |
| ICPOL           | Police Research Center   | <a href="iscpsi.pt/investigacao/investigID/Paginas/default.aspx">iscpsi.pt/investigacao/investigID/Paginas/default.aspx</a> |
| ICS-ULisboa     | Institute of Social Sciences                                   | <a href="http://www.ics.ulisboa.pt">http://www.ics.ulisboa.pt</a>   |
| IJ              | University of Coimbra Institute for Legal Research             | <a href="http://www.ij.fd.uc.pt/index_en.html">www.ij.fd.uc.pt/index_en.html</a>  |
| IJP             | Portucalense Institute for Legal Research                      | <a href="http://ijp.upt.pt">ijp.upt.pt</a>  |
| inED            | Centre for Research and Innovation in Education                | <a href="http://ined.es.ee.ipp.pt/">http://ined.es.ee.ipp.pt/</a>   |
| IO              | Orient Institute   | <a href="http://ioriente.iscsp.ulisboa.pt/en/">http://ioriente.iscsp.ulisboa.pt/en/</a>                                     |
| IPRI-NOVA       | Portuguese Institute of International Relations                | <a href="http://www.ipri.pt">www.ipri.pt</a>  |
| IS-UP           | Institute of Sociology of the University of Porto              | <a href="http://isociologia.up.pt">http://isociologia.up.pt</a>   |
| JusGov          | Research Centre for Justice and Governance                     | <a href="http://www.jusgov.uminho.pt">www.jusgov.uminho.pt</a>  |
| LabCom          | LabCom - Communication and Arts                                | <a href="http://www.labcom-ifp.ubi.pt">http://www.labcom-ifp.ubi.pt</a>   |
| LE@D            | Distance Education and Elearning Laboratory                    | <a href="http://lead.uab.pt/">http://lead.uab.pt/</a>   |
| NECE            | Research Unit in Business Sciences                             | <a href="https://www.ubi.pt/entidade/NECE">https://www.ubi.pt/entidade/NECE</a>   |
| NIPE            | Centre for Research in Economics and Management                | <a href="http://www.nipe.eeg.uminho.pt">www.nipe.eeg.uminho.pt</a>  |
| Nova SBE        | Nova School of Business and Economics                          | <a href="http://www.novasbe.unl.pt/faculty-research/research-unit">www.novasbe.unl.pt/faculty-research/research-unit</a>    |
| REM             | Research in Economics and Mathematics                          | <a href="https://rem.rc.iseg.ulisboa.pt/">https://rem.rc.iseg.ulisboa.pt/</a>   |
| REMIT           | Research on Economics, Management and Information Technologies | <a href="http://remit.upt.pt/">http://remit.upt.pt/</a>   |
| UIDEF           | Education and Training Research and Development Unit           | <a href="http://www.ie.ulisboa.pt/investigacao">http://www.ie.ulisboa.pt/investigacao</a>                                   |
| UNIAG           | Applied Management Research Unit                               | <a href="http://uniag.ipb.pt/">http://uniag.ipb.pt/</a>   |
| UNIDE           | Business Research Unit   | <a href="http://bru-unide.iscte-iul.pt/">http://bru-unide.iscte-iul.pt/</a>   |
| WJCR            | William James Center for Research                              | <a href="http://wjcr.ispa.pt/">http://wjcr.ispa.pt/</a>   |

## HUMANITIES

|              |   |  |
|--------------|---|--|
| ARTIS-IHA    | Institute of Art History, School of Arts and Humanities                                     | <a href="http://www.artis.letras.ulisboa.pt">http://www.artis.letras.ulisboa.pt</a>  |
| CEAA         | Arnaldo Araújo Research Center  | <a href="http://www.ceaa.pt">www.ceaa.pt</a>   |
| CEAACP       | Center for Studies in Archeology, Arts and Heritage   | <a href="http://ceaacp.uc.pt">http://ceaacp.uc.pt</a>  |
| CEAU         | Centre for Studies in Architecture and Urbanism   | <a href="http://www.ceau.arq.up.pt">www.ceau.arq.up.pt</a>   |
| CEAUL/ULICES | University of Lisbon Centre for English Studies   | <a href="http://www.ulices.letras.ulisboa.pt">www.ulices.letras.ulisboa.pt</a>   |
| CEAUP        | Centre of African Studies of the University of Porto  | <a href="http://www.africanos.eu">www.africanos.eu</a>   |
| CEC          | Centre for Comparative Studies  | <a href="http://www.cec.letras.ulisboa.pt">www.cec.letras.ulisboa.pt</a>   |
| CECC         | Research Centre for Communication and Culture   | <a href="http://cecc.fch.lisboa.ucp.pt/en/">http://cecc.fch.lisboa.ucp.pt/en/</a>  |
| CEC-FLUL     | Centre for Classical Studies  | <a href="http://www.tmp.letras.ulisboa.pt/cec">http://www.tmp.letras.ulisboa.pt/cec</a>  |
| CECH/FL/UC   | Center for Classical and Humanistic Studies of the Faculty of Letters of Coimbra University | <a href="http://uc.pt/en/iii/research_centers/CECH">uc.pt/en/iii/research_centers/CECH</a>                                       |
| CEFH         | Centre for Philosophical and Humanistic Studies   | <a href="http://braga.ucp.pt/cefh/en/">http://braga.ucp.pt/cefh/en/</a>  |
| CEHUM        | Research Centre for Humanities  | <a href="http://ceh.ilch.uminho.pt">http://ceh.ilch.uminho.pt</a>  |
| CEIS20       | Centre of 20th Century Interdisciplinary Studies  | <a href="http://www.uc.pt/iii/ceis20">www.uc.pt/iii/ceis20</a>   |
| CEL          | Center for the Studies in Letters   | <a href="http://www.utad.pt/vPT/Area2/investigar/CEL/Paginas/cel.aspx">www.utad.pt/vPT/Area2/investigar/CEL/Paginas/cel.aspx</a> |
| CELGA-ILTEC  | Research Centre for General and Applied Linguistics   | <a href="http://celga.iltec.pt">http://celga.iltec.pt</a>  |
| CEPS         | Centre for Ethics, Politics and Society   | <a href="http://www.ceps.ilch.uminho.pt">www.ceps.ilch.uminho.pt</a>   |
| CESEM        | Centre for the Study of the Sociology and Aesthetics of Music                               | <a href="http://cesem.fcsh.unl.pt/">http://cesem.fcsh.unl.pt/</a>  |
| CET          | Centre for Theatre Studies  | <a href="http://www.tmp.letras.ulisboa.pt/cet">http://www.tmp.letras.ulisboa.pt/cet</a>  |
| CETAPS       | Centre for English, Translation, and Anglo-Portuguese Studies                               | <a href="http://www.cetaps.com">http://www.cetaps.com</a>  |

| ACRONIM      | NAME   | WEBPAGE   |
|--------------|--|---|
| CFCUL        | Center for Philosophy of Sciences of the University of Lisbon            | <a href="http://cfcul.fc.ul.pt/">http://cfcul.fc.ul.pt/</a>   |
| CFUL         | Centre of Philosophy, University of Lisbon                               | <a href="http://cful.letras.ulisboa.pt">http://cful.letras.ulisboa.pt</a>   |
| CHAIA        | Centre for Art History and Artistic Research                             | <a href="http://www.chaia.uevora.pt">www.chaia.uevora.pt</a>  |
| CHAM         | Centre for the Humanities  | <a href="http://www.cham.fcsh.unl.pt/">http://www.cham.fcsh.unl.pt/</a>   |
| CHSC         | Center for the History of Society and Culture                            | <a href="http://chsc.uc.pt/">http://chsc.uc.pt/</a>   |
| CH-ULisboa   | Centre for History of the University of Lisbon                           | <a href="http://www.centrodehistoria-flul.com/">www.centrodehistoria-flul.com/</a>                                      |
| CIAC         | Research Centre for Arts and Communication                               | <a href="https://ciac.pt/">https://ciac.pt/</a>   |
| CIAUD        | Research Centre for Architecture, Urban Planning and Design              | <a href="http://ciaud.fau.utl.pt/index.php/pt/">http://ciaud.fau.utl.pt/index.php/pt/</a>                               |
| CIDEHUS.UÉ   | Interdisciplinary Centre for History, Culture(s) and Society             | <a href="http://www.cidehus.uevora.pt">www.cidehus.uevora.pt</a>  |
| CIEBA        | Artistic Studies Research Center   | <a href="http://www.belasartes.ulisboa.pt/investigacao/cieba/">http://www.belasartes.ulisboa.pt/investigacao/cieba/</a> |
| CIEC         | Interuniversity Centre for Camonian Studies                              | <a href="http://ciec.uc.pt">http://ciec.uc.pt</a>   |
| CITAD        | Planning of Territory, Architecture and Design Research Centre           | <a href="http://citad.ulusiada.pt">http://citad.ulusiada.pt</a>   |
| CITAR        | Research Center for Science and Technology of the Arts                   | <a href="http://citar.artes.porto.ucp.pt/">http://citar.artes.porto.ucp.pt/</a>   |
| CITCEM       | Transdisciplinary Research Centre - Culture, Space and Memory            | <a href="http://www.citcem.org">www.citcem.org</a>  |
| CITTA        | Research Centre for Territory, Transports and Environment                | <a href="http://citta.fe.up.pt/">http://citta.fe.up.pt/</a>   |
| CITUA        | Centre for Innovation in Territory, Urbanism and Architecture            | <a href="http://citua.tecnico.ulisboa.pt">http://citua.tecnico.ulisboa.pt</a>   |
| CIUHCT       | Interuniversity Center for the History of Science and Technology         | <a href="http://ciuhct.org/">http://ciuhct.org/</a>   |
| CLEPUL       | Centre for Lusophone and European Literatures and Cultures               | <a href="http://www.clepul.eu">www.clepul.eu</a>  |
| CLLC         | Centre for Languages, Literatures and Cultures                           | <a href="http://www.ua.pt/cllc">http://www.ua.pt/cllc</a>   |
| CLP          | Centre of Portuguese Literature  | <a href="http://www.uc.pt/fluc/clp">http://www.uc.pt/fluc/clp</a>   |
| CLUL         | Center of Linguistics of the University of Lisbon                        | <a href="http://www.clul.ulisboa.pt/en/">www.clul.ulisboa.pt/en/</a>  |
| CLUNL        | Centre of Linguistics of NOVA University of Lisbon                       | <a href="http://clunl.fcsh.unl.pt">clunl.fcsh.unl.pt</a>  |
| CLUP         | Centre of Linguistics of the University of Porto                         | <a href="http://www.clup.pt">www.clup.pt</a>  |
| esad-idea    | esad idea, Research in Design and Art                                    | <a href="http://www.esadidea.pt">www.esadidea.pt</a>  |
| i2ADS        | Research Institute in Art, Design and Society                            | <a href="https://i2ads.up.pt">https://i2ads.up.pt</a>   |
| ICArEHB      | Interdisciplinary Center for Archaeology and Evolution of Human Behavior | <a href="http://www.icarehb.com">www.icarehb.com</a>  |
| ID+          | Research Institute for Design, Media and Culture                         | <a href="http://www.idmais.org">http://www.idmais.org</a>   |
| IEF          | Institute for Philosophical Studies                                      | <a href="http://www.uc.pt/fluc/uidief">http://www.uc.pt/fluc/uidief</a>   |
| IELT         | Institute for the Study of Literature and Tradition                      | <a href="http://www.ielt.fcsh.unl.pt">www.ielt.fcsh.unl.pt</a>  |
| IEM          | Institute of Medieval Studies  | <a href="http://iem.fcsh.unl.pt">http://iem.fcsh.unl.pt</a>   |
| IF           | Institute of Philosophy  | <a href="http://ifilosofia.up.pt/">http://ifilosofia.up.pt/</a>   |
| IFILNOVA     | NOVA Institute of Philosophy   | <a href="http://www.ifilnova.pt">http://www.ifilnova.pt</a>   |
| IHA          | Art History Institute  | <a href="http://institodehistoriadaarte.wordpress.com/">institodehistoriadaarte.wordpress.com/</a>                      |
| IHC          | Institute of Contemporary History  | <a href="http://ihc.fcsh.unl.pt/">http://ihc.fcsh.unl.pt/</a>   |
| ILC          | Institut for Comparative Literature                                      | <a href="http://www.ilcml.com">www.ilcml.com</a>  |
| INET-md      | Ethnomusicology Institute - Center for Studies in Music and Dance        | <a href="http://www.inetmd.pt">www.inetmd.pt</a>  |
| Lab2PT       | Landscapes, Heritage and Territory Laboratory                            | <a href="https://www.lab2pt.net">https://www.lab2pt.net</a>   |
| LIDA         | Arts and Design Research Lab   | <a href="http://lida.ipleiria.pt">http://lida.ipleiria.pt</a>   |
| PRAXIS       | Centre for Philosophy, Politics and Culture                              | <a href="http://www.praxis.ubi.pt">http://www.praxis.ubi.pt</a>   |
| TECHN&ART    | Technology, Restoration and Arts Enhancement Center                      | <a href="http://www.techneart.ipt.pt">www.techneart.ipt.pt</a>  |
| UNIARQ       | Centre for Archaeology - University of Lisbon                            | <a href="http://www.uniartq.net">www.uniartq.net</a>  |
| UNIDCOM/IADE | Research Unit in Design and Communication                                | <a href="http://unidcom.iade.pt/">http://unidcom.iade.pt/</a>   |
| VICARTE      | Glass and Ceramic for the Arts   | <a href="http://www.vicarte.org">www.vicarte.org</a>  |

