



Valentina Nisi Ian Oaklev

Embodied Futures is a hands-on 2.5 day workshop, which will guide participants through the entire process of designing a novel application for use in public spaces. The workshop will combine Embodied interaction, an emerging paradigm for the design of interactive systems which emphasises action over representation and the "creation, manipulation and sharing of meaning through engaged interaction with artefacts" with an accelerated Service Design approach. This involves a three stage project lifecycle including structured processes of discovery, synthesis and construction. This combination of methodologies is well suited to address issues emerging from the increasing incorporation of technology in people's everyday lives.

In this workshop participants will learn how to apply a variety of creative, out-of-the-box style methods at all stages of the design process, from initial fieldwork, to design brainstorming, to prototyping and finally deployment. Professionals from all disciplines, including social science, computer science, interaction design and even management, will have a chance to engage in all parts of a mini-design process as it takes place over the course of 2.5 days, and have a chance to strengthen their skills of being part of an interdisciplinary team.

This workshop, at heart, is collaborative, encouraging participants to engage with one another to create and realize novel ideas as a team. Consequently, it is not necessary for participants to be expert anthropologists or professional programmers. Rather, they should have a willingness to explore and communicate, to work together to generate cutting-edge design ideas and prototypes.

Embodied Futures



Larry L. Constantine Monchu Chen

Usability and user experience are widely recognized as critical for the success of software and Web-based applications. Interaction design is the gateway to usability, but not every project has full-time access to interaction designers or usability specialists. This workshop by two experienced practicing designers introduces core principles and basic practices for guiding effective interaction design. These simple proven and practical approaches can help non-designers of all kinds—software architects, software engineers, analysts and developers—make sound decisions that will enhance usability and improve the user experience. Participants will learn from discussion, examples, and hands-on practice how to improve function visibility, how to provide better user feedback, how to structure user interfaces for faster learning and increased user performance, and how to design more flexible and forgiving user interaction. They will learn how to understand the activities in which their users are involved and to organize the user interface to better support performance of those activities.

Interaction Design for Non-Designers

Paulo Marques Mário Rela Ricardo J. Machado João M. Fernandes

Session 1 - Agile Software Engineering

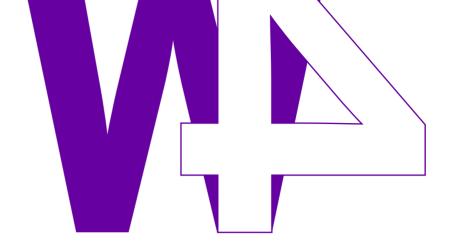
"Velocity", "Quality", "Price": these are the words that command software development nowadays. The Software Engineering Bootcamp is a hands-on interactive workshop on the fundamental techniques behind agile software engineering. Although focus is put on agile, the workshop is wide in scope, covering issues like "Why do software projects fail?", "Team Work and Team Dynamics", "Agile Software Development with SCRUM", "Agile Estimation" and "Risk Management". Emphasis is put on class exercises and joint team work. At the end of the workshop participates will be equipped with the tools needed to efficiently run software projects that cannot afford to "wait for next year" to be delivered!

Session 2 - Software Requirements Validation

Requirements validation is a critical task in any software engineering project. The confrontation of stakeholders with static requirements models is not enough, since stakeholders with non-computer science education are not able to discover all the inter-dependencies between the elicited requirements. Even with simple Unified Modelling Language (UML) requirements models, it is not easy for the development team to get confidence on the stakeholders' requirements validation.

This workshop describes an approach, based on the construction of executable interactive prototypes, to support the validation of software requirements, where the system to be built must explicitly support the interaction between people within a pervasive cooperative workflow execution. A case study from a real project is used to illustrate the proposed approach.

Agile Software Engineering



Workshop instructors Nuno Jardim Nunes Lia Patrício

Service orientation is at the centre of both business evolution and the e-business revolution. While traditionally service co-production was anchored in human-human interactions, IT is playing a transformative role in how services are conceived, developed, and delivered. Service industries now account for the majority of economic activity in developed countries. Today we live and work in the newly labelled Service Economy. A new service-centered paradigm has emerged that is changing the way services are conceptualized and managed.

The new service-centered paradigm advocates that value is co-created by customers through product usage or service interaction experience, in a relational exchange. Instead of delivering pre-produced offerings, firms must now offer value propositions, which customers then transform into value through usage. In this context, service experiences, viewed as "the outcomes of the interactions between organizations, related systems/processes, service employees and customers", become increasingly important to differentiate and add value to firms offerings.

In this workshop participants will learn how to translate their research findings into models that can be used by software developers to produce high-quality services. Participants will learn how to translate requirements into models of services, including customer experience and other non-functional requirements. Professionals from all disciplines, including social science, computer science, interaction design and even management, will have a chance to engage in all parts of a mini-design process as it takes place over the course of 2.5 days, and have a chance to strengthen their skills of being part of an interdisciplinary team.

Service Modeling

Francisco Veloso Marvin Sirbu Pedro Ferreira Rui Baptista



Innovation and entrepreneurship are increasingly seen as the key elements of growth and prosperity in a region. The most dynamic region in the world today, Silicon Valley, was propelled forward mainly by new technology and the creation of startups – Intel, Apple, Sun, and Google, to name just a few. This workshop seeks to present some the main elements and current thinking on the creation and maintenance of sustained innovation in existing firms and through the establishment of new entrepreneurial ventures. Issues covered include how to use innovation to respond to the current global competitive environment, in particular through user and open innovation processes; what are the impetuses for the formation of new entrepreneurial ventures; and what are critical drivers of innovative and entrepreneurial success, focusing on financial structure and human capital. Throughout the session will be presented concepts, metrics, methods and cases.

Session 2: Challenges and Opportunities for Telecom Segmented Regulation Next Generation Networks (NGNs) promise to deliver triple-play directly to endusers through high-bandwidth connections in the last mile. Designing, provisioning, operating and managing such new infrastructures requires both a large amount of capital, most likely to invest in deep fiber-based solutions, as well as the appropriate skill-set and competences, both technical and business, for upgrading current service offerings. The regulatory context under which such investments develop has a significant bearing on the attractiveness and promptness of carriers to deploy new networks to deliver new information-based services. Dense urban regions may be expected to support multiple facilities-based NGNs, whereas the most rural regions will struggle to attract NGN investment by even one provider. We provide a preliminary analysis of this problem and discuss ways in which it can be addressed for the particular case of Portugal.

Innovation, Entrepreneurship and ICT Policy



Ricard Pillosu Verónica Costa Carvalho

The workshop is divided into 6 sessions of 3 hours each. This year we have the pleasure of having with us Lead Game Programmer Ricard Pillosu and junior gameplay programmer Mario Silva from Crytek(), who will introduce the participants to CryEngine 2 (//, Crytek's award winning game engine. On the last session we will have invited speakers from major game and technology companies that will talk about the game industry and advance topics on game development.

Session 1: Introduction to the CryEngine 2 (June 23rd, morning) - Participants will learn the main concepts to design simple game levels, add objects and enemies.

Session 2: Hands-on (June 23rd, afternoon)-Participants will work in groups and implement a game level with the concepts learned in session 1.

Session 3: Introduction to CryEngine Flow Graph (June 24th, morning) - Participants will learn to use the Flow Graph visual programming interface. Participants will learn to create applications for interactive scenes.

Session 4: Hands-on (June 24th, afternoon) - Participants will work in groups and include in their game level the concepts learned in session 3.

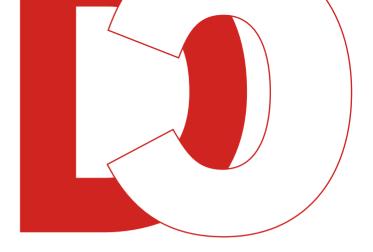
Session 5: Videogame Development Competition (June 25th, morning) - Participants have 3 hours to create a game level with a clear goal and mission.

Session 6: Invited Speakers talk and Videogame Development Competition Award ceremony (June 25th, afternoon) - Ricard Pillosu - Talk: "Scrum". Mario Silva - Talk: "One year experience of working at Crytek" -2 more speakers to be announced.

Videogame Development

Doctoral Committee

Luís Caires Aurélio Campilho Fernando Silva João Paulo Costeira





The Doctoral Consortium is a workshop for Ph.D. students from the dual degree programs in the Carnegie Mellon Portugal Program who are in the early phases of their dissertation work. The goal of the Doctoral Consortium is to help students with their thesis and research plans by providing feedback and general advice on using the research environment in a constructive and interdisciplinary atmosphere. Students will present and discuss their thesis in the context of the Carnegie Mellon Portugal Partnership outside of their usual department or research group atmosphere.

Several prominent professors and industry representatives will be called to attend the consortium and critique and comment on the content of the thesis as well as on the presentation. Students will have 20 minutes to present their research, focusing on the main theme of their thesis, what they have achieved so far and how they plan to continue their work. Another 20 minutes is reserved for discussion and feedback from both the professors and other participants.

Doctoral Consortium







Workshop Instructors and Doctoral Committee

Valentina Nisi is an Assistant Professor at the University of Madeira where she teaches Service Design as part of the Carnegie Mellon|Portugal Program. Her research interests focus on bringing digital stories out into real space, merging architecture, environment and landscape with multimedia narrative experience. She holds a Phd from Trinity College Dublin, Ireland and worked for 4 years in MIT MediaLabEuropeís Story Networks research group investigating the potential of wireless mobile technologies in cinematic non-linear narratives.

Valentina Nisi

lan Oakley is an assistant professor at the University of Madeira and an adjunct assistant professor at the HCI Institute at Carnegie Mellon University. His research focuses on the design, development and evaluation of multi-modal and embodied interfaces. He holds a PhD from the University of Glasgow, UK and has spent three years doing post-doctoral research at MIT MediaLabEuropeís Palpable Machines group. He has also spent two enlightening years working in industrial R&D in South Korea.

Ian Oakley









Paulo Margues is an Assistant Professor

at the University of Coimbra, Portugal,

Professor at Carnegie Mellon University

Program in Software Engineering, offered

jointly by CMU and Coimbra. His main

research interests are concurrent and

collaboration with institutions like the

European Space Agency and Microsoft

Research, resulting in more than 30

publications and results that are now

being applied at the European Space

Operations Center. Having a deep passion

also the author of three books on software

for communication and teaching, he is

engineering and reliability. In the last few

large distributed systems, software

years he lead several projects in

(CMU) in the US. He is the Portuguese

and an Adjunct Associate Teaching

Director of the Professional Master

Larry L. Constantine, IDSA, is an ACM Fellow and an award-winning designer specializing in interaction design for software, hardware, and Web applications. One of the pioneers of software design whose current work centers on usagecentered design, he has contributed numerous concepts and techniques forming the foundations of modern practice in software engineering and applications design and development. His design innovations include numerous patents in human-machine interaction. His publications in both the computer sciences and human sciences include over 175 articles and papers plus 17 books. including the award-winning Software for Use, written with Lucy Lockwood. Winner of the 2009 Stevens Award for contributions to software design and development, he is a highly regarded presenter and teacher who has lectured and taught around the world. Constantine is a Professor in the Department of Mathematics and Engineering at the University of Madeira where he teaches in the dual Masters in Human-Computer Interaction program with Carnegie Mellon University and is the Director of the Laboratory for Usage-centered Software Engineering (Lab:USE).

Monchu Chen obtained his PhD from the HCI Institute at Carnegie Mellon University. His thesis study investigated how to design interfaces perceived by our peripheral vision. Monchu was born in Taiwan, where he got his BSc in Computer Science and an MA in Design from National Chiao-Tung University. He moved to Pittsburgh to work as a research associate in the Department of Psychology at Carnegie Mellon University and finished his master degree of HCI. He lived there for 8 years until he finished his PhD degree. His work covers a wide range of subjects including computer music, interactive arts, cognitive modeling, kinetic typography, computer graphics, film making, architecture, interface and interaction design. computation and cognition of design and eye tracking and computer vision. His current research interests focus on visual attention in interaction design, peripheral visual design and information visualization.

Paulo Marques

development in C# and .NET.

Monchu Chen

Larry L. Constantine









Department of Informatics Engineering.



Ricardo J. Machado is an Assistant Professor at the Dept. Information Systems, University of Minho, Portugal. He the coordinator of the University of Minho's scientific activities within the CMU-Portugal Program, His research focuses on software engineering, namely on model-driven development, requirements engineering, and software quality. He has lead several research projects resulting in more than 60 publications. His current research projects focus on the development of multi-staged approaches in software product lines and on the integration of multi-standard models in software high maturity levels. He leads the SEMAG research group at the Algoritmi research center. He has been involved in the organization of various international events, including ACSD 2003, DIPES 2006, QUATIC 2007, IEEEXtreme 2008 and the MOMPES workshops series.





João M. Fernandes is an Associate Professor at the Dept. Informatics. University of Minho. He conducts his research activities in Software Engineering, with a special interest in Software Modeling, Requirements Engineering, and Embedded Software. During his Ph.D. and now as part of his research and teaching activities, his work is focused on the methodological and technologic aspects related with the use of a multi-perspective, model-driven approach for developing embedded systems, From Sep/2002 until Feb/2003. he was a post-doctoral researcher at the Embedded Systems Laboratory, TUCS, in Turku, Finland, and from Sep/2006 until Jun/2007, he was an invited assistant professor at Dept. Computer Science. Aarhus University, Denmark. He is author of more than 70 papers and he is member of the Editorial Review Board of the Journal of Information Technology Research, IGI Publishing, since Jun/2007. He has been involved in the organization of various international events, including ACSD 2003, DIPES 2006, GTTSE 2009. and the MOMPES workshops series.

João M. Fernandes



Nuno Jardim Nunes is a principal investigator with the Information and Communication Technologies Institute, as well as an associate professor at Lab:USE, vice president of Madeira Tecnopolo. He also directs the joint Carnegie Mellon Portugal Masters of Human-Computer Interaction program. Nunes teaches courses in humancentered software engineering, and various graduate project courses for the HCI program. His areas of research interest lie in model-based user interface design, agile software development methods, and human-centered software engineering. Prior to joining Lab:USE. Nunes was head of the University of Madeiraís Department of Mathematics and Engineering and a researcher with INESC-ID. He holds a Ph.D. in Computer Science from the University of Madeira.

Nuno Jardim Nunes



Lia Patrício is Assistant Professor at the School of Engineering of the University of Porto, in the areas of Service Marketing and Management, Previously, she worked in the Banking Sector, She holds a PhD in Industrial Management and Engineering, an MBA and a degree in Economics from the University of Porto. Her current research focuses on new multidisciplinary methods for Service Experience Design, joining the perspectives of Service Management and Engineering. She has been a proponent of the new Service Engineering and Management Master degree, which started in 2007 at the University of Porto. She is also involved in several research projects on service experience design in banking, retailing and tourism industries.





Francisco Veloso is an Associate Professor in the Department of Engineering and Public Policy at Carnegie Mellon University. He also has an appointment with the Business School at Universidade Catolica Portuguesa in Lisbon, Francisco's scholarly work focuses on how firms and regions develop and leverage scientific and technical capabilities for economic growth. He has published in journals such as the Academy of Management Review. Journal of Operation Management, or Research Policy and worked with a variety of international firms and organizations. including McKinsey & Co., Alcoa Inc., the Asian Development Bank, or The Mexican and Portuguese Science and Technology Foundations. Francisco has won several awards, including the Stan Hardy award for the outstanding paper published in the field of Operations Management in 2008 and the Alfred P. Sloan Industry Studies Fellow for 2008-20010. Francisco has a PhD in Technology, Management and Policy from the Massachusetts Institute of Technology, an M.S. in Technology Management from ISEG and a Diploma in Physics Engineering from IST, both part of the Technical University of Lisbon.

Francisco Veloso









Pedro Ferreira is an Assistant Professor at the Electrical and Computer Engineering Department at Instituto Superior Técnico, Lisbon, Portugal and a Visiting Professor at the Heinz College. Carnegie Mellon University (CMU). His research interests relate to segmented regulation for NGN deployment, universal service policy and spectrum markets. Pedro teaches regularly at the Judge Business School, University of Cambridge (UK) and at the Portuguese Catholic University, in Lisbon, He is affiliated with the Center for Innovation, Technology and Policy Research, in Lisbon. He served as advisor for information society issues for the Secretary of State for S&T of the Government of Portugal and served as a member of the Board of Directors of the Portuguese Knowledge Society Agency, Ministry for S&T. He worked as a Post Doctoral Fellow at the School of Information Management and Systems, UC Berkeley, and at the MIT Program on Internet and Telecoms Convergence, as a Research Assistant, Pedro holds a PhD in Engineering and Public Policy (EPP) from CMU and a dual MSc in Technology Policy and EECS from the Massachusetts Institute of Technology.

Marvin Sirbu received B.S. degrees in Electrical Engineering (1966) and Mathematics (1967), an M.S. degree in Electrical Engineering (1968) and an Sc.D. in Electrical Engineering with a minor in Economics (1973) all from the Massachusetts Institute of Technology. Dr. Sirbu remained at MIT as a Research Associate in the Center for Policy Alternatives before joining the faculty of MITis Sloan School of Management, While at MIT he directed its Research Program in Communications Policy. In 1985 he moved to Carnegie Mellon University with a joint appointment in Engineering and Public Policy, the Tepper School of Business, and Electrical and Computer Engineering. In 1989 He founded CMU's which engages in interdisciplinary research and education at the intersection of telecommunications. computing, business and policy studies.

Marvin Sirbu

Rui Baptista is Associate Professor of Strategy and Organizations at the Department of Engineering Management of Instituto Superior Técnico and Senior Research Fellow of the Max Planck Institute of Economics (Jena, Germany) since March 2004. He is also Coordinator of the Laboratory of Technology Policy and Management of Technology, Center for Innovation, Technology and Policy Research, IN+, since February 2005. Baptista's research and teaching focus mainly on the subjects of entrepreneurship, technological innovation, firm and labor mobility, and their relationship with economic growth and regional development. He is also interested in the relationship between cultural values, governance, economic regulation and political economy. He holds a Licenciatura in Economics from the Portuguese Catholic University, Lisbon and a Ph.D. in Economics from the London Business School at the University of London.

Rui Baptista

Pedro Ferreira









After working as programmer for different web studios, Ricard Pillosu completed a Master Degree in videogame programming and moved into the game industry. Since then he has been involved in different projects like Pyro Studio's RTS "Imperial Glory" and Arvirago's "Lord of the Creatures". He works at Crytek since 2006 he started as Al programmer and now he is Lead Programmer with a team of 12 people.

Ricard Pillosu

Verónica Costa Orvalho born in 1976, mother of a lovely boy. Holds a Ph.D. in Software Development (Computer Graphics) from Universitat Politécnica de Catalunya external link (2007), where her research centered on "Facial Animation for CG Films and Videogames' external link. She has been working in IT companies, such as IBM external link and Ericsson external link, and Film companies, like Patagonik Film Argentina external link since 1994. She has given many workshops and has international publications related to game design and facial animation in conferences like SIGGRAPH external link and Symposium in Computer Animation external link. She has received international awards for several projects: "Photorealistic facial animation and recognition", "Face Puppet" and "Face In Motion". Now, she is a full time professor of Porto University and cofounder and CTO of Face In Motion (http://faceinmotion.com). She is also a former research member at the Event Computational Lab (http://moving-event.org) working on virtual reality and character animation. Current and past collaborations include several film and game companies (Blur Studios, Electronic Arts, Microsoft Portugal, Dygra Films), and research groups (Stanford University, Universitat Politécnica de Catalunya). Her current research focus on developing new methods related to motion capture, geometric modeling and deformation, and real time animation.

Luís Caires is an Associate Professor and he also directs the Centre for Informatics and Information Technology. His research activities are centered on principles and tools for software construction. programming languages, and language based analysis techniques for concurrency and security. He teaches a range of courses on programming languages theory, design and implementation, program analysis. software verification, and principles of concurrency and security. His recent research projects focus on programming language-based verification techniques for concurrency and security in distributed and service based systems, e.g. Sensoria, SecureSpace, SpaceTimeTypes, and Mobilog, in conjunction with Carnegie Mellon. He holds Ph.D. and M.Sc. degrees in Computer Science from the New University of Lisbon, and a B.Sc. in Computer Science from the University of Lisbon.

Luís Caires









João Paulo Costeira

at Carnegie Mellon's VASC

Robótica (www.isr.ist.utl.pt

http://www.ist.utl.pt). He is

Lab (http://welcome.isr.ist.utl.pt/

are focused on visual perception.

recognition and motion analysis.

(www.isr.ist.utl.pt/~jpc) received his BSc,

in 1985,1989 and 1995 respectively. From

1992 to 1995 he was a visiting scientist

Associate Professor in the Department

of Electrical and Computer Engineering

(vasc.ri.cmu.edu). Currently he is an

at Instituto Superior Técnico and a

researcher at Instituto de Sistemas e

the coordinator of thematic area "Signal

Processing for Communication Networks and Multimedia" of the ISR-Associated

about/assoclab/). His research interests

particularly 3D reconstruction, object

MSc and PhD degree in Electrical and

Computer Engineering from Instituto Superior Técnico (http://www.ist.utl.pt)

Department of Electrical and Computer Engineering at the Faculty of Engineering, University of Porto, There, he teaches Image Analysis and Recognition. Biomedical Image Analysis, Measurement, Sensors and Instrumentation, and Computer Programming. In 1985, he earned his Ph.D. from FEUP, where he also earned his undergraduate and postgraduate degrees. Campihoís research interests include Medical Imaging, Image Analysis, and Pattern Recognition. His is currently involved in research projects such as Support Servers for Local and Remote Biological and Medical Image Analysis and Computer Vision (National Program for Scientific Re-equipment; Portuguese Research Council) and BING - Brain Imaging Network Grid (Leader Institution: Universidade de Aveiro: Investigador). Campilho has also worked as Adjunct Director at FEUPis Doctoral Program in Electrical and Computer Engineering, Adjunct Professor at the University of Waterloois Department of Electrical and Computer Engineering, and as President of the Institute for Biomedical Engineering.

Aurélio Campilho is a Professor in the

Fernando Silva studied Applied Mathematics at the University of Porto and in 1987 went to England were he obtained the M.Sc. in Computing at UMIST (1988) and the Ph.D. in Computer Science from the University of Manchester (1993) under the supervision of Prof. Paul Watson, In 2007, obtained the Habilitation in Informatics from the New University of Lisbon. He joined the Department of Applied Mathematics in 1985 and later, in 1996, joined the newly created Computer Science Department, both departments are at the Faculty of Science of the University of Porto (FCUP). He currently is an associate professor at FCUP. coordinates the Center for Research in Advanced Computing Systems (CRACS), is the Director of MAP-i, the Doctoral Program in Computer Science of the Universities of Minho, Aveiro and Porto (2008/09 edition) and is the PI for the Dual PhD Degree in Computer Science between MAPi and Carnegie Mellon University, representing UP. He was head of the Computer Science Department from 1/2006 till 12/2007.

João Paulo Costeira

Fernando Silva

Aurélio Campilho

The Carnegie Mellon Portugal Summer Academy is a unique event organized by ICTI involving several workshops and talks covering many breakthrough and practical issues on the area of information and communication technologies (ICT). Tailored for an industry audience with hands-on experience in key methods and techniques for service, software and game development, technology change and†entrepreneurship. The workshops and talks will be offered by an international team of experts from the Carnegie Mellon faculty and also invited professors from world renown institutions in the ICT field.

The workshops will take place on **June 23-25** according to the following **timetable** June 23, from 9:00 to 18:00 June 24, from 14:00 to 18:00 June 25, from 9:00 to 18:00

Participation is subject to registration, the fee includes all the material to be used in the workshops plus the meals and meetings presented in the timetable.

- · W1 Embodied Futures
- W2 Interaction Design for non-Designers
- W3 Agile Software Engineering (1 day + 1 day)
- W4 Sérvice Modelina
- W5 Innovation, Entrepreneurship and ICT Policy (1 day + 1 day)
- W6 Videogame Development
- DC Doctoral Consortium (1 day)

The registration fees are as follows (1 day / 2,5 days)

- General registration 250 euros/ 500 euros
- Industry affiliates 150 euros/ 350 euros
- Students 100 euros / 250 euros

Event location

Hotel Hipanema Porto http://www.hfhotels.com/gb/?s=7&ss=82

Social venues

Welcome event - 22 June 2009 at Palácio da Bolsa (18.00h) Closing Dinner - 25 June 2009 at Taylor's Port Wine Cellars (19.30h)

Travel and accommodation bookings and enquiries

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