



ESO
European Organisation
for Astronomical
Research in the
Southern Hemisphere



Training Opportunity for Portuguese Trainees

Title	Duty Station
Mechanical Engineer	ESO HQ, Garching/Germany
<p>Mechanical Engineering Department:</p> <p>The Mechanical Engineering department (MEC) within the Directorate of Engineering (DoE) is providing Mechanical Engineering support to the ESO projects, in particular the Extremely Large Telescope (ELT). As part of the project teams the department members are responsible for the definition, design, analysis, procurement and initial assembly of mechanical, opto-mechanical, cryogenic and vacuum systems for advanced astronomical telescope and instrumentation systems for the ESO observatories. The ESOcast 186: Engineers at ESO gives a glimpse of the engineering work done in the Directorate of Engineering: https://www.youtube.com/watch?v=thft_cCRo5g#action=share</p>	
<p>Proposed field of activity:</p> <p>The successful candidate will have the opportunity to learn and understand the ELT system, the world's biggest Telescope, and in particular its mechanical structure. S/he will work within the Mechanical Department groups in the areas of structural and thermal analysis of the ELT system including its opto-mechanical subsystems and Instruments using the latest software programs:</p> <ul style="list-style-type: none">• Get familiar with the ELT system and the existing Finite Element Models (e.g. Main Structure, opto-mechanical subsystems and Instruments)• Combine existing Main Structure and subsystem FE Models• Perform structural FE Analysis of entire system model to investigate cross-coupling effects, to cross check and verify system and subsystem requirements (e.g. performance, error budget and earthquake requirements)• Provide general design and analysis support to ESO projects, if needed	
<p>Required education:</p> <p>Applicants should have completed or be in their final year of a university course at masters level in Mechanical Engineering.</p> <p>Required skills:</p> <ul style="list-style-type: none">• Solid knowledge and understanding of Mechanical Engineering mainly in the areas of structural analysis and design.• Good practical experience in Finite Element Analysis, preferably ANSYS Classic and ANSYS Workbench.• Candidates must be fluent in English (both spoken and written), ESO's official language.• Candidates should have good interpersonal and communication skills and should be able to work in a multi-cultural environment, both independently and as part of a team.	