



ESO  
European Organisation  
for Astronomical  
Research in the  
Southern Hemisphere



## Training Opportunity for Portuguese Trainees

Title	Duty Station
Systems Engineer	ESO HQ, Garching/Germany
<p><b>System Engineering Department:</b></p> <p>The Systems Engineering Department (SEN) within the Directorate of Engineering is responsible for providing Systems Engineering functions to all development projects at ESO. The department is currently supporting three main areas. The first area is general Systems Engineering for the future Extremely Large Telescope (ELT), including systems architecture, requirements management, technical budgets, performance simulations, configuration control and verification. The second area is the design and development of advanced optical and infrared instrumentation for the telescopes of ESO's La Silla-Paranal Observatory and for the ELT. The third area is the design and development of Adaptive Optics Systems, including technology development, performance simulations, and system design and development.</p> <p>The ESOcast 186: Engineers at ESO gives a glimpse of the engineering work done in the Directorate: <a href="https://www.youtube.com/watch?v=thft_cCRo5g#action=share">https://www.youtube.com/watch?v=thft_cCRo5g#action=share</a></p>	
<p><b>Proposed field of activity:</b></p> <p>The proposed opportunity consists of support in Systems Engineering in one of the three areas mentioned above. The successful candidate will work on one of the following topics.</p> <p>Systems Engineering for ELT:</p> <ul style="list-style-type: none"><li>• Support the Lead Systems Engineer in Requirements Management and Configuration Control</li><li>• Support the simulations of the wavefront control strategy</li></ul> <p>Adaptive Optics for La Silla-Paranal or ELT:</p> <ul style="list-style-type: none"><li>• Simulations of a (Multi-Conjugate) Adaptive Optics System</li><li>• Support the commissioning of an AO System</li><li>• Support simulations of phasing in the ELT</li><li>• Implementation of data-reduction and interfacing routines in Python</li></ul> <p>Instrumentation for La Silla-Paranal or ELT:</p> <ul style="list-style-type: none"><li>• Establish and evaluate a MBSE model for an instrument for the ELT</li><li>• Support the acceptance tests, installation and commissioning of an integral-field-spectrograph for the VLT</li><li>• Collect experience and establish a database with reliability and maintenance information and apply it to an instrument for the ELT</li></ul>	
<p><b>Required education:</b></p> <p>Applicants should have completed or be in their final year of a university course at masters level or PhD in Systems Engineering, Experimental Physics or Instrumentation for Astrophysics.</p> <p>Candidates must be fluent in English (both spoken and written), ESO's official language.</p> <p>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.</p>	