



ESO  
European Organisation  
for Astronomical  
Research in the  
Southern Hemisphere



## Training Opportunity for Portuguese Trainees

Title	Duty Station
Optical/Photonics Engineer	ESO HQ, Garching/Germany
<p><b>Optical Engineering Department:</b></p> <p>The Optical Engineering Department within the Directorate of Engineering provides engineering expertise to ESO's projects within the ESO matrix organization, in the areas of optical design for telescopes and instruments, active optics and wave front control, metrology for telescope alignment, laser guide stars, optical fiber technology and Assembly Integration and Testing of optical systems and instruments. In addition, the department manages 900m<sup>2</sup> of optical and opto-mechanical integration laboratories at ESO headquarters and supports the observatory in solving optical problems arising in systems in operation.</p> <p>The ESOcast 186: Engineers at ESO gives glimpse of the engineering work done in the Directorate of Engineering: <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 successful candidate will have the opportunity to work on advanced technologies and R&amp;D activities of the optical engineering department in the context of the ELT and future applications. Depending on experience and interest, the candidate will participate to the following activities:</p> <ul style="list-style-type: none"><li>- Participate to the design and implementation of a test set-up aiming at characterizing large gratings for astronomy application</li><li>- Develop innovative optical alignment techniques combining field dependent Zernike sensitivity, Computer Generated Hologram (CGH) and Laser Trackers</li><li>- Participate to the definition of a standard approach to generate optical sensitivity data for in-house STOP analyses (<u>S</u>tructural-<u>T</u>hermal-<u>O</u>ptical-<u>P</u>erformance).</li><li>- Participate to the characterization of a phase-mask phasing sensor, as well as a pyramid phasing sensor for natural and laser guide star applications.</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 in Optical engineering, Photonics or Physics.</p> <p>Practical experience with simulation software (e.g. Matlab, Mathematica, Python) and optical design software (e.g. Optics Studio) would be an asset.</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>	