

## Training Opportunity for Portuguese Trainees

Reference	Title	Duty Station
PT-2017-TEC-SWS(2)	ARM processors for future Flight SW	ESTEC
<p><b>Overview of the Unit missions:</b></p> <p>The Software Systems division has the responsibility in domain of software engineering <a href="http://www.esa.int/Our_Activities/Space_Engineering/Software_Systems">http://www.esa.int/Our_Activities/Space_Engineering/Software_Systems</a>. In particular the division covers verification and validation techniques for checking mission-critical software, software technology for flight as well as ground systems, real-time software embedded in spacecraft systems and payloads; ground facilities software, including electrical ground support equipment, testbenches, databases and simulation and modelling tools; The division is supporting all ESA satellite projects in the above domains.</p>		
<p><b>Overview of the field of activity proposed:</b></p> <p>Within the domain of Spacecraft Flight Software, Software Validation Facilities the Flight Software Systems Section offer a training opportunity within;</p> <p><b>ARM processors for future Flight SW:</b></p> <p>ARM technology is widely used in consumer electronic devices such as smartphones, tablets or cameras. The low power consumption, performance and the ecosystem business model have made this architecture very popular.</p> <p>However, the use of ARM processors by the European Space Community is still uncommon. To exploit this technology and benefit from the wide ecosystem, a further evaluation of the architecture is necessary.</p> <p>During this activity, the candidate shall:</p> <ul style="list-style-type: none"> <li>- Evaluate the ARM architecture, with special focus on real-time and reliability capabilities.</li> <li>- Select the most suitable ARM processor for the development of Flight SW</li> <li>- Port the EagleEye<sup>1</sup> Central Software to the selected ARM processor.</li> <li>- Verify the correct integration and performance of EagleEye by running the ATB software integration tests</li> </ul> <p>(1) EagleEye is a reference mission implemented within the Avionics Test Bench infrastructure. It simulates an Earth Observation satellite composed by a set of AOCS sensor/actuators, thermal/power subsystems and a simple optical payload (GoldenEye). The EagleEye Central Software is in charge to manage these subsystems and to handle the Telemetry and Telecommands communication with Ground.</p>		
<p><b>Required Education:</b></p> <p>Applicants should have just completed, or be in their final year of a University course at Masters Level (or equivalent) in a technical or scientific discipline.</p> <p>Applicants 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> <p>Applicants must be fluent in English and/or French, the working languages of the Agency.</p>		