

Training Opportunity for Portuguese Trainees

Reference	Title	Duty Station
PT-2014-TEC-EDD	On Board Computers and Data Handling Engineer –MicroController	ESTEC
<p><u>Overview of the Unit missions:</u></p> <p>The Data Systems Division is responsible for project support and technology development of space applications for all that concerns on-board data handling and processing systems (essentially control computers, data handling computers, specialised processors for payload data processing, solid state mass memories, microelectronics devices, ASICs, data and command & control busses, encryption/authentication units/modules, on board networks and corresponding support software).</p> <p>The division is, besides activities related to the specification and validation of data systems, also actively involved in the design of the required building blocks. These elements must comply with high reliability and availability requirements combined to specific immunity to the space environment, in particular related to radiation induced effects.</p> <p>The division hosts several laboratory facilities (for Avionics and Payload Data systems) that allow hands-on work.</p>		
<p><u>Overview of the field of activity proposed:</u></p> <p>The applicant will work integrated in the computer and data systems division of ESTEC and from there he will work closely in the context of the development of a new family of microcontroller for space application</p> <p>The Trainee will be involved in the evaluation and benchmarking of a family of new microcontroller IP cores developed by the On-Board Computer & Data Handling section for space applications.</p> <p>In the first phase of the activity the applicant will be involved in the definition of a test bench for the new Microcontroller IP core. The test bench will be used to assess the suitability of the IP core in space applications such as Motion Control, processing core of Remote Terminal Unit, core of smart sensors. In a second phase the applicant will be involved in the test bench implementation, in the tests execution and in the results analyses.</p> <p>The applicant shall be guided in the specificity of on board systems such as the need for long term reliability and availability, the harsh environment constraints due to radiation effects, on board autonomy to ensure the operations and eventually the survival of the spacecraft.</p>		
<p><u>Required Education:</u></p> <p>Applicants for this post should have a university degree or equivalent qualification in electronics, computer science, telecommunications or equivalent.</p> <p>Knowledge of design of control systems, Hardware (Digital and Analog) and Software design programming language, operative systems are needed. The applicant must have skills in VHDL, MATLAB, C, C++.</p> <p>Candidates must be fluent in English or French, the official languages of the Agency.</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>		