EUROPEAN SPACE AGENCY

Radiation Hardness Assurance Engineer

Job Req ID: 14943
Closing Date: 17 March 2022
Publication: Internal & External
Vacancy Type: Permanent
Date Posted: 17 February 2022

Vacancy in the Directorate of Technology, Engineering and Quality.

ESA is an equal opportunity employer, committed to achieving diversity within the workforc and creating an inclusive working environment. We therefore welcome applications from a qualified candidates irrespective of gender, sexual orientation, ethnicity, beliefs, age, disability or other characteristics. Applications from women are encouraged.

This post is classified A2-A4 on the Coordinated Organisations' salary scale.

Location
ESTEC, Noordwijk, Netherlands

Description
Radiation Hardness Assurance Engineer in the Radiation Hardness Assurance and Component Analysis Section, Technical Reliability and Quality Division, Product Assuranc and Safety Department, Directorate of Technology, Engineering and Quality.

The Radiation Hardness Assurance and Component Analysis Section provides functional support to ESA projects and carries out technology research (R&D) on the radiation effect and reliability assessment of EEE components. The Section is also responsible for the da to-day operation of the ESA component laboratory, including the preparation and executio of radiation test campaigns, the development of test set-up, and subsequent data analysis support of the Agency's projects, studies, evaluation, qualification and radiation hardening activities.

Duties
You will report to the Head of Section and, within the above technical fields, your main tas and responsibilities will include:

- providing support to the Agency's projects in the field of EEE component Radiation Hardness Assurance (RHA);
- preparing and conducting radiation test campaigns, including developing test set-up ar subsequent data analysis (with the emphasis on TID, DD and SEE), on EEE components and test structures in support of the Agency's projects, studies, evaluation, qualification, a radiation hardening activities;
- defining, initiating and managing relevant radiation studies and experimental and development activities (including in-flight component radiation characterisation experiment under ESA contracts;
- supporting the Section's standardisation activities, particularly those involving general

- coordinating such activities with internal and external partners and promoting the result achieved in the form of publications, presentations, and training to be provided;
- contributing to the definition of an RHA activity roadmap for the key component technologies;
- specific duties will include the characterisation and analysis of total ionising dose (TID) displacement damage (DD) and single-event effect (SEE) and the development of RHA guidelines on components for space applications;
- providing expert technical support and consultancy on RHA to ESA projects, programmes and general studies throughout all project phases;
- participating in feasibility studies, project reviews and the evaluation of procurement proposals;
- identifying critical development problems and assisting in their resolution;
- contributing to the definition of technology development requirements and work plans f the Agency's technology programmes;
- defining, initiating and managing R&D activities covering both long- and short-term needs;
- fostering new application areas for multidisciplinary activities, with the emphasis on innovative concepts, cutting-edge technologies and system architectures;
- laboratory activities as required;
- monitoring applicable scientific and technological trends and maintaining state-of-the-a expertise;
- contributing to dissemination of the results of activities performed and the transfer of knowledge across the Agency.

Your duties may also include providing support for other activities in your area of competence.

Technical competencies
General background and specific experience in the field of radiation hardness assurance
A basic knowledge of component engineering, product assurance principles and analysis and simulation of radiation effects on EEE components
Understanding of related technologies, R&D trends and familiarity with the industrial landscape
Hands-on laboratory experience
Ability to conduct research autonomously

Behavioural competencies
Result Orientation
Operational Efficiency
Fostering Cooperation
Relationship Management
Continuous Improvement
Forward Thinking

Education

A master's-level degree in a technical or scientific discipline, i.e. electrical/electronic engineering or (solid-state) physics.

Additional requirements
Experience in performing radiation tests on electronic components and TID, DD and SEE

Other information
For behavioural competencies expected from ESA staff in general, please refer to the ESA Competency Framework.

The working languages of the Agency are English and French. A good knowledge of one o these is required. Knowledge of another Member State language would be an asset.

The Agency may require applicants to undergo selection tests.

At the Agency we value diversity and we welcome people with disabilities. Whenever possible, we seek to accommodate individuals with disabilities by providing the necessary support at the workplace. The Human Resources Department can also provide assistance during the recruitment process. If you would like to discuss this further please contact us email contact.human.resources@esa.int.

Please note that applications are only considered from nationals of one of the following States: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germar Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, the United Kingdom and Canada, Latvia, Lithuania and Slovenia.

According to the ESA Convention, the recruitment of staff must take into account an adequate distribution of posts among nationals of the ESA Member States*. When short-listing for an interview, priority will first be given to internal candidates and secondly to external candidates from under-represented or balanced Member States*. (https://esamultimedia.esa.int/docs/careers/NationalityTargets.pdf)

In accordance with the European Space Agency's security procedures and as part of the selection process, successful candidates will be required to undergo basic screening befor appointment.

Recruitment will normally be at the first grade in the band (A2); however, if the candidate selected has little or no experience, the position may be filled at A1 level.
*Member States, Associate Members or Cooperating States.