

Junior Professional in Microelectronics and Photonics Radiation Effects Engineer

Job Req ID: 14241

Closing Date: 28 February 2022

Publication: Internal & External

Vacancy Type: Junior Professional

Date Posted: 31 January 2022

Vacancy in the Directorate of Technology, Engineering and Quality

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

This post is part of ESA's Junior Professional Programme. We are looking for enthusiastic candidates with a Master's degree and 2-3 years' experience to join ESA for an initial three year period. During this time, you will actively work and learn on the job and will benefit from interesting development opportunities in order to prepare for a permanent position at ESA the end of your Junior Professional assignment.

The selection process for the first cohort of Junior Professionals will take place during Spring 2022, successful candidates are expected to start work during the period June-October 2022.

This post is for an initial limited duration of three years and is classified A1 on the Coordinated Organisations' salary scale.

Location

ESTEC, Noordwijk, Netherlands.

You may be required to relocate temporarily to other ESA establishments or another location for development assignments.

Description

The Radiation Hardness Assurance and Component Analysis Section is in the Product Assurance and Safety Department, Directorate of Technology, Engineering and Quality. The Section's Business Area provides direct and indirect engineering support to ESA projects and European industry in the areas of EEE component radiation effects and reliability assessment. The Section is also responsible for the day-to-day operation of the ESA component laboratory. Moreover, it is responsible for covering all EEE component related RHA to support ESA space missions and R&D activities.

Duties

As Junior Professional, you will be in charge of defining a roadmap for Radiation Hardness Assurance (RHA) activities with respect to the key technologies identified as critical in the EEE sovereignty papers. This concerns in particular Ultra-Deep SubMicron (UDSM) and

Displacement Damage (DD) and Single Event Effect (SEE) characterisation and analysis, well as development of radiation hardness assurance guidelines for photonics for space applications.

Development programme

In addition to your daily work, you will take part in an extensive learning and development programme. From day one, you will learn on the job and benefit from tailored development opportunities, including exposure to different business areas of ESA and participation in technical and key skills training courses.

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On top of this, you will have additional training to build up specific skills and knowledge as well as all the support you need to pursue your career in ESA.

As part of this assignment and with a view to boosting your professional experience and knowledge of the European space sector, you will be offered a one-year secondment with one of ESA's industrial partners. Taking your profile into account and with a view to boosting your professional experience and knowledge of the European Space Agency, you will be offered rotational assignments within and outside your initial organisational unit.

Technical competencies

A basic knowledge of component engineering, product assurance principles and analysis and simulation of radiation effects on EEE components

Ability to conduct research autonomously

Breadth of exposure coming from past and/or current research/activities

Research/publication record

Familiarity with radiation hardness assurance standards

General interest in space and space research

Ability to gather and share relevant information

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, preferably in electrical/electronic engineering or (solid-state) physics.

Additional requirements

You should have between two and three years of professional experience, preferably in a relevant technical area, after completion of your master's degree.

Participation in one of ESA's entry-level programmes, i.e. Young Graduate Trainee, National Trainee, or Research Fellow Programmes, will be recognised as eligible experience."

Specificities

The ESA Junior Professional Programme has a forward-looking perspective. Subject to confirmed good performance, both technically and behaviourally, it is the intention to offer you a permanent contract at the end of the three years. As such, this initiative represents a significant investment by ESA in your personal and professional development. The programme is designed to provide you with the required knowledge and skills to ensure an optimal match and allow you to fulfil your role as effectively as possible. You can expect to be given many opportunities to develop your professional experience and competencies, to learn from ESA experts and to contribute to ESA activities.

Recruitment will take place in the A1 grade. You can expect to be upgraded to A2 at the end of the fourth year if you are offered a permanent position at the end of your Junior Professional assignment.

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 of 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 within 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, Germany, 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 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 before appointment.

*Member States, Associate Members or Cooperating States.