

Optoelectronics Engineer

Job Req ID: 12743

Closing Date: 07 October 2021

Publication: Internal & External

Vacancy Type: Permanent

Date Posted: 26 August 2021

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. We therefore 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 classified A2-A4 on the Coordinated Organisations' salary scale.

Location

ESTEC, Noordwijk, Netherlands

Description

Optoelectronics Engineer in the Optoelectronics Section, Mechatronics and Optics Division, Mechanical Department, Directorate of Technology, Engineering and Quality.

The Optoelectronics Section provides functional support to ESA projects and carries out technological research (R&D) in optoelectronic device technologies and applications. The Optoelectronics Section deals in particular with the specification, development and characterisation of photonic component subsystems and active optical instruments, such as detectors and lasers operating in the UV to FIR wavelength ranges, fibre-optic sensors, lidars, optical communication systems and quantum technologies.

Duties

You will report to the Head of Section and, in the above technical areas, will have the following main tasks and responsibilities:

- Providing expert technical support and consultancy to ESA projects, programmes and general studies in the area of lasers and optical communications 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 for 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-art expertise;
- Contributing to dissemination of the results of the activities performed and the transfer of knowledge across the Agency.

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

Technical competencies

General background and specific experience in the technical domains covered by the position

Hands-on hardware experience

Experience in the development and verification of space hardware

Experience with the design, development and application of relevant tools and methods

Project support experience in a relevant domain

Experience with laboratory and field testing of relevant technical equipment

Experience in the preparation of procurement activities for technology development and innovation (statements of work, proposal evaluation, etc)

Behavioural competencies

Result Orientation

Operational Efficiency

Fostering Cooperation

Relationship Management

Continuous Improvement

Forward Thinking

Education

A Master's degree in optoelectronic engineering is required. Preference will be given to applicants with a PhD.

Additional requirements

- At least 5 years' experience in optoelectronics engineering.
- Knowledge of optical communications, feeder links and laser technologies.
- Experience in pointing acquisition and tracking technologies for space- and ground-based optical communication terminals.
- Experience in the analysis of optical satellite communication links (link budgets analysis including atmospheric effects).
- Knowledge of coding, modulation and transmission of optical communications to support discussions on the CCSDS forums is an asset.
- Knowledge of quantum communications/quantum key distribution systems is an asset.

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 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, 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 internal candidates and secondly to external candidates from under-represented 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.

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.

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