EUROPEAN SPACE AGENCY

Eagle-1 Optical/QKD System Engineer

Job Req ID: 12344
Closing Date: 01 September 2021
Publication: Internal & External
Vacancy Type: Permanent
Date Posted: 21 July 2021

Vacancy in the Directorate of Telecommunications and Integrated Applications.

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, The Netherlands

Description
Eagle-1 is one of the "SAGA-CON" contributing missions under the SAGA programme, with SAGA being the space component of the EU's EuroQCI initiative. It will be implemented through a partnership between ESA and a private operator. Eagle-1 is an end-to-end system including in-orbit pre-commercial QKD services for the partner operator, European Commission, ESA and its Member States.

If successfully appointed to this position, you will report to the Eagle-1 Project Manager and be responsible for monitoring the design, development, integration and testing of the satellite optical payload as well as the optical ground terminals. You will also be responsible for monitoring development of the system level QKD concept and the resulting overall payload architecture, with the aim of achieving the required QKD performance at system level.

Duties
- Monitoring development of the system level QKD concept and the resulting overall payload architecture.
- Monitoring the design, development, integration and testing of the (optical) payload.
- Monitoring payload accommodation and interfaces to the platform.
- Monitoring the design, development, integration and testing of the (optical) ground terminals.
- Monitoring payload and ground terminal procurement activities.
- Monitoring development of all validation models at equipment and payload level.
- Monitoring development of the necessary MGSE/EGSE for the optical payload to perform the payload and satellite integration and test activities.
- Supporting the definition, preparation and execution of the payload- and satellite-level tests, including environmental (TVAC, Mechanical) and in-orbit tests.
- Supporting preparation of the operational procedures.
- Monitoring schedule for the (optical) payload-level activities.
- Identifying potential risks associated with (optical) payload activities and proposing appropriate risk mitigation measures.
- Coordinating, together with the Product Assurance Manager, the implementation of ESA expertise to support payload activities.

Technical competencies
Knowledge of QKD concepts and their realisation via space borne optical payloads.
Knowledge of optical communication technology
Experience in the design, development, testing and operation of optical on-board payloads and ground terminals
Experience with industrial procurement, design, development and verification processes
Multi-disciplinary and comprehensive knowledge of & experience with space system design, development, verification/testing, launch and in-orbit validation
Knowledge of & experience with PA standards and their application in space projects
Complex project risk management processes

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

Education
A Master's degree in an engineering or scientific discipline is required.

Additional requirements
You should also have:

- Strong problem-solving skills to deal with day-to-day operational challenges, together with demonstrated planning and organisational skills; strong result orientation with the ability to set priorities and present practical solutions.
- An excellent ability to provide clear and concise reporting, both orally and in writing; the ability to clearly communicate the "big picture view" of an issue without unnecessary detail.

Direct experience of working with a commercial telecommunications prime contractor and/or operator will be a distinct advantage. Experience with ESA's Partnership Projects would be an asset.
You should demonstrate proven technical capabilities in optical payload engineering and the capacity to apply analytical and sound judgment to resolve problems pragmatically.

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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