

Radio Navigation System Engineer

Job Req ID: 10063

Closing Date: 18 June 2021

Publication: Internal & External

Vacancy Type: Permanent

Date Posted: 28 May 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. Applications from women are encouraged.

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

Location

ESTEC, Noordwijk, The Netherlands

Description

Radio Navigation System Engineer in the Radio Navigation Systems & Techniques Section, Radio Frequency Systems Division, Electrical Department, Directorate of Technology, Engineering and Quality.

The Section provides functional support to ESA projects and carries out technological research (R&D) in the field(s) of radio navigation systems, system performance tools, algorithms (signal and navigation), techniques and equipment for position-navigation-time (PNT) applications on ground and in space.

The Section also covers radio navigation techniques and technologies, elements and subsystems to generate, receive, exploit and analyse the signals from the current and upcoming radio navigation systems (GPS, GLONASS, EGNOS, Galileo, BEIDOU), including system design tools and navigation equipment. Emphasis is placed on the engineering aspects, GNSS system and sub-system evolution, design and low TRL for technological demonstrator prototyping and, in particular, navigation system design and tools, novel navigation techniques and equipment design/prototyping, on-board receivers and formation-flying RF metrology.

Duties

Reporting to the Head of Section and within the technical fields described above, your main tasks and responsibilities will include:

- providing expert technical support and consultancy to ESA projects, programmes and general studies in the field of radio navigation systems and techniques (PNT, in particular GNSS) throughout all project phases;
- participating in feasibility studies, project reviews and 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 long- and short-term needs;

- fostering new application areas for multidisciplinary activities, placing 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 the dissemination of the results of activities performed and the transfer of knowledge across the Agency.

Your duties may also include supporting other activities within your field of competence.

Technical competencies

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

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

Understanding of related technologies, R&D trends and the industrial landscape

Project support experience in a relevant domain

Experience with laboratory or field testing of relevant technical equipment

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

Experience in the management and monitoring of industrial activities, including participation in reviews

Behavioural competencies

Communication

Teamwork

Customer Focus

Innovation & Creativity

Problem Solving

Planning & Organisation

Education

A Master's degree in telecommunications engineering is required.

Additional requirements

Solid expertise and several years' professional experience in at least several of the following topics:

- satellite radio navigation systems performance and design, including (but not limited to) those relating to GNSS
- algorithms and systems for high-accuracy GNSS relying on PPP and RTK techniques
- advanced signal processing techniques and user equipment architectures for robust, resilient, secure GNSS or wireless systems
- hybrid positioning techniques involving sensor fusion (Kalman filter, AI and machine learning, positioning with signal of opportunities)

Knowledge and work experience in space receivers and/or RF systems and techniques other than radio navigation (e.g. wireless communications, wireless security, scientific applications involving RF remote sensing and RF metrology) is considered an asset.

You must be eligible for security clearance from your national security administration.

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.

If you require support with your application due to a disability, please 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 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.

<http://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.