

Flight Software Engineer

Job Req ID: 12618

Closing Date: 27 August 2021

Publication: Internal & External

Vacancy Type: Permanent

Date Posted: 16 July 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. 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 classified A2-A4 on the Coordinated Organisations' salary scale.

Location

ESTEC, Noordwijk, The Netherlands

Description

If appointed to this post, you will be working in the Flight Software Systems Section, a team of around 20 software & electronics engineers responsible for providing expert technical support in the on-board software domain for all missions and satellites at ESA.

The Section's core activity is to support ESA missions in the field of real-time embedded software systems and software system engineering. The Section is involved in a wide range of ESA activities e.g. space science, human and robotic exploration, Earth observation, telecommunications & integrated applications, navigation, space transportation, space engineering and technology, operations and space safety. The Section has contributed, or is contributing, to the success of ESA missions such as Rosetta, Galileo, Juice, Earth observation Sentinel missions, and meteorological missions.

The Section is also responsible for defining, initiating and managing technology research and development (R&D) activities in its field of expertise (e.g. software verification and validation methods and processes, modern software architectures and frameworks, new generation processors, kernel qualifications, RTOS & TSPs, Model-Based Engineering, etc.).

The Section also participates actively in standardisation activities, by influencing the evolution of the various applicable standards and by ensuring their applicability among ESA projects (e.g. ECSS-E40, ISVV handbook, SAVOIR working groups, CCSDS working groups, etc.).

Duties

As a Flight Software Engineer, your specific responsibilities will include:

Project support:

- You will work as part of ESA project teams, together with satellite engineering managers and instrument managers, providing specialist technical support for real-time embedded software systems, including flight software and the corresponding development and validation facilities.
- You will provide technical monitoring of software development contracts, including verification of industrial outputs, reviews and acceptance.
- You will participate in the evaluation of industrial proposals and in project reviews.

Technology activities:

- You will participate in defining and implementing the technology programmes falling within the Section's area of expertise, in particular as regards software architectures, verification and validation and modern engineering methods/tools to improve the development and qualification processes for embedded software.
- You will contribute to the dissemination of the results of activities performed and knowledge transfer across the Agency.

Standardisation activities:

- You will contribute to standardisation activities in the software systems domain. You may also be asked to perform other duties within your field of competence.

Technical competencies

Experience in real-time embedded software

Knowledge of all phases of the software development lifecycle

Experience in software development projects

Spacecraft systems knowledge

Project support experience in a relevant domain

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

Experience with Space Engineering Standards and their preparation and implementation

A good understanding of modern software engineering methods and tools, R&D trends and the industrial landscape

Behavioural competencies

Result Orientation

Operational Efficiency

Fostering Cooperation

Relationship Management

Continuous Improvement

Forward Thinking

Education

A Master's degree in computer science, electronics engineering, space systems engineering, or related discipline is required.

Additional requirements

- Strong experience in real-time embedded software (e.g. SPARC LEON processors, ARM, RISC-V; multicore platforms, IMA/TSP, RTOS, etc.)
- Knowledge of all phases of the software development lifecycle (e.g. requirements engineering, design, coding, V&V, functional validations at system level, support to operations, agile methodology, etc.)
- Strong experience in software development projects (e.g. C/C++, Ada & assembly programming languages; software development environments, software validation facilities and ground testbeds & support equipment)
- Spacecraft systems knowledge, and experience with software development for satellite platforms and/or payloads (e.g. experience with avionics subsystems and integrated flight hardware)
- Proven project support experience (i.e. leading software activities in a project team), including participation in reviews (i.e. assessment of software-related project status at particular project milestones)
- Proven experience in the management and monitoring of industrial activities (e.g. elaboration of statements of work, user specifications, proposal evaluation, supplier interactions, monitoring progress and quality, acceptance, etc.)
- Proven experience with space software engineering standards and their application, or equivalent standards in other domains
- A good understanding of modern software engineering methods and tools, R&D trends and the industrial landscape.

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.

The closing date for applications is 27 August 2021.

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 at 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.