Job Title: Software System Engineer

Requisition ID **10981** - Posted **07/12/2020**

EUROPEAN SPACE AGENCY

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.

Post
Software System Engineer

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

Location
ESTEC, Noordwijk, The Netherlands

Description

Software System Engineer in the Flight Software Systems Section, Software Systems Division, Systems Department, Directorate of Technology, Engineering and Quality.
• The Flight Software Systems Section provides support to ESA projects and carries out technology research and development (R&D) in the fields of real-time embedded software systems, flight software systems development and software validation facilities;
• Future challenges addressed in the Section include new generation processors and their software environments, or modern software development approaches such as model-based and agile methods and their suitability for safety critical software; also autonomy concepts and their implementation and validation are becoming increasingly relevant.

Duties

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

- Providing expert technical support and consultancy to ESA projects, programmes and general studies in the field of real-time embedded software systems, flight software systems development and software validation facilities focused on both simulated environments and hardware in the loop;
- Supporting a wide variety of ESA space missions in the field of real-time embedded software and systems;
  - Participating in the full development lifecycle of the mission and on-board software.
  - Identifying technical risks and critical areas in the development process while assisting in their resolution.
  - Applying the principles of mission critical software development across multiple disciplines, including Robotic Exploration, Human Spaceflight, Science, Earth Observation and Telecoms.
- Participating in feasibility studies, project reviews and evaluation of procurement proposals;
- Contributing to the definition of R&D 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, placing emphasis on innovative concepts, cutting-edge technologies and system architectures;
- Monitoring applicable scientific and technological trends and maintaining a state-of-the-art expertise;
- Contributing to the dissemination of the results of the activities performed and the transfer of knowledge across the Agency;

Duties may also include supporting other activities within the post holder's field of competence.

Technical competencies

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

Behavioural competencies

Communication
Teamwork
Problem Solving
Results Orientation
Planning & Organisation
Continuous Learning

Education

A Master's degree in computer science and/or electrical engineering is required.

Additional requirements

Applicants for this post should have a background and experience in embedded real-time systems. Expert knowledge in the programming languages, including but not limited to C and Ada. Hands-on experience of device driver development on e.g. Leon and ARM processors and interfaces such as CAN, SpaceWire and MilBus1553. Development experience from using RealTime kernels such as RTEMS. Extensive knowledge of modern software engineering and practical experience in spacecraft software engineering is required.

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 3 January 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 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.