

# Job Title: Software System Engineer

Req ID 8692 - Posted 01/10/2019



## 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. 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 SW environments, or modern SW development approaches such as model-based and agile methods and their suitability for safety critical software; also autonomy concepts and their implementation and validation become 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 or equivalent qualification 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 15 October 2019.**

If you require support with your application due to a disability, please email [contact.human.resources@esa.int](mailto:contact.human.resources@esa.int).

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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. Priority will first be given to internal candidates and secondly to external candidates from under-represented Member States when short-listing for interview.

(<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.