Job Title: Software Engineer (Ground/Crew Systems)

Req ID **8942** - Posted **17/02/2020**

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. Applications from women are encouraged.

Post
Software Engineer (Ground/Crew Systems)

This post is for a limited duration of 4 years (non-renewable) and is classified A2-A4 on the Coordinated Organisations' salary scale.

Location
ESTEC, Noordwijk, The Netherlands with a resident assignment in EAC, Porz-Wahn, Germany.

Description

Software Engineer in the Ground Software Systems and Functional Verification Section, Software Systems Division, Systems Department, Directorate of Technology, Engineering & Quality.

The Section provides functional support to ESA projects and carries out technological research (R&D) in the fields of ground software development and utilisation, covering items such as test benches, simulators or database applications.

The Section develops and promotes SW engineering technology applied to ground SW and simulator technology, in particular

1. test and operational procedure languages
2. database applications
3. tools for real-time simulation with hardware-in-the-loop and human-in-the-loop
4. graphical simulation
5. visualisation and interactive 3-D graphics (virtual and mixed reality technologies).

In all areas the Division studies the application of artificial intelligence technologies.

The position will initially focus on management support for the development of new technologies for astronaut operations and exploration. This is relevant in the ISS context, but also to future activities in cis-lunar space and lunar surface missions in the framework of the European Exploration Envelope Programme. The objective is to foster, coordinate and assess the application of existing - as well as any future ones - to astronaut operations and exploration. Training and familiarisation withthe parent Directorate's mandate, preocesses and procedures will be part of this assignment.

Duties

You will initially be assigned as Functional Support to the Directorate of Human & Robotic Exploration Programmes, raporting functionally to the Leader of the Space Training Team in the ISS Operations & Astronaut Group within the technical fields described above, and will discharge main tasks and responsibilities including:

- providing expert technical support and consultancy to ESA projects, programmes and general studies in the Section field outlined above;
- defining, initiating and managing R&D activities covering long and short-term needs, in particular assisting in implementing technology projects on astronaut operations, medical and training;

- fostering new application areas for multidisciplinary activities, emphasising innovative concepts, cutting-edge technologies and system architectures;
- implementing projects in the aforementioned areas, identifying critical development problems and assisting in their resolution;
- monitoring science and technology developments in the field as well as existing and possible future projects and developments, maintaining state-of-the-art expertise;
- liaising with other ESA-wide technology and R&D activities such as DPTD or other programmes, and TEC expertise in the area of competence, contributing to the definition of technology development requirements and work plans for these programmes;
- participating in feasibility studies, project reviews and evaluation of procurement proposals;
- facilitating the prioritising of projects in combination with the TEC and HRE roadmaps / strategies;
- participating in periodic meetings with the parent section, contributing to the transfer of the technical knowledge and lessons learned across the Agency.

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

Technical competencies

Knowledge of Human Factors Engineering (UX design) and associated technologies
A good understanding of modern software engineering methods and tools, R&D trends and the industrial landscape
Experience in crewed spaceflight operations
Experience in software development projects
Experience in the management and monitoring of industrial activities, including participation in reviews
Experience in simulator technology, Mixed Reality and Virtual Reality
Knowledge of Space Engineering Standards and their application
Experience in technology roadmap definition and harmonisation

Behavioural competencies

Communication
Teamwork
Results Orientation
Innovation & Creativity
Planning & Organisation
Continuous Learning

Education

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

Additional requirements

Background and experience in modern software engineering is required. Experience with space operations and robotics concepts is highly desirable. Experience with industrial software developments is an asset.

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 17 March 2020.

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 view of the limited duration of this post, internal candidates are strongly advised to contact their HR advisor before applying.

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.