EUROPEAN SPACE AGENCY

Vega and Space Rider AOCS and GNC Engineer

Job Req ID: 15813
Closing Date: 14 July 2022
Publication: External Only
Vacancy Type: Fixed-Term
Date Posted: 30 June 2022

Vacancy in the Directorate of Space Transportation.

ESA is an equal opportunity employer, committed to achieving diversity within the workforce and creating an inclusive working environment. We therefore welcome applications from all qualified candidates irrespective of gender, sexual orientation, ethnicity, beliefs, age, disability or other characteristics. Applications from women are encouraged.

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

Location
ESRIN, Frascati, Italy

Description
Under the direct hierarchical authority of the Vega and Space Rider Avionics, GNC and Software Engineering Manager (STS-PVA), the Vega and Space Rider AOCS and GNC Engineer is responsible for all the Vega technical activities in the domain of the Guidance, Navigation and Control algorithm engineering and the Navigation Unit development, acting as Technical Authority to ensure the necessary harmonisation in the implementation of the different Vega and Space Rider programme envelopes.

Duties
- Definition of the Technical Requirements specifications, architecture and interfaces with other subsystems, Design Definition, Development, Validation and Qualification relevant to the Vega GNC algorithms, including Failure Detection Isolation & Recovery (FDIR);
- apportionment of technical requirements from system level to GNC, defining the relevant internal and external interface specifications, from Launch System down to Launcher System and Subsystems, Launch Base and Launch Range;
- Supervision of the GNC engineering activities and in particular the performances of the Vega algorithms;
- Contributing to the Vega Programs Verification and Validation strategy within the area of responsibility, in coordination with the System and Avionics, including Simulation and Test Facilities (SWIL, HWIL test campaigns);
- Technical supervision of the GNC Engineering areas in Vega Production, in particular for the Mission acceptance process, supporting the flight anomalies and non-conformances review process, assessment of request for waivers or deviations, monitoring of change proposal process and action implementation and impacts on Vega Launcher qualification status;
- Supporting the exploitation activities relevant to the Flight Trajectory Reconstruction, comparing the performances derived from the Flight Data against predictions and against the GNC requirements;
- Drafting the relevant Statements of Work, evaluating the industrial offers and supporting the negotiation process of industrial contracts within the area of

responsibility;
- Evaluating the industrial deliverables and their formal acceptance by the Agency within the area of responsibility;
- Contributing to the preparation of milestones and reviews, including the specific GNC Reviews for Vega programmes;
- Systematic exhaustive reporting of the status and criticalities of the activities in the domain of responsibility, for weekly management meetings with line management, reporting meetings with upper management and status reports to the Programme Board.

In addition, in support to the Space Rider Focal Point:

- Definition of the Technical Requirements specifications, architecture and interfaces with other subsystems, Design Definition, Development, Validation and Qualification relevant to the Space Rider AOCS and GNC algorithms for the Orbital and Re-entry, Descent, TAEM and Landing mission phases, including Failure Detection Isolation & Recovery (FDIR);
- Critically reviewing the engineering activities and in particular the performances of the Space Rider GNC algorithms;
- Contributing to the Space Rider Verification and Validation strategy within your area of responsibility, in coordination with the System and Avionics, including Simulation and Test Facilities (SWIL, HWIL and ATB and combined test campaigns);
- Participating in trade-offs for the selection of best suitable sensors and actuators and advanced control techniques to achieve the Space Rider performance requirements and the corresponding development follow-up activities.

Technical competencies
Strong background in the design, development, validation and qualification of GNC and AOCS systems for space applications
Knowledge of cost and schedule aspects related to your area of responsibility
Knowledge of other technical domains with interfaces to your own area of responsibility
Knowledge of Space system development and PA standards
Knowledge of ESA development, verification and procurement processes
Direct experience of the development of Vega related products is considered an asset

Behavioural competencies
Result Orientation
Operational Efficiency
Fostering Cooperation
Relationship Management
Continuous Improvement
Forward Thinking

Education
A master's degree in a relevant engineering field is required for this post

Additional requirements

Other information
For behavioural competencies expected from ESA staff in general, please refer to the ESA Competency Framework.
For further information please visit: Professionals, What we offer and FAQ

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.

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 or balanced 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 conducted by an external background screening service.

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.
*Member States, Associate Members or Cooperating States.