

Orbit and Mission Analysis Engineer

Job Req ID: 12725

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Vacancy Type: Permanent

Date Posted: 10 December 2021

Vacancy in the Directorate of Navigation.

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

Location

ESTEC, Noordwijk, Netherlands

Description

Orbit and Mission Analysis Engineer in the Galileo Constellation Analysis Unit, Galileo G1 System Engineering Service, Galileo First Generation Project Office, Galileo Programme Department, Directorate of Navigation.

The Galileo Constellation Analysis Unit carries out constellation mission analysis activities for the overall Galileo system deployment, mission analysis for all future Galileo launches (G1, G2), support for LEOP, constellation deployment planning, and maintenance/upgrades of the constellation mission analysis facility. The Galileo Constellation Analysis Unit consists of a team of ESA systems engineers complemented with industry resources.

Duties

You will report to the Head of the Galileo Constellation Analysis Unit, and will be responsible for orbit and mission analysis tasks for the Galileo Programme (First and Second Generation).

Your main tasks and responsibilities will include:

- Generating orbit and mission analysis products and associated technical notes;
- Supporting and following up operations (LEOP, manoeuvres, satellite anomalies);
- Contributing to the Galileo Constellation Deployment and Replenishment Plan, which maintains service availability, taking into account satellite deployment constraints, satellite reliability, spare policy, and satellite and launcher procurement plans;
- Contributing to the Galileo disposal orbit strategy, which ensures compliance with space debris regulations and long-term exploitability of the constellation orbits;
- Contributing to implementation of the critical requirements related to satellite orbit and attitude control, from LEOP through to satellite end-of-life and disposal, to ensure navigation service performance;

- Following up with the space segment team in its area of expertise, in particular the avionics subsystem, and its contribution to overall mission objectives and navigation service performance;
- Following up with the ground segment team in its area of expertise, in particular flight dynamics;
- Assisting the operations and service teams in their areas of expertise, in particular flight dynamics and constellation management;
- Following up interaction with launcher providers, ensuring the proper implementation of launcher requirements related to the deployment of satellites to the Galileo constellation, and proper disposal of launcher orbital stages;
- Helping manage tasks carried out by industry teams in the area of mission analysis and constellation replenishment;
- Leading the procurement and maintenance of constellation mission analysis and constellation replenishment tools to perform the analysis needed to accomplish the tasks described above, as required by the programme;
- Generating lessons learned and contributing to Knowledge Management initiatives in the Directorate of Navigation.

You will work as part of a team of engineers, led by the Head of the Galileo Constellation Analysis Unit, and will cooperate closely with the other team members and teams within the Galileo programme, particularly those responsible for satellite platform and ground segment procurement, and operations support.

Technical competencies

Experience in mission, spacecraft and/or payload operations

Mission analysis

Astrodynamics software development

Experience in deployment and maintenance of satellite constellations

ESA space systems development, verification and review processes and standards

Behavioural competencies

Result Orientation

Operational Efficiency

Fostering Cooperation

Relationship Management

Continuous Improvement

Forward Thinking

Education

A Master's degree in aerospace engineering or related discipline is required for this post.

Additional requirements

You have a background and substantial experience in mission analysis and systems engineering, and a good background in space system design, manufacturing, and testing. Experience in GNSS Phase C/D projects is considered an asset.

You have a good knowledge of modern computer systems, programming languages, and constellation mission analysis, as well as a detailed understanding of constellation aspects of satellite navigation systems (Galileo, GPS).

You have good leadership, interpersonal and communication skills.

You can work autonomously, effectively and cooperatively in a diverse, international team environment, defining and implementing solutions in line with team and individual objectives and project deadlines.

You also have good technical, analytical, organisational and reporting skills, a proactive attitude to solving problems and an interest in innovative technologies.

You must be able to obtain security clearance from the relevant national authorities.

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.

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 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, Latvia, Lithuania and Slovenia and in addition of Member States of the European Union not members of ESA: Bulgaria, Croatia, Cyprus, Malta and Slovakia.

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.