

EUROPEAN SPACE AGENCY

Vacancy in the Directorate of Technical and Quality Management

The European Space Agency is an equal opportunity employer and encourages applications from women

POST

Guidance, Navigation and Control (GNC) Systems Engineer in the Navigation, Guidance and Control Section, Control Systems Division, Electrical Engineering Department, [Directorate of Technical and Quality Management](#).

This post is classified in the A2/A4 grade band of the Coordinated Organisations' salary scale.

LOCATION

ESTEC, Noordwijk (The Netherlands).

DUTIES

The incumbent will report to the Head of the Navigation, Guidance and Control Section. The Navigation Guidance and Control Section is responsible for the definition and implementation of GNC systems for planetary exploration orbiters and landers, launchers and re-entry vehicles and for specialised applications such as formation flying.

The major areas of responsibility of the postholder will be to provide support to spacecraft and space transportation systems, and to initiate and manage research and development (R&D) contracts in their domain of competence.

The main tasks of this position are:

- providing GNC engineering expertise to ESA projects, involving system and trajectory requirements analysis and trade-offs, performance and budget analyses, writing and assessment of GNC specifications (system, software and hardware units), participating in the evaluation of industrial proposals, being the engineering focal point for the GNC subsystem and unit procurement;
- reviewing, evaluating and checking industrial contractors' GNC designs, including FDIR and health monitoring systems; identifying design deficiencies and problem areas and assisting in their resolution. These activities shall be carried out during all phases of satellite procurement from preliminary definition up to launch, with particular emphasis on project reviews;
- providing technical expertise, in the domain of competence of the Section, to early feasibility and definition studies for future missions including Phase 0 in the ESA Concurrent Design Facility, involving system requirement flow down analysis, GNC conceptual definition, and trade-off studies with respect to trajectories, feasibility and available technology;
- analysing and designing advanced guidance and estimation algorithms and robust controllers for exploration vehicles and space transportation systems; developing associated design analysis and simulation tools including mathematical solvers;
- conceiving, initiating and managing R&D contracts on mission enabling technology including GNC architectures, algorithms and hardware technology. This task involves preparing specifications and work statements, managing and monitoring technical and schedule performance, following up and promoting the technology results;

- working in the Control Laboratory, primarily preparing and using the in-house GNC Test Facility and prototyping precursor GNC tools supporting new GNC techniques.

QUALIFICATIONS

Applicants for this post should have a Master's degree or equivalent qualification in control and aerospace engineering. A minimum of five years of experience in design, tuning, analysis and simulation of GNC systems including FDIR in different project phases, is essential.

A proven knowledge of modern control design methods, commercial model-based design tools, rapid prototyping of hardware-in-the-loop systems would be an asset. Candidates should also be proficient with Matlab/Simulink and C/C++ programming language.

Applicants should have good interpersonal and communication skills. They should have the ability to work autonomously, effectively and cooperatively in a diverse and international team environment and to define and implement solutions in line with team and individual objectives and project deadlines.

In addition, candidates should have good analytical, organizational and reporting skills, a proactive attitude to solving problems and an interest in innovative technologies.

The working languages of the Agency are English and French. A good knowledge of one of these languages is required. Knowledge of another member state language is an asset.

CLOSING DATE

The closing date for applications is **02 May 2014**.

Applications from external candidates for this post should preferably be made [on-line](#) at the ESA Web Site (www.esa.int/careers). Those unable to apply on-line should submit their CV to the Human Resources, ESTEC, Keplerlaan 1, 2201 AZ Noordwijk ZH (The Netherlands).

ESA staff members wishing to apply for this post should fill in the [Internal Application Form](#) and email it to [Apply2ESTEC](#).

The Agency may require applicants to undergo selection tests.

Under ESA Regulations, the age limit for recruitment is 55. Please note that applications are only considered from nationals of one of the following States: Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, the United Kingdom and Canada.

Priority will be first given to internal candidates and secondly to external candidates from under-represented member states.

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.