

# **Mission Analysis & Navigation Engineer**

Ref.ª T202505

Our client is a space systems engineering company, delivering advanced design solutions and turn-key space SW systems. Building on a solid team of highly motivated and specialized engineers, is now a reference player in the European space sector, leading in the areas of Mission Analysis, Guidance, Navigation and Control, Global Navigation Satellite Systems Technologies, Ground Segment Systems and Earth Observation applications.

The company is selecting a Mission Analysis and Navigation Engineer to be integrated in the Interplanetary Mission Analysis and Navigation Competence Centre of the Mission engineering Business Unit. The work of the Mission Engineering Business Unit is oriented to supporting the design of space missions from a mission analysis point of view (for both ESA and commercial customers), design software tools for mission analysis studies and do research in celestial mechanics and astrodynamics.

As a matter of reference, current activities comprise:

- Interplanetary missions (planets, astronomy, minor bodies, etc.)
- Earth observation and lunar missions
- Flight dynamics
- SW Development
- Planetary Defence
- Formation flying
- Autonomous in-orbit rendezvous
- Space transportation systems and re-entry vehicles
- Planetary entry, descent and landing

Location: Lisbon, Portugal

## Main Accountabilities:

The following types of responsibilities are envisioned:

Support to mission analysis and design for interplanetary and Earth missions

If you meet the above requirements, please send your application via email: careers@qsr.consulting with reference to T202505\_Rec\_Mission Analysis and Navigation Engineer

- Development of software tools in support to mission analysis actions
- Performance of covariance and navigation assessments
- Development of software for navigation purposes
- Design, optimize, and automate orbit manoeuvre strategies and algorithms for constellation deployment, station-keeping, replenishment, collision avoidance, and re-entry.
- Modelling and simulation of space systems, including space environment and space vehicle dynamics
- Play an active role in fostering the consolidation of the engineering processes and promoting technology research, innovation and development actions

## **Requirements & Qualifications:**

#### Education:

<u>Required:</u> Postgraduate studies (e.g. M.Sc.) in aerospace engineering
PhD studies in the relevant field is an asset.

#### Professional Experience:

 <u>Required</u>: Engineer with 3 - 5 years of experience in the practical application of the domains relevant to the post (relevant MSc & PhD studies would also be considered).

The position will be tailored to the level of experience; additional industrial and/or academic experience would be viewed very positively.

#### Technical Requirements:

- Required:
- High knowledge of celestial mechanics and astrodynamics
- Knowledge of mission analysis covariance and navigation analysis.
- Knowledge of estimation theory and techniques
- Knowledge of trajectory optimisation theory and techniques
- Programming: Python
- Software tools: ESA MIDAS (GODOT-based) tool
- Software engineering methods and techniques
- Experience with orbital analysis software or tools
  - —
- Desired:
- Experience related to lunar missions
- Background in control, telemetry or a related field.

If you meet the above requirements, please send your application via email: careers@qsr.consulting with reference to T202505\_Rec\_Mission Analysis and Navigation Engineer

- Familiarity with Object oriented programming

### Languages:

- Excellent level of English, spoken and written

## Offer:

- Wage package appropriate to the demonstrated knowledge and experience.
- Career development opportunity.
- Contractual link established directly with the our client company.
- Work in highly innovative projects with ESA (European Space Agency).