



Talent driven
culture.

Senior GNC/AOCS Engineer

Ref.^a T20264

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 one engineer to be integrated in the GNC/AOCS Competence Centre of the Flight Systems Business Unit, to support new growth areas in Guidance, Navigation, and Control (GNC), including Attitude and Orbit Control Systems (AOCS) and Failure Detection, Isolation, and Recovery (FDIR).

The work of the GNC/AOCS Competence Centre is oriented to the design, development, specification, and validation of autonomous systems for a broad range of aerospace and aeronautical platforms. As a matter of reference, the activities covered are:

- Satellite formation flying, rendezvous, in-orbit servicing (IOS) and active debris removal (ADR)
- Entry, descent, and landing on planets (Earth, Mars) & natural satellites
- Launch vehicles
- Earth observation, up-stream (flight segment) and downstream
- Interplanetary exploration and navigation
- Unmanned autonomous vehicles (UAVs, UGVs)
- System and mission design

Location: Lisbon (Portugal)

Main Accountabilities:

The following types of responsibilities are envisioned:

- Specification, design, implementation, and validation of AOCS and FDIR algorithms, to be applied to Earth-observation, interplanetary, and ADR/IOS satellites, among others, and/or
- Specification, design, implementation, and validation of GNC and FDIR algorithms, to be applied to satellites, launchers, and re-entry vehicles, among others, and/or

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- Specification and support to procurement of sensors and actuators for GNC and AOCS.

The activities involved may include:

- Model-based design implementation of GNC/AOCS algorithms
- Simulator design, implementation, and testing
- Simulation of dynamic systems
- Mathematical modelling
- Specification and validation of GNC/AOCS solutions
- Analysis and trade-off of hardware solutions
- Interface with the overall system team
- Technical and team management

Requirements & Qualifications:

Education:

- Required: A recognized engineering degree (Mechanical, Aerospace, Electrical, Electronic) or a related degree (e.g., Physics, Maths).
- Desired: Postgraduate studies (MSc or PhD) with a focus on aeronautical / aerospace engineering and providing a solid background in at least one of the following:
 - Orbital mechanics and atmospheric flight dynamics
 - FDIR design, implementation, and validation
 - Classical and robust control techniques (including fixed-structure H^∞ synthesis, μ analysis, LPV control)
 - Flight operations
 - Model-based system engineering

Professional Experience:

- Required: Engineer with at least 3 years of experience in the practical application of the domains relevant to the post (relevant MSc & PhD studies would also be considered).
- Desired: Engineer with 5 or more years of experience.

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

Technical Requirements:

- Required:
 - A strong background in control and simulation of dynamic systems
 - Practical experience in aeronautical/aerospace GNC/AOCS and FDIR solutions (experience in ESA/European programmes is welcome)

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- Capacity to understand new concepts and apply them to engineering problems
- Good programming skills
- Experience with Matlab and Simulink
- Desired:
 - Experience in flight operations in ESA/European programmes
 - Experience in atmospheric flight
 - Experience with COMPASS and/or GAFE to support FDIR design and analysis
 - Solid theoretical background in GNC/AOCS
 - Background on multivariable robust control
 - Experience with Python and C
 - Experience in project management

Languages:

- Good 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 company.
- Work in highly innovative projects with ESA (European Space Agency).

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