

**Ref. Unit Request:** Headquarters (Terceira Island)

**Vacancy Title:** Project Developer

**Location of work to be performed:** Headquarters (Terceira Island, Azores, Portugal)

**Contract Duration:** 24 months

The AIR Centre has a vacancy for a junior Project Developer to work on the construction of a new constellation of small satellites for ocean and climate change monitoring, based on different sensors such as radar altimeter combined with gravity and ocean temperature and salinity measurements.

The Ocean has been assuming a more prominent role both as a mobiliser of technological, scientific, economic and social development, as well as a resource that must be protected and valued. One of the best ways to prospect, monitor and value the open ocean, in an economical and sustainable manner, is by leveraging on the Space/Earth interactions, in line with the “Atlantic Interactions” research agenda and, at a global scale, the UN Sustainable Development Goals.

The successful candidate will work on the MAGAL project, which seeks to understand long-term variability in local, regional, and global climate induced by ocean steric (temperature and salinity) variations. Concurrent monitoring of land water storage (soil moisture, snow, surface water, and groundwater) needs to go hand-in-hand with the oceanic measurements. Innovative data assimilation techniques need to be developed with the state-of-the-art ocean and land modeling to provide a consistent and systematic Earth dataset. Improved spatial and temporal resolution can be obtained by developing radar altimeter instruments to be adapted for a future constellation of small satellites. Through the Consortium’s extensive experience in multi-satellite and multi-variate data assimilation, MAGAL also includes an innovative data and information processing and visualization system, using advanced high-performance modeling, estimation techniques, statistical and scientific machine learning methods, and error analysis in data gathered from different sources.

MAGAL will foster the growth of the national scientific and engineering capacity to generate innovation and industrial development, by combining profit driven partners, with more scientific oriented ones, through research and interface entities. Concurrently, MAGAL promotes the internationalization of Portuguese entities, taking advantage of the experience and organizational culture of the American institutions like UT Austin.

**Tasks and Responsibilities:**

AIR Centre’s role in MAGAL is to contribute to user cases and mission definition as well as in the project dissemination activities. Through its close working relationships within its network, and as part of its strategic objectives, AIR Centre will analyse user needs and contribute to mission requirements to ensure relevance for target “customers”. AIR Centre will look for the potential of future sustainability of services and geographic coverage, giving focus on the export potential to the Southern hemisphere. In addition, through its annual flagship event, High-Level Industry-Science-Government Dialogues (HLD), AIR Centre will involve representatives on a ministerial level from several Atlantic countries, and ensure that MAGAL draws attention to decision makers, financing bodies and potential user sectors of the results. In the concluding phase of MAGAL, a joint workshop will be organized with adjacent projects and interested stakeholders, in an EU

location with easy access, with the purpose of preparing the grounds for pursuing the next steps and new partnerships.

Opportunity to continue the development and implementation of other projects within the AIR Centre related with small satellite constellations.

**Qualifications and experience requirements:**

- Msc degree in Aerospace Engineering, Engineering Physics, Electrical and Computer Engineering or other relevant degrees.
- Familiarity with two or more of the following fields: orbital mechanics, radar altimeter, multi-satellite and multi-variate data assimilation, data and information processing and visualization, estimation techniques, statistical and scientific machine learning methods and error analysis in data gathered from different sources.
- Ability to perform teamwork, with excellent inter-personal and communication skills.
- Excellent organization skills and willingness to work autonomously.
- Excellent verbal and written communication skills (mainly in English, knowledge in Portuguese is an advantage).
- Communicate effectively through oral and written.

**About us:**

The AIR Centre is the entity that implements the research agenda of the ‘Atlantic Interactions’ High-Level Dialogues, which has officially begun its activity in July 2018. The AIR Centre’s distributed and articulated network around the Atlantic Ocean stimulates and improves mutual understanding and collaboration of countries, regions and entities. In addition, it takes advantage of the synergies of connected governments, infrastructures, institutions and resources to develop large-scale joint initiatives, projects and integrated actions. Due to its structure, AIR Centre can reach a more significant population segment in a faster and more efficient way, accelerating the connectivity and interaction of the regions and promoting projects that require the transregional and/or transnational dimension that the AIR Centre can provide.

**Application Process:**

Interested candidates should send a single PDF file (please name it: Name\_MAGAL.pdf), to the email address [recruitment@aircentre.org](mailto:recruitment@aircentre.org), indicating in the subject line Vacancy: Junior Project Developer, with the following documents:

- 1) Motivation Letter
- 2) Detailed CV
- 3) Contacts of 2 references

The deadline for application submission is January 31, 2021. Selected candidates will be invited for an interview, via videoconference.