

Ref. Unit Request: Earth Observation Laboratory (EO Lab)

Vacancy Title: Scientific Programmer

Location: Terceira Island, Azores – Portugal - Headquarters of the AIR Centre

Contract Duration: 2 years

Job Description:

The AIR Centre is hiring a Scientific Programmer to support the Marine Biodiversity Observation Network (MBON) Secretariat. The successful candidate will be part of a multidisciplinary team of scientists and engineers who conduct research in a variety of geographic areas and will support their work, pushing the boundaries of satellite data applications.

The MBON is the marine thematic network under the Group on Earth Observation Biodiversity Observation Network (GEO BON). The MBON is a community of practices to develop and share best practices and standards on how to collect and share data about life in the sea. A grand challenge is to focus on Essential Ocean Variables (EOVs) and Essential Biodiversity Variables (EBVs) that can be used to track changes in how and why the abundance, distribution and diversity of organisms in the sea are changing, and to apply this information for sustainable development, conservation and societal benefit.

The MBON Secretariat provides a coordinating mechanism to link the GEO BON MBON with other key international ocean research and monitoring efforts as well as with local requirements for information about life in the sea and applied oceanography. The MBON Secretariat also streamlines and focus on this community of practice to link operational agencies with research groups across various disciplines (fundamental to social transdisciplinary sciences) on solving problems of society.

Support to the MBON Secretariat is needed on several activities that may include one or more of the following: identification of historical and current biodiversity data, interfacing and ensuring data interoperability between various international geo-portals, support programming for oceanographic applications based on remote sensing and in situ Earth Observations, support the expansion of the network both geographical and thematically, support the maintenance of the MBON website and content management.

Tasks and Responsibilities:

- Coordinate activities with the MBON Secretariat, MBON Co-chairs and Steering Committee Group.
- Coordinate activities with other international networks related to marine biodiversity.
- Coordinate efforts with research institutions in the Atlantic region that are aligned with the scientific agenda and the missions of the AIR Centre.
- Contribute and propose the organization of scientific and dissemination events within the AIR Centre and MBON networks.
- Explore the application of satellite-derived products to innovate in the support of biodiversity in the context of both the AIR Centre and MBON communities.
- Assist with the development, maintenance and management of a system to process space derived data products for different applications.

- Carry out excellent data quality analysis and quality assurance and provide satellite imagery for publications, production of data from new satellites with oceanographic instruments, and ingest all needed ancillary data.
- Support development of the code in high-level programming languages to generate satellite-derived products.

Qualifications and experience requirements:

- Academic qualifications: at least master's equivalent in geography, oceanography, remote sensing biology or related areas and with minor or extensive experience in either marine ecology, marine biology, biological oceanography, computer science or related fields. Having a PhD will be valued.
- Proficient in high-level programming languages such as Python or R and able to develop user applications/methodologies.
- Good level of autonomy and planning skills.
- Demonstrated the ability to develop and publish technical reports, papers, and products.
- Excellent verbal and written communication skills (mainly in English).
- Experience in international proposals development will be valued.
- Experience working with satellite imagery and GIS (preferable).
- Professional experience of at least 3 years.

Working Place:

The EO Lab is a dedicated unit of the AIR Centre, located in the TERINOV Technology and Science Park (Terceira island, Azores) and is established as European Space Agency (ESA)_LAB@Azores, a laboratory to set-up an institutional link between academia, high-tech enterprises, research institutions and ESA to explore innovative applications of space technologies of observation in the Atlantic area. Our policy has the benefit of allowing remote work during one week per month.

The EO Lab contributes to maximizing the integration of a distributed space ecosystem, extending the use of space technologies and applications to support societal challenges, public demands and policies in the Atlantic space and contributing to a better knowledge of understudied areas. It is also a laboratory to test procedures and methods to connect peripheral regions into globally competitive technological sectors by supporting research, innovation and entrepreneurship. The aim is to set-up a collaborative framework to identify, consolidate, sustain, stimulate, promote, and build capacity for existing, new and future EO based services of use for Atlantic Ocean countries.

The AIR Centre is a geographically distributed network of nodes that aims to improve the development of large-scale joint initiatives, projects and integrated actions, taking advantage of synergies of existing and connected distributed infrastructures, institutions and resources in the Atlantic region with particular attention to both sides of the tropical and South Atlantic areas. Its main purpose is to strengthen research and innovation cooperation among the Atlantic countries to address the challenges of developing a more integrated and connected sustainable blue-economy in the Atlantic basin. It focuses on enhancing scientific and technological collaboration between public and private entities in a wide range of areas related to the marine and maritime environment, based on a network with the capacity to attract scientists and technology-based companies. It aims to accelerate the generation and flow of knowledge of excellence and its valuation

in the field of blue economy, including aspects such as climate change, food and energy security, circular economy, maritime technologies and the conservation of marine natural resources. We pursue the use and management of the marine and oceanic environment in a more intelligent, sustainable and inclusive way. The United Nations agenda for 2030 is an important reference for the AIR Centre, which works to achieve its objectives, developing effective, viable capacities, knowledge and technologies for the region. It aims to improve the mutual understanding and collaboration of countries, regions and entities connected by the Atlantic Ocean, by strengthening cooperation with the European Union and by harnessing the capabilities of its outermost Atlantic territories. Ultimately, it seeks to materialise the benefits of the blue economy in the Atlantic, promoting the skills, knowledge, and technological solutions necessary to address social and economic challenges.

The AIR Centre can directly reach a significant segment of the main stakeholder institutions in a fast and efficient way, accelerating the connectivity and interaction of the Atlantic region. This way, it has a unique capacity to effectively influence the lives of Atlantic populations.

Application Process:

Interested candidates should send a single PDF file (please name it: Name_EOLAB.PDF), to recruitment@aircentre.org containing:

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

The deadline for application submission is March 7th, 2022. Selected candidates will be invited for an interview, via videoconference.