



UNIVERSIDADE FEDERAL  
DO RIO DE JANEIRO

## Memorandum of Understanding

Between

**The Atlantic International Research Centre - AIR Centre**

and

**The Universidade Federal do Rio de Janeiro – UFRJ**

for mutual recognition, strategic alliance and intention to establish sustainable collaboration projects between participants in both networks.

**The ATLANTIC INTERNATIONAL RESEARCH CENTRE**, hereinafter also referred to as the “**AIR Centre**” and hereby represented by the Chair of its Executive Committee, António Sarmento,

and

**The Universidade Federal do Rio de Janeiro** hereby represented by its Rector Prof. Roberto Leher.

The AIR Centre and UFRJ shall be referred to herein as “the Signatories”,

Considering the development of the scientific agenda of the AIR Centre, as referred in the “Praia Declaration”, signed at the “3<sup>rd</sup> High-level Industry-Science-Government Dialogue on Atlantic Interactions”, held in Praia, Cape Verde, May 7-8, 2018, together with the “Florianopolis Declaration” the “2<sup>nd</sup> High-level Industry-Science-Government Dialogue on Atlantic Interactions”, held in Florianopolis;

Considering that both the AIR Centre and UFRJ have the objective to play a significant role in the implementation of the “Belem Statement on Atlantic Research and Innovation Cooperation” and the “South-South Framework for Scientific and Technical Cooperation in the South and Tropical Atlantic and Southern Oceans”;

Considering the recommendations of the Workshop Rio 2018 – Atlantic Interactions that took place in Rio de Janeiro, Brazil, January 16, 2018;

Have decided on the following:



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### Clause 1

The present Memorandum of Understanding (MoU) aims at establishing a synergetic relationship between AIR Centre and UFRJ, with the objective to align activities wherever feasible, to optimize each organisation's relevance and value to society by collaboration, enhancing mutual use of resources and minimising potential overlaps or redundancy of actions.

### Clause 2

In the context of the present MoU, the Signatories will take, among others, the following actions:

- a) To identify areas of mutual scientific and technological interests that address both regional priorities and global challenges, bringing together the Signatories competences, experiences and networks to jointly co-create innovative research and development projects, to explore new funding opportunities and to stimulate knowledge-driven business ecosystems with emphasis in the following societal benefit areas, which are aligned with the UN Sustainable Development Goals:
  - Marine resources and biodiversity;
  - Healthy and clean oceans;
  - Systems integration from deep ocean to outer space;
  - Mitigation and adaptation to climate change;
  - Sustainable energy systems;
  - Data science.
- b) To build a strategic partnership to promote the development of high technology businesses, to foster innovation and stimulate the collaboration between government, academia, and industry for sustainable economic growth.
- c) To strengthen Signatories' knowledge-transfer and capacity-building capabilities through the mobility of researchers and exchanges of information, skills, resources and technical expertise, and through national or global collaborative initiatives, involving governments, academia, businesses and civil society, to advance science and technology for the preservation of marine and coastal ecosystems and for the benefit of all people living around the Atlantic Ocean.
- d) To actively support and create the condition for the implementation of an initial set of projects identified in the Workshop Rio 2018 – Atlantic Interactions that took place in Rio de Janeiro, Brazil, January 16, 2018, in particular:
  - Enhancement of large-scale marine circulation models in the South Atlantic: this project aims at the implementation of hydrodynamic and atmospheric regional models





with assimilation of observational data and the use of its results for assimilation in large-scale circulation models, including the potential changes in the ocean dynamics at different spatial scales in relation to different scenarios of climate change in the entire South Atlantic basin.

- Modelling of dispersion of micro plastics and oil in the sea: the objective of this project is to develop models of dispersion of microplastic and oil in the sea in coastal regions around the South Atlantic basin using results from coastal hydrodynamic models already implemented and validated for such regions together with satellite imagery, in-situ observations and citizen science data.
  - Continuous oceanographic observation of the South Atlantic: this project aims at the implementation of continuous data acquisition lines in radials crossing the South Atlantic basin with the use of autonomous aerial, surface and underwater vehicles, as well as voluntary observing ships equipped with sensors for relevant environmental parameters.
  - Effective implementation of the AIR Centre Data Intelligence Network (AIR DataNET): the AIR\_DataNet will act as the AIR Centre Data Foundry, enabling the fulfilment of its research and development objectives. The AIR\_DataNET will enable and support a very large capacity federated data infrastructure providing ready-to-use data focused on the societal benefit areas of the AIR Centre. It will provide a one-stop shop data management facility for Open Data storage, processing and retrieval facility, a FAIR Data & Metadata Catalogue, Persistent IDs and versioned mid & long-term storage. It will also provide a state-of-the-art presentation and visualization big data services and tools.
- e) To stimulate the organization of joint workshops and other dissemination and user engagement activities, as well as to encourage mutual representation at dissemination events organized by the Signatories.
- f) To jointly disseminate scientific knowledge to the general public, policy makers and media.
- g) To develop coordinated actions to implement common methodologies, standards and indicators related with the AIR Centre's scientific agenda.
- h) To proactively engage citizens, coastal communities, policy makers and local businesses in the development of effective Earth observation services and products for decision making.



- i) To actively ensure the Signatories presence at mutual events, including the already planned "4<sup>th</sup> High-level Industry-Science-Government Dialogue on Atlantic Interactions", to be held in Las Palmas, Gran Canarias, Canary Islands, November 2018.
- j) Other forms of collaboration that contribute to the mission of AIR Centre and UFRJ.

### Clause 3

1. A Joint Commission for monitoring the implementation of the present MoU will be set up by the following representatives of the Signatories:
  - a) for AIR Centre, the two representatives will be Antonio Sarmiento and José Luiz Moutinho;
  - b) for UFRJ, the three representatives will be José Carlos da Costa Silva Pinto (Executive Director of the Science Park of UFRJ), Luiz Landau (General Coordinator of the Laboratory for Numerical Methods in Engineering of COPPE/UFRJ) and Luiz Paulo de Freitas Assad (Technical Coordinator of the Laboratory for Numerical Methods in Engineering of COPPE/UFRJ).
2. The representatives may be later substituted by mutual written agreement.
3. In order to implement this Memorandum, the parties shall enter into Specific Agreements to set forth joint programs.

### Clause 4

UFRJ will act as the AIR Centre main node in the State of Rio de Janeiro, at the UFRJ Science Park, performing the following actions, which will be subject of Specific Agreements:

- a) to promote and encourage the participation of different centers, units, departments, laboratories and researchers of UFRJ in the research and technical activities developed jointly with the AIR Centre, currently carried out mainly by the Science Park of UFRJ and the Laboratory for Numerical Methods in Engineering of COPPE/UFRJ, and to communicate in written form the adhesion of additional university instances to the terms of the present MoU;
- b) to develop and implement a living lab / test bed environment at the UFRJ Science Park that aims to apply and testing technologies, products and services that may be of interest to both sides;





- c) to map local and regional networks of scientific infrastructures and research organizations to promote shared access and open data to all relevant stakeholders in the Air Centre;
- d) to actively engage other relevant state-wide institutions, such as universities, research institutes, businesses, funding agencies, development banks and non-governmental organizations for them to participate in mutually significant projects and to consolidate UFRJ as the main AIR Centre node in the State of Rio de Janeiro;
- e) to identify existing or planned local, regional or national projects and initiatives aligned with the AIR Centre's societal benefit areas mentioned in Clause 2 that could be expanded to other areas in the Atlantic Ocean;
- f) to identify potential local or regional gaps and foster multilateral projects and initiatives, aligned with local or national science and technology priorities and global challenges;
- g) to manage and develop the node according to the strategy established by the Joint Commission mentioned in Clause 3;
- h) To oversee the implementation the AIR Centre node in the State of Rio de Janeiro at its facilities, organizing and preparing node meetings and ensuring good communication with other nodes in Brazil;
- i) to liaise with the AIR Centre headquarters to improve service provision, reporting, project preparation and any other items requested to the nodes;
- j) to develop foresight studies to stay at the forefront of science and technology needs;
- k) to coordinate AIR Centre's communication and dissemination strategy in the State of Rio de Janeiro;
- l) to write an annual report.

#### Clause 5

Each Party is responsible for taking necessary action to secure adequate financial and human resources to perform the projects or activities eventually developed in collaboration.



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Clause 6

The Signatories will collaborate respecting the principles of reciprocity, mutual benefit and results sharing.

Clause 7

The present MoU can be modified at any time, under mutual written agreement of the Signatories.

Clause 8

The content of this MoU does not generate any obligation in the context of International Public Law.

Clause 9

1. The present MoU shall come into effect on the date of its signature and will remain in force for a period of five (5) years. Thereafter, in case this Memorandum is still needed, the parties may execute a new Memorandum of Understanding;
2. The present MoU shall cease to have effect if one of the Signatories expresses this wish, notifying the other in written, and with a time span of 60 days before the cessation;
3. In no case shall such termination affect the activities that are in progress before the effective date of termination;
4. With the intention to disclose such public acts, this Memorandum shall be published by UFRJ in the "Boletim da UFRJ" (UFRJ Newsletter) and in the Official Gazette.

Signed in Rio de Janeiro, on \_\_\_\_\_, in two originals, in English language.

SIGNED for and on behalf of the AIR Centre

SIGNED for and on behalf of UFRJ

António Sarmento  
Chair of Executive Committee

  
Prof. Roberto Leher  
Rector

Prof.ª Denise Nascimento  
Vice - Reitora  
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