



University  
of Victoria



## Postdoctoral Research Fellowship

### Postdoctoral Research Fellowship in Remote Sensing of Sargassum in the Amazon and Mesoamerican

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[The Spectral and Remote Sensing Laboratory](#) in the Department of Geography at the University of Victoria seeks a full-time Postdoctoral Research fellow (PDF) who is passionate about mobilizing science towards concrete actions to benefit endangered ecosystems and support the livelihoods of Atlantic Coastal Communities in Mexico and Brazil. The postdoc will conduct applied research in developing satellite-based tools, modeling Sargassum seaweed, and working with collaborators in the tropical Atlantic. This project is funded by the Canadian New Frontiers in Research Fund. The postdoc will be based in Victoria, British Columbia, Canada, and will work under the supervision of Dr. Maycira Costa.

**Project Context:** Since 2011, countries along the Tropical Atlantic have grappled with **massive coastal accumulations of Sargassum seaweed**, which have triggered several economic, ecological, and health crises. Sargassum influx is expected to continue with climate change, exacerbating its adverse effects and increasing management costs. There is a need for more holistic Sargassum management frameworks that increase local community preparedness for algal blooms (knowledge of the time, location, and extent of algal outbreaks) and coordination for its clean-up. Our project aims to establish the a **locally-focused framework** that will empower coastal communities in the **Brazilian Amazon** (Salinópolis, Pará) and the **Mexican Mesoamerican Reef** (Mahahual, Quintana Roo) to manage massive Sargassum landings effectively. By implementing this framework and conducting capacity-building workshops with our local partners, we will **build resilience**, protect vital ecosystems, and enable communities to turn the crisis into an opportunity by developing **novel blue economy pathways**.

**The Position:** The successful candidate will report to [Dr. Maycira Costa](#) and project manager/co-lead [Santiago Ramirez Said](#). The candidate will work closely with an international team, including Coastal Communities from the Atlantic Coasts of Mexico and Brazil, researchers from the [University of Miami](#), the [University of Sao Paulo \(USP\)](#), and the [Autonomous National University of Mexico \(UNAM\)](#), and fellows from [NASA](#) and the [National Geographic Society](#). The PDF will work towards developing and validating a digital predictive model for tracking offshore Sargassum seaweed and predicting other areas that are highly likely to have a presence in Salinópolis and Mahahual. For the model, the PDF will integrate oceanographic data with a satellite-based offshore Sargassum dataset. The PDF will develop the Sargassum dataset or use data from other ongoing Sargassum international initiatives and associated oceanographic data. Finally, the candidate will develop and provide training courses, in collaboration with the University of Miami and National Geographic Fellows for Local Communities, on how to use drones for sargassum monitoring and interpret monitoring algorithms for their use. Periodic field visits in Quintana Roo, Mexico, and Para, Brazil, will be part of the work. Therefore, the candidate should be comfortable working outdoors in various weather conditions. The candidate should be comfortable and open to sharing and learning from Local peoples and different cultures and be passionate about making a positive socio-environmental change through their work. Specific deliverables

include the production of the digital tracking model, as well as spatial and temporal maps of pelagic Sargassum. Operationally, the candidate will lead at least 2 manuscripts for peer-reviewed publications and produce project reports and other educational and knowledge mobilization efforts with the project team for Local Communities.

**Your Qualifications:**

- A Ph.D. in Oceanography, Computer Science, Geography, Marine Ecology, or related disciplines.
- Strong programming and data analysis skills in Python and related libraries
- Demonstrated expertise in remote sensing
- Experience working with machine learning and deep neural networks, an asset
- Experience with GIS and physical oceanography
- Record of successful project management and collaboration.
- Interpersonal and communication skills and the ability to work both independently and collaboratively with coastal communities and the broader international research team.
- Cultural sensitivity and a Diversity, Equity, and Inclusion (DEI) driven mindset.
- Proficiency in Spanish or Portuguese is a valued asset.

**Application deadline:** 15 Nov 2024

**Posting start date:** As soon as possible

**Position Length:** two years, pending annual review and with the possibility of renewal.

**Estimated salary:** \$75,000 / year (benefits and mandatory related costs are included)

**Location:** University in Victoria, Victoria, BC, Canada.

**Submit applications to** Santiago Ramirez Said ([santiramirezsaid@uvic.ca](mailto:santiramirezsaid@uvic.ca)) and Maycira Costa ([maycira@uvic.ca](mailto:maycira@uvic.ca)) with the following attachments:

- A CV, including the e-mail/phone number for two references;
- A short cover letter (1 page max) explaining your motivation for working on this project, how your previous experience qualifies you for this position;
- Reprints of 2 published papers, if available.

Please send any questions to Santiago at ([santiramirezsaid@uvic.ca](mailto:santiramirezsaid@uvic.ca)).

**Diversity, Equity, and Inclusion** are essential for academic excellence and effective sustainability work. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code. Your future work team will be led and include members of groups, including but not limited to People of Color, Indigenous Peoples, LGBTQ+, and Local Communities from all across the Americas.