

Announcement of Opportunity

Postdoctoral Fellow position in remote sensing of Arctic coastal environments, Rimouski, Québec, Canada

Advisors:

Simon Bélanger, Université du Québec à Rimouski (UQAR)

Rakesh Kumar Singh, National University of Singapore

Salary:

52k\$CAD/yr

Date:

The position is open for at least one year from April 1st, 2024. The application should be sent before **March 1st, 2024**. Extension beyond the one-year contract is very likely.

The project:

University of Québec at Rimouski (UQAR) has an opening position for a postdoctoral fellow to participate in a European Initiative entitled "Polar Ocean Mitigation Potential" (the POMP project). POMP's overall objective is to advance the science on climate change impacts on polar ecosystem carbon sinks and biodiversity, with a focus on the capacity of ecosystems to mitigate increasing atmospheric CO₂ concentrations. POMP's focus ranges from building detailed local- and regional-scale process understanding, for example, on impacts of sea-ice loss and glacial melt on carbon burial rates, to pan-Arctic and Antarctic assessment of ecosystem functioning with the aim of translating project outcomes into management actions. POMP will rely on various remote sensing technologies, coupled physical-ecosystem models, and field observations to understand how these regions' carbon dynamics and biodiversity change.

The successful candidate will:

- Join an international team of renowned Arctic scientists and remote sensing experts.
- Contribute to a high-impact project with direct implications for climate change mitigation strategies.
- Conduct research focused on photosynthetically available radiation reaching the Arctic benthos (PAR_B), a vital source of energy for marine coastal primary productivity.
- Analyze extensive Pan-Arctic PAR_B data sets derived from MODIS-Aqua observations.
- Investigate local drivers (clouds, ice cover, water clarity) of PAR_B variability at regional scales (e.g., POMP study sites).
- Assess the feasibility of adapting the PAR_B model (Singh et al., 2022) for higher-resolution satellite sensors (e.g., OLCI) to enable local-scale studies (e.g., fjords, deltas).
- Prepare and publish research findings in leading peer-reviewed journals.
- Contribute to the vibrant scientific community at UQAR.

Qualification:

- Ph.D. in remote sensing, geomatic, geography, environmental science, oceanography, or any related fields are invited to apply.
- Strong computational skills, and proficiency in Python or R (or similar)
- Expertise in satellite remote sensing (e.g., ocean color) data processing and geospatial analysis (multivariate analysis)
- Ability to work independently
- Good communication skills in both written and spoken English
- Experience and knowledge in physical and biological oceanography or in Arctic science is desirable

The research environment

The Université du Québec à Rimouski (UQAR) is a leading research university in marine sciences and northern environmental studies. Over the years, the quality of its infrastructures, education and research, the development of areas of research excellence (marine sciences and northern environmental studies), and the numerous awards won by UQAR have earned it broad recognition, both nationally and internationally. Rimouski is 300 km east of Québec City. It is blessed by its unique geographical location along the vast St. Lawrence Estuary, home to an exceptional natural environment and a rich maritime tradition.

The successful candidate will benefit from the dynamic training environment and the logistical and financial support provided by the strategic research cluster such as Québec-Océan (<http://www.quebec-ocean.ulaval.ca/>).

Application

Please email 1) your CV, 2) a motivation letter, 3) two references, and 4) your main research contribution (i.e., publications) to Dr. Simon Bélanger (simon_belanger@uqar.ca) before **March 1st, 2024**.