

Post-Doctoral Fellow Position in Hudson Bay Sea Ice and Navigability

Applications are invited for a one-year post-doctoral fellow position with a possibility of renewal for another year pending further funding availability at the Centre for Earth Observation Science, University of Manitoba focused on the current and future navigability of Hudson Bay in the response to continued climate change and sea ice loss. This fellow will contribute to research that will address the following two critical questions:

- 1) what is the exact timing of opening and closing of the entire route from Churchill to other local communities and the Labrador Sea? and,
- 2) how do we address the substantial biases in climate model simulations of sea ice concentration and thickness in this region?

Responsibilities

- Improve estimates of historical and future navigability of shipping routes within Hudson Bay using a combination of satellite, reanalysis, and climate model datasets
- Write a comprehensive report targeted for rightsholders and stakeholders (including insurance and shipping companies) that details these findings
- Disseminate results to the scientific community via a peer-reviewed journal article and conference presentation
- Collaborate with a broader team working on navigability within Hudson Bay

Qualifications

The successful applicant **must...**

- hold a PhD in Geography, Earth Science, Environmental Science, or a related discipline (e.g., Physics, Computer Science, Data Science) by the time of appointment.
- be competent working with large spatial datasets and high-performance computing
- be self-motivated, enthusiastic, and a positive contributor to the broader team.
- communicate effectively in written and spoken English.

The **ideal** applicant will...

- have experience working with climate model output
- be a capable coder in Python and/or MatLab

About the Institution

The fellow will join the Centre for Earth Observation Science (CEOS), housed in the Clayton H. Riddell Faculty of Environment, Earth, and Resources at the University of Manitoba. CEOS is a research centre founded in 1994, with a mandate to research, preserve and communicate knowledge of Earth system processes, especially in polar regions. CEOS is multidisciplinary and collaborative, drawing on researchers from different areas and faculties at the University and elsewhere.

The University of Manitoba is strongly committed to equity and diversity within its community and especially welcomes applications from women, racialized persons/persons of colour, Indigenous peoples, persons with disabilities, persons of all sexual orientations and genders, and others who may contribute to the further diversification of ideas. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

Application Materials

Please submit a short cover letter (1-2 pages) detailing your research background and interests and how they would help you succeed in this position, a CV, graduate transcripts, and contact information for two referees to Dr. Alex Crawford (alex.crawford@umanitoba.ca) and Dr. Feiyue Wang (feiyue.wang@umanitoba.ca). Please also direct any questions to them, including both on the email.

Application Deadline: 1 October 2024

Start Date: 1 January 2025 (or as soon as possible thereafter)