UNIVERSITY OF MANITOBA | Clayton H. Riddell Faculty of Environment, Earth, and Resources
Centre for Earth Observation Science

MULTIPLE POSITIONS AVAILABLE

1. Faculty Position: Tenure Track Assistant/Associate Faculty Position
2. Faculty Positions: Two Tenure track Assistant/Associate NSERC Industrial Research Chairs
3. PhD or MSc Student – Mercury Cycling in Arctic Coastal Marine Environments
4. PhD or MSc Student – Biogeochemical Tracers in Arctic Coastal Marine Environments
5. PhD or MSc Student - Mixing & Stratification in Hudson Bay, Canada
6. PhD Studentship – Arctic Ecotoxicology

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1. Faculty Position: Tenure track Assistant/Associate Faculty Position

This bridge-position between the two faculties has been created to take advantage of the research that will be facilitated by the CFI funded Churchill Marine Observatory (CMO) and to leverage existing remote sensing and applied electromagnetics expertise in the Centre for Earth Observation Science (CEOS) and the Department of Electrical and Computer Engineering (ECE), the expected home-department for the position. The position's research profile is envisaged to fit in with existing research being conducted on the detection, impacts and or mitigation of oil (and other transportation related contaminant) spills in sea ice-covered environments.

2. Faculty Positions: Two Tenure Track Assistant/Associate NSERC Industrial Research Chairs

The University of Manitoba invites applications for two full-time NSERC industrial research chair, tenure-track appointments, at the rank of Assistant or Associate Professor. With the support of KGS Group and Stantec both positions will work within the recently CFI funded Churchill Marine Observatory (CMO), Both positions will encompass the broad field of Arctic System Science with a particular emphasis on the detection, impacts and or mitigation of oil (and other transportation related contaminant) spills in sea ice- covered environments. This can include the fields of sea ice geophysics, remote sensing, thermodynamics, genomics, geomicrobiology, low temperature isotope systematics, biogeochemistry, physical, chemical and biological oceanography, and physical and chemical measurement and/or modeling of oil spills in sea ice.

3. PhD or MSc Student – Mercury Cycling in Arctic Coastal Marine Environments

We are seeking a highly motivated graduate student with exceptional academic standing to examine mercury cycling within estuarine and marine environments of the sub-Arctic Hudson Bay. The position is open to incoming Ph.D. or M.Sc. students. The successful candidate will join a recently funded project whose overarching objective is to characterize the effects of varying river discharge on mercury cycling within Hudson Bay.

4. PhD or MSc Student – Biogeochemical Tracers in Arctic Coastal Marine Environments

Significant changes in the timing, volume and location of runoff has occurred in recent decades, driven in part by climate and in part by the regulation of rivers to generate hydroelectricity. The effects of these changes on sea ice/ocean interactions, oceanography and biogeochemistry of the double estuary systems are poorly known and are the subject of several new projects recently funded by ArcticNet and the NSERC CRD program. We are seeking keen MSc and/or PhD students with interests in physical and chemical oceanography and/or biogeochemistry to undertake research in this area. The projects will involve community-based fieldwork in Hudson Bay in winter as well as summer. Thus, special consideration will be given to those candidates with experience in the field and in working in a team environment.

5. PhD or MSc Student – Mixing & Stratification in Hudson Bay, Canada

We invite applications for an exciting graduate student position to investigate mixing and re-stratification due to tidal forcing, air-ice-sea interactions, and CDOM and sediment-rich river discharge within Hudson Bay. The successful candidate will join a recently funded four year project whose overarching goal is to provide a scientific basis to separate the relative effects of climate change from those of hydroelectric regulation of freshwater on changing physical, biological and biogeochemical conditions in Hudson Bay. As the largest continental shelf sea in the world, Hudson Bay receives an annual freshwater loading of about 760 km^3 from more than 42 rivers within a drainage basin of over 3×10^6 km^2 in area. An even larger seasonal freshwater flux, estimated at 1200 km^3 or more, is withdrawn from or added to the water column by the formation or decay of sea ice. The research will involve participation in fieldwork that will include the deployment and retrieval of oceanographic moorings and in-situ observations onboard the icebreaker CCGS *Amundsen* and coastal locations.

6. PhD Studentship – Arctic Ecotoxicology

The student will work with a multidisciplinary and multi-institutional team to A) characterize the inputs of wastewater contaminants from a range of communities in the Canadian Arctic, B) develop lab-based bioassays for marine and sea-ice algae to characterize the concentration-response and possible recovery following exposure to a select subset of the commonly observed contaminants, and C) use *in situ* samplers to characterize the response of primary producers in the field upon actual exposure, as well as to validate lab-derived screening tools. The ideal candidate will have: a strong track record of working as part of a diverse team and under sometimes adverse conditions; a foundation in ecotoxicology, with a preference towards algal toxicity testing; and a firm grounding in analytical chemistry.

For more details and pdfs for each position:
http://umanitoba.ca/faculties/environment/departments/ceos/people/jobs.html