Post-doctoral opportunity in northern climate change

This project will support one post-doctoral fellow who will address research topics in northern climate change as a contribution to the BaySys collaborative research and development supported by Manitoba Hydro. The project seeks to assess the relative contributions and impacts of climate change and hydro-electric regulation on the variability and change in freshwater-marine coupling for the Hudson Bay System. Candidates will work in close collaboration with industry and will be expected to take a leadership role in graduate student supervision, project management and peer-reviewed publication. The one-year position will commence 1 September 2014, with the possibility of a one year renewal contingent upon performance and funding availability. Applications (due by 30 May 2014) will consist of a cover letter with your expression of interest and experience in northern hydrology, hydrometeorology, and/or hydrologic modelling, a curriculum vitae, and the names of two potential references to be sent to electronically to Dr. Tricia Stadnyk, P.Eng. (Tricia.Stadnyk@umanitoba.ca). The position will be based at the University of Manitoba situated in Winnipeg, Manitoba, Canada and will be in collaboration with Dr. Stephen Déry at the University of Northern British Columbia (UNBC) situated in Prince George, British Columbia, Canada.

Project details

This four-year project has been initiated between Manitoba Hydro and key research institutions, including University of Manitoba and University of Northern British Columbia, building off research currently underway by Canada's Arctic Net (http://www.arcticnet.ulaval.ca/) research program and the Centre for Earth Observation Science (http://umanitoba.ca/faculties/environment/departments/ceos/about.html) and includes an extensive four-year field campaign aboard the Amundsen in Hudson Bay and the Nelson/Churchill estuaries. The candidate for this position would be working with the freshwater systems team to quantify freshwater exports into Hudson Bay under climate change, examining the relative effects of hydro-electric regulation and climate on freshwater variability and quantity. Year one of this post-doctoral research would involve performing a PCA cluster analysis to derive climate forcing for hydrologic projection, and initial setup of a continental-scale hydrologic model for Hudson Bay.

Qualifications

- Possession of a doctoral degree (awarded within the last four years) in a science or engineering program, preferably with background in meteorology or hydrology
- Ability to work independently; excellent organizational and problem solving skills
- Proficient computer skills in Word and Excel.
- Experience with hydrologic models and modelling; programming ability in Fortran™, C and Matlab would be an asset.
- Experience with CMIP5 model output, with knowledge of or experience with cluster analysis being an asset
- Capacity to lead substantial research activities, communicate research results (written and orally), and to prepare peer-reviewed publications.
- Ability to be fully engaged and to collaborate with a large network of researchers.
- Willingness to travel for collaborative research opportunities

The University of Manitoba is committed to creating a diverse and inclusive workplace. Applications are encouraged from qualified applicants including members of visible minorities, Aboriginal peoples, people with disabilities, people of all sexual orientations and genders, and others who may contribute to the further diversification of the university. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

Application materials, including letters of reference, will be handled in accordance with the protection of privacy provisions of "The Freedom of Information and Protection of Privacy" (Manitoba). Please note that curriculum vitaes may be provided to participating members of the search process.