



Laurentian University  
Université Laurentienne



UNIVERSITY OF  
WATERLOO



## Postdoctoral Fellow Opportunity Modeling of the winter carbon losses in cold region wetland ecosystems under current and future climates

A postdoctoral Fellow (PDF) position is available to participate in a research project to evaluate the impact of winter warming mitigation in controlling carbon losses from pan-Canadian wetland and permafrost ecosystems. The goal of this project is to advance the fundamental, process-based understanding of the function of soil biogeochemical processes in cold region environments during the fall-winter and winter-spring transitions and during the non-growing season (NGS) by creating the foundation for the predictive modelling of winter carbon losses in cold region wetland and permafrost ecosystems under current and future climates. The main tasks of the PDF will be developing reactive transport and bioenergetic models to simulate the biogeochemical transformations of carbon and nutrients under winter warming scenarios to quantify future northern wetland and permafrost ecosystems carbon balances during the period of NGS respiration.

Applicants must have a PhD in a relevant natural science or engineering field, and have a track record of research productivity, including peer-reviewed publications. Preference will be given to candidates with demonstrated skills and experience in numerical mathematical modeling, programming and numerical analysis in soil biogeochemistry and reactive transport modeling. The PDF will work within a multidisciplinary team with significant strengths in ecohydrology, environmental-(bio)geochemistry, microbiology, chemistry, hydrogeology and high-performance computing. Funding for the positions is available for up to two years. For further information regarding this position, or to submit an application, please contact Dr. Fereidoun Rezanezhad ([frezanez@uwaterloo.ca](mailto:frezanez@uwaterloo.ca)).

### Application Instructions

In your application email, please include "PDF-ACCS-YourName" in the subject line and attach a single file that contains:

- A cover letter stating your motivation for applying to this position and your research interests
- Curriculum vitae
- Copy of unofficial transcripts
- Contact information for up to 3 references

**Closing date:** Applications will be reviewed as they are received. The positions will remain open until filled. **We thank all applicants for their interest, however, only those individuals selected for an interview will be contacted.**