



PhD Candidate Position in Paleolimnology/Paleoecology

Lake browning in a greening boreal forest: Long-term effects of climate change on lake carbon cycling

We are currently recruiting a PhD student to join our team at the Forest Research Institute of the Université du Québec en Abitibi-Témiscamingue (UQAT). The student will take on a research project investigating the long-term effects of climate-driven changes in forest cover and composition on carbon dynamics in boreal and subarctic lakes.

Northern forest ecosystems are greatly affected by climate change. Accelerated warming is altering plant growth, habitat availability, and the cycling of carbon and nutrients across the landscape. Satellite observations indicate recent greening of northern forests and browning of lakes, suggesting elevated amounts of carbon in lakes. However, because of the remote nature of much of the boreal forest, our understanding of changes in lake ecosystems, especially over longer timescales, is severely limited. Lake sediments provide a natural archive of how forests and lakes have changed over the past decades to thousands of years. This project will use lake sediment records to study the long-term impacts of climate change on water quality and carbon cycling in remote northern lakes.

The student will work under the supervision of Professor Carsten Meyer-Jacob at UQAT and Dr. Sébastien Joannin at the Université de Montpellier. The project includes field work and lab work, and will involve several geochemical and spectroscopic techniques, as well as pollen and satellite image analyses.

This is a fully funded 3-year position with an anticipated start date in Fall 2024 or Winter 2025. Further details on the PhD program at UQAT (Doctorate in Environmental Sciences) are available at <https://www.uqat.ca/etudes/irf/doctorat-en-sciences-de-environnement-secteur-forets/>.

Start Date: September 2024 or January 2025

Financial Support: Scholarship of 24,000\$ per year for 3 years

Requirements:

- MSc degree or equivalent in Biology, Earth or Environmental Sciences, or related fields
- Field and lab work experience
- Ability to communicate in written and spoken English
- Ability to work independently and in teams
- Motivated to learn and passionate about environmental change and solving environmental issues
- Experience in paleolimnology, paleoecology, aquatic ecology, and/or biogeochemistry are advantageous



Application: For enquiries or to apply, please send an email with the subject line “PhD Project: Lake Browning Greening Boreal Forest” to Professor Carsten Meyer-Jacob (carsten.meyer-jacob@uqat.ca) and Dr. Sébastien Joannin (sebastien.joannin@umontpellier.fr). Applications should include a statement of interest, a CV, and transcripts (unofficial transcripts are acceptable).



HUMAN-CENTRED
>>> CREATIVE
AUDACIOUS

UQAT
UNIVERSITÉ DU QUÉBEC
EN ABITIBI-TÉMISCAMINGUE

UQAT: HIGHER LEARNING ON A HUMAN SCALE

Study in the heart of Quebec's great outdoors

Set in a region where wilderness, lakes, and forests stimulate creativity and foster talent, UQAT is different by nature.

With 22,000 lakes and endless miles of boreal forest, Abitibi-Témiscamingue is a dynamic place full of creative people, new ideas, and bold projects. [See what our students have to say!](#)

Renowned professors with time for you

The professors at UQAT are recognized experts in their fields who typify quality teaching. And with a ratio of one professor or lecturer to every twelve students, UQAT offers a personalized educational environment where you will fit right in. Knowing you can always count on your professors to be available - now that's a real advantage.

A world of high-calibre research

Research activities at UQAT are producing remarkable results in a range of scientific fields. According to the 2023 independent firm RESEARCH Infosource Inc., UQAT is ranked among the top 3 Canadian universities in terms of research intensity per professor, among universities mainly active in the undergraduate category (full-service universities, excluding universities with medical schools).

With more than \$24 million in research per year and state-of-the-art laboratories, UQAT is an exceptional environment for graduate students. Many of our students have achieved excellence in their chosen fields and many of our professors have been recognized for the quality of their research and their innovative spirit. [Find out more.](#)

STUDENT FOR A DAY

One visit is enough to know that UQAT is a first-class institution. The Student for a Day program is the best way to learn more about UQAT, visit the campus that interests you, and meet professors and students.

We'll tailor the visit to your needs and interests!

[Find out more.](#)

