



## Recruitment of three PhD students

**ESCER Center, Université du Québec à Montréal\*** (Montréal, QC, Canada)

**Context:** The ESCER center (Étude et Simulation du Climat à l'Échelle Régionale) at the Université du Québec à Montréal (UQAM) is recruiting three PhD students to join our team as part of a project funded by the Natural Sciences and Engineering Research Council (NSERC) of Canada and which includes researchers from Hydro-Québec, the ministère de l'Environnement, de la Lutte contre les Changements Climatiques, de la Faune et des Parcs (MELCCFP), Ouranos, UQAC, and Polytechnique Montréal. The objective of this five-year partnership is to **assess hydrometeorological risks and extremes for strategic hydroelectric and mining infrastructure in Quebec.**

**Work to be done:** The research work of two PhD students will consist of studying the **added value of the new regional climate model (CRCM6/GEM5) developed at the ESCER center, in "convection-permitting" mode (2.5 km), to simulate extreme precipitation (PhD1) and snow cover (PhD2), their evolution and their effects on probable maximum floods, in the context of climate change. PhD3 will focus on improving bias correction methods.**

**Workplace and study program:** [ESCER Center](#) and [PhD program at the Department of Earth and Atmospheric Sciences](#) at the Université du Québec à Montréal, Montréal, Canada.

**Date and duration:** Beginning of September 2024, 3.5 years including the writing of scientific papers.

### **Skills and profile sought:**

- **Required:** A master's degree in environmental sciences, climate sciences, atmospheric sciences, meteorology, hydrology, physics, geography, mathematics, or related field.
- **Asset:** Experience in writing and publishing peer-reviewed scientific papers.
- **Asset:** Autonomy and excellent ability to interact with students and faculty members.
- **Asset:** Good knowledge of programming in various languages (e.g., Fortran, C/C++, Matlab, Python, Julia, R) and experience in handling large volumes of climate datasets.
- **Required:** Fluency in English (oral and written skills) and interests in learning and interacting in French.

**Working environment:** The projects will be co-supervised by Philippe Lucas-Picher, researcher at the ESCER center and professor at UQAM, by Isabelle Chartier, researcher at Hydro-Québec, by Émilie Bresson, researcher at Ouranos, and Philippe Roy, researcher at Hydro-Québec.

**Scholarships:** Student scholarships will be of **20,000 \$CAN per year**, in addition to the **basic amount provided by UQAM of 13,000 \$CAN** to all full-time PhD students registered during the 3 years of study: Year 1: 5,000 \$; Year 2: 4,000 \$; and Year 3: 4,000 \$.

**How to apply:** Interested candidates are asked to send a **CV, a cover letter, transcripts, and the contacts of 3 reference people** to [lucas-picher.philippe@uqam.ca](mailto:lucas-picher.philippe@uqam.ca) before **31 March 2024** specifying the PhD project that interests you particularly.

*\*UQAM contributes to the development of an environment favorable to equity, diversity, and inclusion (EDI) in all spheres of activity, including obligations for research and creation. To do this, recruitment procedures for highly qualified personnel (including students and postdoctoral researchers) must ensure representation of minority groups and promote their inclusion within research teams.*