PhD Opportunity
University of Quebec at Montreal, Montreal, Quebec, Canada

Global Water Futures

Storms and Precipitation Across the Continental Divide Experiment (SPADE)

This project focuses on **cold region processes related to storms and their precipitation at the top of the western Cordillera**. Despite essential role of precipitation, very few observations that link surface features, precipitation and atmospheric conditions are available in this region. The overall goal is to study storms and precipitations across the continental divide. One of the key issues is how much of the moisture flux crosses the barrier from either the Pacific in eastward moving storms or from the Prairies and Gulf of Mexico in leeside (upslope) storms. In particular, small-scale features of this moisture transport such as the distribution of snowfall, from for example, preferential deposition, will be addressed.

We are seeking a PhD candidate that has a strong background in atmospheric sciences, physics or related fields. The successful candidate will examine the microphysical processes of precipitation passing over the divide and along its trajectories using high-resolution simulations (GEM, Lagrangian model and/or Computational Fluid Dynamics). This includes how precipitation interacts with the flow near the surface. The candidate will have the opportunity to conduct a field experiment across the continental divide during the month of May and June 2019. The project is based at the University of Quebec at Montreal located downtown Montreal, Quebec, Canada working in strong collaboration with the University of Saskatchewan, Environment and Climate Change Canada as well as the core scientists of Global Water Futures. This is a fully funded during up to 3 years that would ideally start on May 1st, 2018. Interested applicants are encouraged to contact Prof Julie Thériault at theriault.julie@uqam.ca with a complete CV by February 1st, 2018 (or until the position is filled). The successful candidate will have to submit an application to the graduate program in Earth and Atmospheric Sciences at UQAM.