

Work opportunity in northern hydrometeorology



Project description: Atmospheric Rivers (ARs), extended but narrow corridors of tropospheric moisture, play a dual role in replenishing critical freshwater supplies while also causing extreme precipitation events across British Columbia (BC), Canada. Thus, ARs represent both an opportunity for freshwater recharge and a challenge for managing flood risks to our forests, waterways, infrastructure, and communities. As the climate continues to change, it is anticipated that ARs will increase in intensity. However, the way in which AR precipitation and precipitation extremes may evolve is not yet fully understood. In this context, this Research Project explores the changing characteristics of ARs making landfall in BC and their effects on water resources. Specifically, this Research Project will: (i) quantify the changing contribution of ARs to precipitation and extreme precipitation in BC in recent years and the near to long-term future under different climate change scenarios; (ii) examine the role of ARs in moderating drought in BC; (iii) analyze the potential impacts of ARs on snowpacks through rain-on-snow (ROS) events; and (iv) assess the implications of these changes for BC's water management strategies.

Position description: We invite applications for a **post-doctoral fellow** (PDF) or **research associate** (RA) with extensive experience with climate data and statistical analyses. Candidates must have strong technical, programming, computational and communication skills. Applicants with significant experience in programming for large-scale data analysis and visualization — using platforms such as R, Python, Matlab, and/or GIS (e.g., ArcGIS, QGIS) — are especially encouraged to apply.. Applicants must have a Ph.D. in the environmental, atmospheric or hydrological sciences, or equivalent experience, and preference will be given to those with strong leadership and problem-solving skills. Applicants must be able to work independently as well as in a team environment and have the ability to disseminate their findings in peer-reviewed publications and through presentations at conferences. The successful candidate will be based at the University of Northern British Columbia (UNBC) in Prince George, BC, and will work closely with a provincial government partner and other collaborators. UNBC is fully committed to employment equity and strongly encourages applications from women, aboriginal peoples, persons with disabilities, members of visible minorities and the LGBTQ2S+ community. The full-time position (35 hours/week) will span at least one year with possibility of a renewal depending on funding availability and satisfactory progress.

Interested applicants should contact Dr. Stephen Déry at sdery@unbc.ca with a cover letter highlighting research and computational experience relevant to this position, an up-to-date curriculum vitae or résumé, unofficial university transcripts, and the names of at least two potential references. Salary will be commensurate with past experience and expertise, will be within the range of \$55,000-\$60,000 annually and will include a highly competitive benefits package. **The application deadline is Thursday 31 July 2025 or until the position is filled.** The position will start in summer or fall of 2025.