

Postdoctoral Scholar Position at the University of Calgary

Area: Water source apportionment and hydrological extreme behavior in Rocky Mountain river watersheds under a changing climate

Duration: 1 year with the opportunity for extension contingent on satisfactory performance

Start date: ASAP

Salary: \$65,000 CAD per year (including health insurance benefits).

The **Department of Civil Engineering** in the **Schulich School of Engineering** at the University of Calgary is inviting applications for a Postdoctoral Scholar to join a comprehensive team working together on a collaborative research project. She/he/they will be part of a comprehensive research team working together on an Integrated Groundwater – Surface Water – Climate Assessment of the eastern slopes of the Canadian Rocky Mountain watersheds, which includes researchers from the University of Calgary, Alberta Environment and Protected Areas, and other partners.

Job Description:

We are seeking a motivated postdoctoral scholar with excellent communication and interpersonal skills, intellectual independence, and strong background on statistical hydrology (especially hydrological extreme analysis) and mountain hydrology in a collaborative environment.

The successful candidates will be working under the supervision of Professor Jianxun (Jennifer) He and co-supervised by Dr. Brandi Newton (Hydroclimatologist, Alberta Environment and Protected Area).

Responsibilities:

Work with the collaborative team through interrogating the historic meteorological, river flow, geochemical and isotopic composition, and groundwater information in the eastern slopes of the Rockies rivers to advance our understanding of seasonal streamflow contributions from various water sources. There will be a focus on hydrological extremes under a changing climate. This interdisciplinary research will provide insights improving hydrological modelling and water resources management in the region.

The Postdoctoral Scholar will:

- Integrate peer research on the geochemical and isotopic composition of mainstem river water into their own research on hydrological extremes, especially different types of droughts (e.g. meteorological, hydrologic, and groundwater droughts) and their propagations (i.e., using response time scale, lag time, and propagation rate, etc.);
- Apportion the streamflow contributions from various water sources including snowmelt, glacial melt, baseflow, and interflow at the daily, seasonal, and interannual temporal scales using integrated information on meteorology, geochemistry, and others;
- Report and present research results in peer-reviewed journals and conferences;
- Mentor graduate and/or undergraduate students;

- Be involved in developing grant proposals; and
- Maintain a safe, collegial, interactive, and welcoming research environment.

Qualifications:

- Must have been awarded a PhD or equivalent within five years in Water Resources Engineering or a closely related field;
- Must be able to conduct independent statistical hydrological research;
- Experience in drought analysis experience is highly preferable;
- Extensive experience in using computational tools (such as MATLAB, Python, and equivalent);
- Must have strong written communication skills, preferably demonstrated in writing peer-review publications in reputed journals;
- Must have the ability to work both independently and collaboratively with a group;
- Must have excellent interpersonal skills; and
- Should have effective organizational and time management skills in setting priorities and accomplishing tasks within deadlines.

Application details:

To apply, please submit your application via email as a **single PDF file** with the subject line: **Postdoctoral application – [Your name]** to Prof. Jianxun (Jennifer) He at jianhe@ucalgary.ca

All applications must include the following documents:

- 1) **One-page cover letter** expressing interest in this position, including date of availability, suitability and motivation for the role;
- 2) Current **curriculum vitae** (CV) that includes a list of all publications;
- 3) A **one-page research statement** summarizing previous research experience;
- 4) Official or unofficial copy of **diploma(s)/university certificate(s)**; and
- 5) The names and contact information of at least **two (2) referees** with knowledge of your research and academic experience to support your application

Only those applicants selected for interviews will be contacted further. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada, although others are encouraged to apply.