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New PhD opportunity on:

## Watershed hydrology and water quality modelling in western Canada



The **Watershed Science & Modelling Laboratory** of the Earth and Atmospheric Department at the University of Alberta is looking for an innovative and highly motivated candidate to develop watershed models and conduct research on water quality modelling covering agricultural lands of western Canada. The successful candidate will utilize advanced data to develop process-based agro-hydrological models for simulation of nutrient processes related to loads, transport and fate in watersheds for application and scenario analysis. The candidate will collaborate with other lab members (i.e., PhD and PDF) to collectively study the impacts of climate change, land management practices on nutrient load, transport and fate.

### Qualifications and Specific Skills

- MSc degree in water resources engineering, earth and environmental sciences, civil and environmental engineering or a closely related fields.
- Proficient knowledge and understanding of hydrology and water quality processes in watersheds and a broad knowledge of agricultural management and crop production systems.
- Prior knowledge and understanding of principles of hydrologic and water quality models, issues and challenges related to representation of processes associated with point source and non-point source pollutants (e.g., nutrients) in watersheds. Any experience with model applications and developments (such as SWAT or similar models) is an asset.
- Proficient knowledge of programming in FORTRAN or C++ and scripting in R or similar languages for big data analysis, as well as analyses and processing of geospatial data.
- Ability to work both independently and collaboratively, prioritize, adapt to rapidly shifting priorities and manage research projects from start to scientific publication
- Superior written, communication and interpersonal skills for effective and efficient development of scientific publications and interaction with other researchers and public

**Location:** Watershed Science and Modelling Laboratory (<https://cms.eas.ualberta.ca/faramarzilab>), Department of Earth and Atmospheric Sciences, University of Alberta.

**Term:** This is a full time position for 4 years.

**Contact:** Send your updated CV to Dr. Monireh Faramarzi via [faramarz@ualberta.ca](mailto:faramarz@ualberta.ca)

**Closing date:** Position open until filled.

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