New graduate opportunity on:

Watershed carbon dynamic modelling and application for freshwater quality assessment under changing climate

The ***Watershed Science & Modelling Laboratory*** of the Earth and Atmospheric Department at the University of Alberta is looking for two innovative and highly motivated candidates to develop models and conduct research on "watershed organic carbon dynamics *under changing climate"*. The successful candidate will work with and/or enhance the process-based agro-hydrological models and data developed at WSML for Prairie lands of western Canada. More specifically the candidates will improve an apply state-of-the art process-based models for simulation of terrestrial (soil) and water (river systems) organic carbon dynamics by application in agricultural watersheds of western Canada. The candidates are expected to collaborate with other graduate and postdoctoral fellows at the WSML and with researchers of other laboratories at the University of Alberta. The end goal is to provide scientifically credible knowledge for sustainable management of water and food resources in an uncertain future.

Qualifications and Specific Skills

- MSc degree in Earth and Environmental Sciences, Civil and Environmental Engineering, Water Resources and Agricultural Engineering or a closely related fields.
- Proficient knowledge and understanding of watershed hydrology, soil-plant-water relations, and watershed water quality processes
- Any background on process-based agro-hydrological modelling and geospatial data analysis is an asset.
- A strong background on programming and experience working with Fortran (or similar programs, such as C++). Any experience working with the source code of the Soil and Water Assessment Tool (SWAT) in a Fortran environment is a great asset.
- Proficient knowledge of scripting in **R** (preferred) or similar tools for large data processing
- Strong ability to work both independently and collaboratively, prioritize, adapt to rapidly shifting priorities and manage research projects from start to scientific publication
- Strong ability to work in a diverse, interdisciplinary, and multiple cultural working environment
- Superior written, communication, and interpersonal skills for effective and efficient development of scientific publications and interaction with other researchers in the lab and in 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 two graduate positions.

Contact: Send your updated CV to Dr. Monireh Faramarzi via faramarz@ualberta.ca

Closing date: hiring is immediate for Fall 2023 and position is open until filled.