New PDF opportunity on:

Watershed water quality modelling and application for regional-scale climate change impact assessment

The **Watershed Science & Modelling Laboratory** (WSML) of the Department of Earth and Atmospheric Sciences at the University of Alberta is looking for one innovative and highly motivated candidate to develop models and conduct research on "*watershed nutrient modeling under changing climate*". The successful candidate will work with and/or enhance the existing process-based agro-hydrological models and data at the WSML for agricultural watersheds of western Canada. More specifically, the candidate will contribute to understanding of nutrient fate and transports from terrestrial soils into the river systems, and their fate and transport in the river systems by application in prairie watersheds of western Canada. For this, the candidate is expected to simulate sediment export and its loads and transport across study watershed. The candidate is highly expected to develop collaborative publications as well as their independent publications at the WSML. 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

o PhD degree in Civil and Environmental Engineering, Water Resources and Agricultural Engineering, Earth and Environmental Sciences or a closely related fields.
o Proficient knowledge and understanding of watershed hydrology, soil-plant-water relations, and watershed water erosion, sediment transport, and quality processes.
o A strong prior experience working with process-based models such as Soil and Water Assessment Tool (SWAT).
o A strong background on programming and experience working with Fortran. Any experience working with the source code of the SWAT model in a Fortran environment is a great asset.
o Proficient knowledge of scripting in **R** (preferred) or similar tools for large data processing required.
o Strong ability to work both independently and collaboratively, prioritize, adapt to rapidly shifting priorities and manage research projects from start to scientific publication is required.
o Strong ability to work in a diverse, interdisciplinary, and multiple cultural working environment
o 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 one year and potentially for two years, depending on the performance of the candidate in the first year.

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

Closing date: Hiring is immediate for spring 2024 and position is open until filled.