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Postdoctoral Position: Hydroclimate Scientist

PCIC is seeking to hire a postdoctoral Hydroclimate Scientist.

Pacific Climate Impacts Consortium (PCIC)

The Pacific Climate Impacts Consortium (PCIC) was created to assess climate impacts in the Pacific and Yukon Region of Canada. The goals of the Consortium are to foster collaborative research, to strengthen the capacity to address regional climate change and variability, and to provide the scientific basis for policy development. PCIC is a regional climate service centre at the University of Victoria that provides practical information on the physical impacts of climate variability and change. Through collaboration with climate researchers and regional stakeholders, PCIC produces knowledge and tools in support of long-term planning. www.pacificclimate.org

Challenge

This postdoctoral position is part of the pan-Canadian Global Water Futures (GWF) research program (https://gwf.usask.ca), led by the University of Saskatchewan. GWF aims to place Canada as a global leader in water science for the world's cold regions in order address the strategic needs of the Canadian economy in adapting to change and managing risks of uncertain water futures. It is the task of the GWF's Core Modelling Team to deliver next-generation advances in modelling tools and new monitoring systems to study and predict the effects of climate change and human interactions on water quantity and quality. Over the coming years the Core Modelling Team will focus on a number of priority research areas to support this next-generation modelling. One priority recognizes that model calibration will remain an important, but expensive, component of model application over large, spatially heterogeneous domains. Therefore, the advertised position is responsible for contributing to improvements in the science of large-domain model parameter estimation for application in Canada and other cold regions.

Nature of Work

The Hydroclimate Scientist, as part of GWF's Core Modelling Team, will undertake research to support the development of a next-generation pan-Canadian hydrologic modeling framework. He/she will work at PCIC under the supervision of the Lead for the Hydrologic Impacts theme and collaborates with members of PCIC and GWF's Core Modelling Team. PCIC offers a positive, supportive and collegial work environment that promotes collaboration and excellence. As a user and stakeholder driven organization, PCIC requires that candidates be flexible in order to adapt their research objectives to changing organizational and stakeholder priorities and needs.

Objectives

The objectives of the position are to conduct research that seeks to address some or all of the following:

- Participate in baseline model performance studies.
- Understand hydrologic model sensitivity and behavior across large domains, with particular emphasis to cold regions hydrology.

- Explore large domain, multi-objective, parameter estimation strategies
- Test and develop computationally efficient model calibration tools and workflows.

Knowledge, Skills & Abilities

Knowledge and Experience

- PhD in the physical sciences, preferably in the Hydrologic, Atmospheric or Climate sciences
- Experience in the development and application of hydrologic or land surface models (such as the Variable Infiltration Capacity model)
- Experience with multi-objective parameter estimation and optimization
- Experience working with high-performance computing systems
- Experience working on interdisciplinary projects and with interdisciplinary teams
- A high level of productivity for peer-reviewed publications is expected

Skill

- Excellent data analysis and visualization skills
- Excellent statistical analysis skills
- Excellent communications skills
- Excellent programming skills
- Excellent multi-tasking skills

Ability

- Work in a self-directed manner and within a team environment
- Re-evaluate and adjust priorities and objectives in light of research findings and evolving requirements
- Ability to acquire, manipulate and analyze large spatiotemporal data sets
- Ability to find creative solutions to complex, open-ended problems
- Operate with a professional demeanor while representing PCIC outside the organization

Employment period

2.5-year term commitment.

Weekly working hours
Full time (37.5 hours per week)

Pay rate
Commensurate with education and experience.

Additional information: Address enquiries to Markus Schnorbus at climate@uvic.ca.

Application: Please send your application including a cover letter, CV, and three professional references to Markus Schnorbus, climate@uvic.ca, with "**ATTN: Hydroclimate Scientist**" in the subject line. Please indicate whether you are legally able to work in Canada.

Review of applicants will start **immediately** and continue until suitable candidates are found.