



UNIVERSITY OF SASKATCHEWAN

Global Institute for
Water Security

USASK.CA/WATER

Post-Doctoral Position in Water Resources Management and Decision Analysis

Context and Purpose:

Global Water Futures (GWF) is a transformative pan-Canadian research programme, led by the University of Saskatchewan's (U of S) Global Institute for Water Security (GIWS), which aims to place Canada as a global leader in water science for the world's cold regions and to address the strategic needs of the Canadian economy in adapting to change and managing the risks of uncertain water futures, including extreme events. GWF is transdisciplinary, working with a wide range of users and integrating the natural, social, health and engineering sciences to provide disaster warning, improved prediction of climate and water futures, and the decision support tools needed to inform adaptation to change and risk management. This 7 year, \$143million program builds on the expertise of the U of S and 3 key partner universities (McMaster, Waterloo, Wilfrid Laurier), faculty from 14 other universities, and 8 federal agencies, with strong international collaboration.

Integrated Modelling Program for Canada's major river basins (IMPC) is a sub-project of GWF that aims to develop a pan-Canadian integrated modelling platform to diagnose, simulate, and predict interactions amongst natural and human-driven water-resource components of the changing Earth and environmental systems, and to deliver optimal decision making tools and solutions for uncertain future water resources, considering the range of stakeholder needs in Canada's major river basins. This program has assembled a strong transdisciplinary research team from 6 universities, 12 government agencies and 10 user groups and integrates atmospheric science, hydrology and ecology with social science, computer science, economics and water resource engineering to build on and extend core Global Water Futures (GWF) modelling, data and knowledge mobilisation capabilities and focus on their application to Canada's major river basins.

The Post-doctoral position:

The GIWS invites applications for a postdoctoral position in the field of Water Resources Management and Mutli-Criteria Decision Analysis. The successful candidate will work as a member of the IMPC transdisciplinary team led by Drs. Saman Razavi, Pat Gober, Howard Wheeler, Al Pietroniro, and John Pomeroy, and focus her/his research on water management modelling, coupling human-driven and natural systems, and decision making under uncertainty and non-stationarity. The successful candidate will also interact with the program's international advisors including Drs. Casey Brown and Patrick Reed. We envision the emergence of a new paradigm of water resource systems modelling and management, which integrates water quality and quantity, addresses environmental flow needs, and economic valuations and trade-offs. We also see a new era of stakeholder engagement whereby public participation in water resources modeling is an iterative, collaborative, two-way exchange, and scientific knowledge is co-produced.

Qualifications:

Outstanding applicants are sought, with demonstrable ability to undertake internationally-leading research and a record of world class publications. They must have: Relevant post-graduate training (Ph.D. or previous PDF) in Civil Engineering or other related disciplines; a PhD awarded within the five years immediately preceding the appointment; a proven track record of modeling/numerical



simulation research and experience in supervising students. Expertise in integrated modelling, computer programming, high performance computing and large dataset analysis and manipulation is desirable. An ability to work in a highly collaborative, multidisciplinary team environment must be demonstrated. Evidence or leading-edge publications in the scientific literature are required as are strong written and oral communication skills in the English language.

Salary Information:

The salary offered will be in the range of \$45,000-\$60,000 CAD, and will be based on training, education, and experience.

Duration: This term position will be for up to three years, commencing as soon as possible.

Application Procedure:

To be considered for this opportunity, please submit the following documents via email to Dr. Amin Haghnegahdar, IMPC program manager, at amin.haghnegahdar@usask.ca:

- a cover letter (1-2 pages) that details relevant academic excellence, research abilities, communication, interpersonal and leadership qualities.
- an updated curriculum vitae (max. 10 pages)
- evidence of previous research productivity, for example, sample of recent journal/conference publications
- names of three referees

Applications will be considered as they come in. We thank all applicants for their interest; however, only candidates selected for an interview will be contacted.