

Research Position in Integrated Water Resources Modelling

Global Institute for Water Security, University of Saskatchewan, is seeking to hire a research position at the rank of Postdoctoral Fellow, Research Associate, or Research Scientist, depending on qualifications and number of years after PhD, in the area of Water Resources Modelling. The position will undertake research within the Global Water Futures (GWF) program and particularly, its affiliated program IMPC (Integrated Modelling Program for Canada). This requires working collaboratively with a large multi-disciplinary team of researchers in these programs and beyond.

Primary Purpose: To further develop water resource management models representing large and complex river basins in Canada, facilitating coupling of the water management models with other models representing an Integrated Water Resources Management (IWRM) approach, and investigating water supply and demand scenarios.

Nature of Work: The position will undertake research in Dr. Saman Razavi's modelling lab, and has a unique opportunity to further collaborate with a network of leaders in multidisciplinary water research in Canada. Global Institute for Water Security (GIWS, <https://www.usask.ca/water>) the leading institute for broad multi-disciplinary research on water resources in Canada and beyond. GIWS leads Integrated Modelling Program for Canada (IMPC, <https://gwf.usask.ca/impc>), a comprehensive multi-disciplinary research program that aims to develop a pan-Canadian integrated modelling platform to simulate and predict water resources in the context of climate, society, and environment change. IMPC is part of Global Water Futures (GWF, <https://gwf.usask.ca>) program, the world's largest university-led freshwater research program led by University of Saskatchewan in partnership with University of Waterloo, Wilfred Laurier, and McMaster University.

Typical Duties/Accountabilities:

- To participate in and manage the development of water management models representing large and complex Canadian river basins. A focus will be on coupling the water management models with other models within an IWRM approach, including hydro-economic models and land-surface hydrology models.
- To investigate water supply and demand scenarios.
- To disseminate research results in academic journal papers and at conferences.
- To contribute in informal supervision of graduate and postgraduate research students.
- To work with researchers from other disciplines including computer sciences as well as stakeholders to develop user-oriented visualization tools for Decision Support Systems.
- To undertake administrative tasks related to this part of the GWF/IMPC program, including planning, attending meetings, presenting, and reporting.
- To participate in research activities, build and create internal and external networks, explore future research requirements, and share research ideas for the benefit of research projects.

- **Duration:** This is a full time fixed term position until August 2020, with a possibility of extension depending on performance quality and availability of funds. The position is available immediately and is advertised until filled.
- **Salary Information:** The salary offered will be in the range of \$50,000-\$90,000 CAD, and will be based on qualifications and experience. Candidates within five years from the date of Ph.D. completion will be considered as a Postdoctoral Fellow. Exceptional candidates will be considered to be hired as a Research Scientist.

Qualifications

Education: PhD degree (or nearing completion) in Civil Engineering or a related discipline or relevant industrial experience.

Experience and Skills:

Essential Criteria

Proven experience and published research and/or relevant industrial experience within water resources management modelling.

- Knowledge of the current status of research in water resources management modelling.
- Proven ability to publish in high-quality journals and present at high-impact conferences.
- Experience of postgraduate research student supervision.
- Proven ability to demonstrate creativity, innovation, and team-work.
- Ability to work without close supervision.

Desirable Criteria

- Previous experience with water management models such as MODSIM, WEAP, and WRIMS is an asset.
- Previous experience at integration of models representing the different components of IWRM such as hydrology, water management, economics, and water quality.
- Knowledge and/or experience of consideration of uncertainty and non-stationarity in model scenario analysis.
- Good knowledge of programming languages such as MATLAB, FORTRAN, or Python.
- Excellent oral, written, and presentation skills.

Informal Inquiries regarding this position can be directed to Dr. Saman Razavi at saman.razavi@usask.ca.

Application Procedure:

To be considered for this opportunity, please submit the following documents via email to Dr. Amin Haghnegahdar, IMPC 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 as demonstrated by authorship of refereed journal publications and conference presentations/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.