Water System Monitoring & Modelling - Post Doc
University of Guelph

Job Title	Water System Monitoring & Modelling - Post Doc
Department	School of Environmental Sciences
Institution	University of Guelph
	Guelph, Ontario
Date Posted	Sep. 9, 2024
Application Deadline	Oct. 15, 2024
Position Start Date	Available immediately
Job Categories	Post-Doc
Academic Field(s)	Water Resources Engineering
	Ecological and Environmental
	Civil Engineering
Apply By Email	
Job Description	

Description of the Area/Topic of Research

The research topic is water pollution, predominately focussing on how to monitor and model the risks that water pollution poses to human life. The rich sources and transport pathways in water catchments result in a complex problem that the Canada Excellence in Research Chair (CERC) in Waterborne Pathogens: Surveillance, Prediction and Mitigation aims to address through surveillance, modelling and mitigation.

This postdoctoral scholar will develop their expertise in the monitoring or modelling of water pollution in areas such as: (1) water sensing to enhance our ability to monitor water pollution at high spatial and temporal resolution through low cost IoT devices, (2) developing novel sensors or sampling systems to detect a wider range of pollutants of concern to public health, OR (3) developing models that include

the real time control of assets to optimise the performance of our water system.

Description of Area

The postdoctoral scholar will work together in a large team together with the Canada Excellence in Research Chair (CERC) in Waterborne Pathogens: Surveillance, Prediction and Mitigation. This team will innovate, develop and validate novel sampling and sensing methods, rapid diagnostic tools, integrated models and treatment options for the surveillance, prediction and mitigation of waterborne pathogens via five deliverables: (1) smart sampling and sensing systems to detect temporal and spatial trends of pathogens in water systems, (2) rapid and near-real-time assays to detect pathogens and their sources, (3) tools/models that can provide early warning of, and mitigation options to limit, disease in our community, (4) treatment of pathogens to protect human health when water is used by humans and (5) training, standard operating procedures, reference materials and guidance manuals to ensure our outputs are useful and adopted by our partners.

General Outline of Duties

The position would involve the following duties among others: (1) developing research ideas, designing experimental protocols, setting up and executing experiments in the field and laboratory, (2) presentation and communication of results via manuscript preparation and journal submissions, presentations to national and international audiences (conference travel will be required and supported), (3) helping to coordinate and supervise graduate and undergraduate students in the execution of their activities, (4) developing skills in research grant/proposal development and securing funding to support the research team.

Teaching Requirement: There will be teaching opportunities, but there are no requirements for teaching.

Student Supervision: There will be student supervision opportunities which will be strongly encouraged.

Required Qualifications

(1) PhD in a relevant field (e.g. electrical engineering, chemical engineering, environmental/civil engineering), (2) minimum of 2 years of related research experience in water monitoring or modelling, (3) demonstrated experience in academic writing, preferably in top ranked journals, (4) experience or interest in gaining experience in graduate student supervision and undergraduate teaching, (5) experience or interest in gaining experience in research grant/proposal writing, preferable having some

success in securing their own funding.

Start Date & Duration of Appointment: Start date preferably October 2024, but negotiable. 1 year duration, with renewal opportunities.

Anticipated Hours of Work (at time of posting): 35 hours per week.

Salary Range (Minimum): 40,267

Salary Range (Maximum): 76,000

This team runs a diverse and inclusive research group where everyone feels welcome and respected. In STEM fields, women and minorities are underrepresented and therefore they strongly encourage applicants from these groups to apply.

Benefits: https://graduatestudies.uoguelph.ca/postdoctoral/benefits-services

Application Requirements

Documents

- Cover Letter
- Statement outlining how you meet the key selection criteria
- CV

Special Instructions

Please be sure to address all key selection criteria (outlined in the "required qualifications" section) in your cover letter.

Contact Information

Supervisor:

Professor David McCarthy, Professor and Canada Excellence Research Chair in Waterborne Pathogens: Surveillance, Prediction and Mitigation

david.mccarthy@uoguelph.ca

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Posting Date: Tue, 07/16/2024

Closing Date: Tue, 10/15/2024

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact   David McCarthy
                  School of Environmental Sciences
                  University of Guelph
                  Guelph, ON
                  Canada

Contact E-mail   david.mccarthy@uoguelph.ca