

Urban Water TMU - September 2023

Welcoming the New 2023/24 Academic Year!

Welcome back Urban Water researchers! As the new school year commences, we are thrilled to have you return to campus full-time and are excited to explore the many new opportunities and initiatives that the academic year will bring!
Reminder about SOPs and General Housekeeping
UW researchers are reminded that it is their individual responsibility to familiarize themselves and stay updated with the UW TMU Standard Operating Procedures.
UW researchers are required to input their time in the shared Google Calendars each visit.
Every UW student performing work in the lab(s) is required to have completed a safety walkthrough.

What were Urban Water researchers up to this summer?

Urban Water Catchment Science Workshop
In June, Claire Oswald and Christopher Wellen co-hosted an all-day Urban Water Catchment Science workshop at the Centre for Urban Innovation.
Dr. Jim Roy, Research Scientist at ECCC (and UW TMU Board Member) describing his urban groundwater contaminant research (left); Dr. Stephanie Melles UW TMU researcher discussing her aquatic ecology research (right).

Aquatic Ecology Field Course
UW TMU's Stephanie Melles led a two week intensive field course on Urban Water Ecosystems this summer during the hottest time of the year (July 2-15).
Students carrying out water quality and ecological sampling in the Don River (left); Students processing Hester-Dendy samplers (aka 'bug hotels') streamside.
Students touring the Ashbridges Bay Wastewater Treatment Plant (top right).

International Research Collaboration in Urban Water Drainage
This summer, Professor James Li led an international research team in their investigation of an exciting piece of LID infrastructure (the Toronto Exfiltration System).
A hydraulic flume (45 m x 5 m x 6 m) and model of the Toronto Exfiltration System was built at the Integrated Civil and Infrastructure Research Centre at the University of Sheffield, UK.
In June, the investigation was completed in the UK and now the data analyses continues, being performed by Patelle Fong (TMU) under the supervision of Prof. Li.

Dr. Li heads back to TMU for another academic year via Platform 9 3/4 at King's Cross station. Expelliarmus!
(left); Construction of the full-scale Toronto Exfiltration System. (right)

We are proud to announce that the Urban Water Field Vehicle was rebranded with the new TMU logos!



Upcoming Seminar

Dr. Camille Nolasco is joining us on Tuesday, September 12th @ 10-11am in CUI-219 to speak on "The Nitrogen Footprint: A look at the Agri-Food Chain's Nitrogen Losses."
Dr. Camille Nolasco hails from the National Institute for Space Research in Brazil.
Please join us on Tuesday in CUI-219!
See here for zoom link

Recent Publications of Full Members

- Full Members are highly involved in the Centre and are regular contributors to Urban Water research projects and initiatives. Check out their recent publications below and a full list of publications on the UW website linked here.
Zanira Ilieva\*, Patricia Hania, Roxana Suehring, Kimberley Gilbride, Rania Hamza. (2023) Impact of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) on secondary sludge microorganisms: removal, potential toxicity, and their implications on existing wastewater treatment regulations in Canada.
Ian Young, J Johanna Sanchez, Binyam Negussie Desta, Cole Heasley, Jordan Tustin. (2023) Recreational water exposures and illness outcomes at a freshwater beach in Toronto, Canada: A prospective cohort pilot study.
Elizabeth Holton, Carla Louw, Edward Archer, Tobias Louw, Gideon Wolfaardt, Barbara Kasprzyk-Hordern. (2023) Quantifying community-wide antibiotic usage via urban water fingerprinting: Focus on contrasting resource settings in South Africa.
Basem S Zakaria, Seyed Mohammad Mirsoleimani Azizi, Biplob Kumar Pramanik, Faisal I Hai, Elsayed Elbeshbishy, Bipro Ranjan Dhar. (2023) Responses of syntrophic microbial communities and their interactions with polystyrene nanoplastics in a microbial electrolysis cell.
Judith Castillo-Rodriguez, Pedro D Ortiz, Reeda Mahmood, Robert A Gossage, Jaime Llanos, Dario Espinoza, Ximena Zarate, Bryan D Koivisto, Eduardo Schott. (2023) The development of Au-titanium photoanode composites toward semiflexible dye-sensitized solar cells.
Cody A. Ross\*, Anna K. Phillips\*, Larissa Gospodyn\*, Claire J. Oswald, Christopher C. Wellen, Ryan J. Sorichetti. (2023) Improving the representation of stream water sources in surrogate nutrient models with water isotope data.
Tyler J. Harrow-Lyle\*, Wai Ying Lam\*, Erik J.S. Emilson, Robert W. Mackereth, Carl P.J. Mitchell, Stephanie J. Melles. (2023) Watershed characteristics and chemical properties govern methyl mercury concentrations within headwater streams of boreal forests in Ontario, Canada.
Eric Fries\* and Roxana Sühring. (2023) The unusual suspects: Screening for persistent, mobile, and toxic plastic additives in envpol.
Albert W. König\*, Sarah S. Ariano\*, Darko Joksimovic. (2023) Analysis of sampling strategies for pulse loads of SARS-CoV-2: implications for wastewater-based epidemiology.

See Our Full Member Publications

