

Urban Water TMU - February 2023

Welcome New UW Researchers!

We would like to extend a warm welcome to our newest Urban Water researcher Stefania Impellizzeri, post-doctoral fellow Ryan Hutchins, and graduate student Aaron McQuaid!

Pictured left to right- Stefania, Ryan, Aaron

Dr. Stefania Impellizzeri
Stefania is an Associate Professor in the Department of Chemistry and Biology at TMU and directs the Laboratory for Nanomaterials & Molecular Plasmonics. Stefania holds the Jet Ice Research Chair in Sustainable Materials Chemistry- a research program centered on nano-tech based approaches to improve the environmental impact of ice-making industry products and practices. She will be undertaking research related to the Jet Ice Research Chair in UW Laboratories.

Dr. Ryan Hutchins
Ryan studied at University of Waterloo and Université du Québec à Montréal before completing post-doctoral fellowships at University of Alberta and University of Waterloo. Ryan's current research focuses on the analytical aspects of ice-making and water quality- part of the Jet Ice research taking place in UW Laboratories.

Aaron McQuaid (EnSciMan, MASC Student)
Under the supervision of Dr. Roxana Söhning, Aaron will study the fate of plastic additives in relation to arctic seabird colonies and long-range transport of microplastics.

Spotlight on Urban Water

UW Members James Li and Darko Joksimovic receive international grant for Toronto Exfiltration System Research!

Pictured left to right- James and Darko

UW researchers James Li and Darko Joksimovic received a Co-UDlab grant and access to partner facilities at University of Sheffield (UK) to study the hydraulic performance of the Toronto Exfiltration System.

The Co-UDlab is a consortium of research partners centred around urban water drainage and provides infrastructure for research purposes to researchers, utilities, and industrial partners through Horizon 2020 funding. The Co-UDlab is considering proposals again in July 2023.

Drs. Li and Joksimovic were awarded a research grant of \$445,000 for the Hydraulic Analyses of the Toronto Exfiltration System (2022-2023) low impact development project. The project is a collaboration between three universities in North America, Europe, and Asia. Professor Li will lead the project using a large hydraulic flume (60 m x 5 m x 6 m) at the BURIED facility at the University of Sheffield (UK). This project is being undertaken in collaboration with Dr. May Chui (University of Hong Kong) and Prof. Jorge Leandro (University of Siegen, Germany).

Congratulations to our brilliant UW researchers James Li and Darko Joksimovic for their ongoing work in LID technologies!

Urban Water Engages with Trafalgar School during Campus Tour!

On Jan 19, a group of highschool students from Trafalgar School were invited to visit the Centre for Urban Innovation to tour the UW labs. Our HQP Eric Fries and Wyatt Weatherston provided research pitches to the students to showcase the incredible work that goes on in the Centre. Our deepest thanks to Eric and Wyatt for engaging with the students. Students had plenty of questions about UW research and the TMU experience in general.

If you are interested in engaging with the public during future tours and visits (schools, industry partners, other research institutes), please let us know at urbanwater@torontomu.ca and we will keep you updated on upcoming events.

Research Proposals and Funding Calls

Current Funding Calls

Great Lakes Protection Initiative

The Great Lakes Protection Initiative is accepting project applications under the Areas of Concern funding priorities. These areas include:

- working with others to protect the Great Lakes
- restoring Great Lakes Areas of Concern (AOCs)
- preventing toxic and nuisance algae
- assessing and enhancing the resilience of Great Lakes coastal wetlands
- evaluating and identifying at risk nearshore waters
- reducing releases of harmful chemicals
- engaging Indigenous Peoples in addressing Great Lakes issues
- increasing public engagement through citizen science

Application submissions are due by 11:59 p.m. (Eastern Time) on February 8.

[View All SRC Funding Calls](#)

Upcoming Urban Water TMU Seminars

Urban Water TMU external seminars are held throughout the academic year, with guest speakers from various organizations and research institutes. Please see details below for upcoming seminars.

Wednesday February 15, 1-2PM
***HYBRID: in-person in CU1317, or remotely on Zoom**
Dr. Todd Howell from the Ontario Ministry of Environment, Conservation and Parks will be speaking on government research on nearshore water quality and ecology in the Great Lakes.

Zoom link: <https://ryerson.zoom.us/j/98731468397?pwd=ZlAzKOR1empudjdEYU1nTngnN1c4dz09>

Wednesday March 15, 1-2PM

Dr. Diana Karwan from the Department of Forest Resources at the University of Minnesota will be speaking about an urban tree ecophysiology focused project she is involved with as part of the new Minneapolis-St. Paul Metropolitan Area Long Term Ecological Research project.

Zoom link: <https://ryerson.zoom.us/j/99470690874?pwd=QWJBWjI2YXBjOUI1S3RlS0UeEFUZz09>

Upcoming External Events

UN 2023 Water Conference
The UN 2023 Water Conference will take place at UN Headquarters in New York, March 22-24 2023. The UN Conference is a global initiative around Water for Health, Water for Sustainable Development, Water for Climate, Resilience and Environment, Water for Cooperation, and Water Action Decade (SDG 6). The Conference is led by participating countries and stakeholders that include non-governmental organizations, academic institutions, the private sector, and philanthropic organizations.

Urban Water TMU will be sending 8 delegates to the Conference. UW has submitted a proposal with York University to co-host a side event entitled "Water security, disasters, and resilience in a changing climate: challenges, opportunities, and solutions".

CAWQ Conference 2023
The 58th Annual Central Canada Research Symposium of the CAWQ is being organized by UW TMU members along with UofT and York. This year it will be held at York University in Toronto from March 20-21 2023.

TMU is sponsoring the event so registration is free for TMU students.

Deadline for submitting an abstract is February 15th, 2023.

Intl Association of Great Lakes Research (IAGLR) 2023 Conference
The International Association for Great Lakes Research is holding its annual conference from May 8-12, 2023 in downtown Toronto. UW TMU and TRCA are co-chairing the local organizing committee and pre-conference workshops will be held on campus at the Centre for Urban Innovation (CUI).

Abstracts closed. Registration opening soon.

Water Canada Summit
The 14th annual Water Canada Summit will be held in partnership with the Canadian Water and Wastewater Association (CWWA) Window on Ottawa from June 5-9, 2023. Water Canada Summit is on the hunt for technical program content in the form of individual abstracts and session proposals for the 2023 conference.

Deadline to submit for the 2023 Summit is February 17th, 2023.

National Water and Wastewater Conference 2023
The National Water and Wastewater Conference is taking place from Nov 12-15, 2023, at Sheraton Fallsview in Niagara Falls, ON. The conference committee is now accepting presentation proposals.

The deadline for submitting a proposal is March 20th, 2023.

Recent Publications of Full Members

Full Members are highly involved and regular contributors to Urban Water research projects and initiatives. Check out their publications in January (below) and full publication list (yellow button).

Claire J. Oswald, Christa Kelleher, Sarah H. Ledford, Kristina G. Hopkins, Anneliese Sytsma, Doerthe Tetzlaff, Laura Toran, Carolyn Voter, Integrating urban water fluxes and moving beyond impervious surface cover: A Review, *Journal of Hydrology*, 2023, 129188, ISSN 0022-1694. <https://doi.org/10.1016/j.jhydrol.2023.129188>.

Tyler J. Harrow-Lyle, Brian K. Ginn, Andrea Kirkwood, and **Stephanie J. Melles**. First report of female gametangia in the invasive macroalga starry stonewort (*Nitellopsis obtusa*) in North America. *Botany*. <https://doi.org/10.1139/cjb-2022-0096>

Gospodyn, L., **Wellen, C.**, Sorichetti, R.J. and Mundle, S.O.C. (2023), Using Stable Water Isotopes to Evaluate Water Flow and Nonpoint Source Pollutant Contributions in Three Southern Ontario Agricultural Headwater Streams. *Hydrological Processes*. Accepted Author Manuscript e14802. <https://doi.org/10.1002/hyp.14802>

Mahmoud, A.; Zaghoul, M.S.; **Hamza, R.A.**; **Elbeshbishy, E.** Comparing VFA Composition, Biomethane Potential, and Methane Production Kinetics of Different Substrates for Anaerobic Fermentation and Digestion. *Fermentation* 2023, 9, 138. <https://doi.org/10.3390/fermentation9020138>

[See Our Full Member Publications](#)

