

	Smart resilience: innovations in wastewater management	Surface and subsurface Brilliance: Urban & agriculture Runoff Management	Emerging contaminants: Unveiling environmental mysteries	Beyond waste: innovations in Biosolids Management
<b>Chair</b>	Session chair name	Session chair name	Session chair name	Session chair name
<b>10:30</b>	Detection and Segmentation of filamentous and Floc-Forming Bacteria in Microscopic Images using AI <i>Sama Al-Ani, McMaster U</i>	Balancing circularity and efficiency – phosphorus in Linköping’s urban agricultural gardens <i>Geneviève Metson, Western U</i>	Performance Elucidation of Forever Chemicals Removal from Landfill Leachate Using Electrochemical Technology <i>Omar Mohamed, Western U</i>	Modelling the impact of thermal hydrolysis pretreatment on sewage sludges <i>Amr Ismail, TMU</i>
<b>10:50</b>	Application of geospatial tool to estimate septic system effluent contributions to Lake Erie & Simcoe Basin <i>Yunpeng Gao, Western U</i>	Nutrient attenuation in a pond-wetland system treating cropping system drainage <i>Shruti Tanga, U of Ottawa</i>	Assessing the Influence of Prolonged Exposure of Aerobic Granular Sludge to Four Target PFAS <i>Zanina Ilieva, TMU</i>	Energy Recovery from Sludge: Impact of Integrated Hydrothermal Liquefaction and anaerobic digestion Schemes <i>Harveen Tatla, U of A</i>
<b>11:10</b>	Leveraging Machine Learning and Multi-modal Analytical Techniques for Enhanced Tracking of Microplastics <i>Manh Huy Nguyen, TMU</i>	Phosphorus Removal from Agricultural Diffuse Sources Using Magnesium Pellets: Lab and Field Evaluations <i>Mohammad Noor Tamim, Western</i>	An Integrated Membrane-Vacuum UV Treatment System to Achieve Energy-Efficient PFAS Destruction in Water <i>Ehsan Khorshidi Nazloo, Western U</i>	Modelling of thermal vacuum stripping for anaerobic digestion intensification and ammonia recovery <i>Amr Abdelrahman, Western U</i>
<b>Chair</b>	Session chair name	Session chair name	Session chair name	Session chair name
<b>1:15</b>	Autotrophic nitrogen removal capacity of MABR: Nitrous oxide emission under different aeration patterns <i>Ahmad Shabir Razavi, Western U</i>	First Flush in Urban watershed of Continental Climate <i>Shagun Chaudhary, Western</i>	Demonstration of Microplastic Removal Mechanisms Through Coagulation, Flocculation and Sedimentation <i>Alice Stephanie Gomes, U of Waterloo</i>	Mathematical optimization for regeneration of the sustainable separating agent in an industrial wastewater treatment process <i>M.A. M. El Zeftawy, Concordia U</i>
<b>1:35</b>	Effect of Inlet design in reactive filters as a tertiary treatment process for remote areas <i>Amin Tabatabaeefar, Polytechnique Montreal</i>	Phosphorus Exports from a Cold Climate Urban Subwatershed: Insights from a Monitoring and Modeling Study <i>Sabrina Jivani, Western</i>	Biofilm Formation on Microplastics in Biological Wastewater Treatment: Impact on Sedimentation & Disinfection Processes <i>Gaurav Bhardwaj, York U</i>	Digestibility of Aerobic Granular Sludge (AGS) Using Multiple Pre-treatment Techniques <i>Ahmed Elsayed, TMU</i>
<b>1:55</b>	Integrating PNA Processes and MABR System for Sidestream Nitrogen Removal: Pilot Study <i>Ijjaj Mahmud Chowdhury, McMaster U</i>	Phosphorus Removal and Recovery using Carbon Black Flow Electrode: Optimization of Operating Parameters <i>Salil Mathew, Western</i>	Optimizing Filtration Efficacy: Direct Filtration for Enhanced Particle Destabilization & Cryptosporidium Oocyst Removal <i>Kalani S. De Silva, U of Waterloo</i>	Production Of PHA from thermophilic microorganisms utilizing waste as a carbon source <i>Shraddha Chavan, INRS-ETE</i>
<b>Chair</b>	Session chair name	Session chair name	Session chair name	Session chair name
<b>2:30</b>	Developing In-Sewer Treatment for H2S Control using Waste-based Materials Operated in a Sewer Pilot Emulator <i>Damanpreet Singh Pannu, Western U</i>	Low-cost Ion-selective membrane – Electrochemical Microsensor for Low-limit Water Salinity Monitoring <i>Ayobami Elisha Oseyemi, York</i>	Leveraging Hyperspectral Imaging: Detection of Nanoplastics within Freshwaters and Whole Organisms <i>Arav Saherwala, McGill U</i>	Combined chemical conditioning to Improve the Post-Treatment Efficacy of Thermophilic Digestate. <i>Umme Sharmeen Hyder, TMU</i>
<b>2:50</b>	The proof is in the pudding: wastewater surveillance for community-level detection of respiratory virus season <i>Lucy Ross-Blevis, U of Toronto</i>	Influence of groundwater discharge on urban stream salinization using the groundwater tracer radon-222 <i>Grant Hodgins, Western U</i>	Developing “Threshold Microplastics Concentrations” as a tool to manage indirect risks from microplastics in drinking water <i>Omar Sadab Chowdhury, U of Waterloo</i>	New approaches for the optimization of the start-up of full-scale anaerobic digesters <i>Amal Hmaissia, U Laval</i>
<b>3:10</b>	Porous metakaolin-based geopolymers for wastewater treatment <i>Vito Cofano, Western U</i>	Analyzing the role of geothermal heating on bacterial community through metagenomics approaches <i>Gurpreet Kaur, York U</i>	Innovating Ferro-sonication for Microplastics Extraction from wastewaters <i>Juviya Mathew, York U</i>	Enhancing Anaerobic Digestion of Thickened WAS through Combined Free Nitrous Acid & Low Heat Pretreatment <i>Salomeh Chegini, TMU</i>

## Poster presentations

1. Managing the Risks of Flood-Induced Livestock Farms Release of Antibacterial Materials Using Agent-Based Simulation: Case of 2021 Sumas Prairie Flooding, **Mahta Nazari**, York U
2. Anammox Process Towards Municipal Wastewater Treatment: A Novel Approach Using Inverse Fluidized Bed Bioreactor (IFBBR), **Ruoting Liu**, Western U
3. A meta-analysis to establish a subterranean estuarine typology based on salinity structure, **Aref Panjeh Fouladgaran**, Western U
4. A sustainable approach to the remediation of mine-impacted water in Northern Canada, **Daria Popugaeva**, Western U
5. Occurrence of Sulfonamide Residues and Resistant Genes in Canadian Wastewater Treatment Plant: A Preliminary Case Study, **Maryam Zarean**, York U
6. Evaluating the influence of stormwater exfiltration Systems on stormwater runoff reductions and groundwater contamination, **Hamed Mohamadian**, Western U
7. Biochar as an Effective Adsorbent for Long-Chain PFCAs in Wastewater Treatment, **Sepideh Nasrollahpour**, York U
8. Unveiling Arctic Contaminants: Understanding OPEs Impact on Inuit Communities and Ecosystems, **Aaron McQuaid**, U of T
9. Large-area Negatively Surface-charge Ultrathin Polyamide Membranes for Controlled Ion Transport, **Claudio Adrian Ruiz Torres**, Toronto U
10. The Effect of Cyclic Temperatures on Bioremediation of BTEX in Groundwater, **Ginelle Aziz**, York U
11. Water, Sanitation and Hygiene in Ililleq, Greenland – Challenges and opportunities, **Audrey Tam**, York U
12. Modeling of Water Vapor Sorption in Linear Aromatic Polyamide, **Niher Ranjan Sarker**, U of T
13. Improving Quantitative Analysis of Porous Membranes Using Electron Microscopy, **Sima Zeinali Danalou**, U of T
14. Advancements in Sustainable Wastewater Treatment: Open-Source 3D Printed Wastewater Alkaline Electrolyzer Powered by Solar Energy, **Giorgio Antonini**, Western
15. Supported Liquid Membrane Stabilization with Ultra-Thin Charged Film for Lithium-Ion Battery Recycling, **Jiahao Zhu**, U of T
16. Ultraviolet (UV) Light Treatment for Water and Biofilm Disinfection in Humanitarian Settings, **Patrick Di Falco**, York U
17. Recoverability of animal wastes to mitigate their impacts on soil and water resources; a case study, **Reza Malekzadeh-Viayeh**, Toronto U
18. Comparing Biomethane Production from Different Industrial Organic Wastes: Effect of Substrate Type and Food-to-Microorganism (F/M) Ratio, **Ahmed El Sayed**, TMU
19. BMP Random Grab Samples of Thickened Waste Activated Sludge and Primary Sludge and their Effect on Biogas Production, **Hassan Mahdi**, TMU
20. Nitrogen Removal from Wastewater using Solid State Carbon, **Dorsa Barkhordari**, Western
21. Review on biological nitrogen removal in wastewater treatment, focusing on the integration and optimization of Anaerobic Ammonium Oxidation (ANAMMOX) with low Dissolved Oxygen (DO) processes, **Fatima-Zahra Ezzahraoui**, Western U
22. Recovering nutrients from effluent – an approach for a sustainable future, **Arslan Tahir**, Western U
23. Inhibition of nitrite-oxidizing bacteria in Anammox integrated membrane aerated biofilm reactors for sustainable nitrogen removal, **Natalia Shiu**, McMaster U
24. Investigation of the exoelectrogenic effect of anammox bacteria in microbial electrolysis cells: A sustainable approach for ammonia-nitrogen removal, **Sara Hemmati**, McMaster U
25. Hyper-thermophilic Treatment of Anaerobically Digested Cattle Manure, **Basem Haroun**, Western U
26. Fate of microplastics in laundry wastewater, **Juan Li**, Western U

## Three Minute Thesis presentations

1. Ice Melting and Environmental Effects of a Novel Alternative Road De-Icing Salt, Melanie Blackburn, **Melanie Blackburn**, Western U
2. Field Performance Evaluation of a Novel Pre-Treatment Stormwater System in a Cold Climate, **Aidan Haskell**, Western U
3. Membrane Magic: Sustainable Recovery of Nickel and Cobalt from Tailing Ponds, **Pei-Yin Diao**, U of T
4. **Siena Ianni-Palarchio**, Western U
5. Evaluating the removal of a wide range of micropollutants by a diversity of wastewater treatment technologies: Preliminary findings and sampling challenges, **Coline Milhau**, Laval U