

Thursday, February 23, 2017 (Agenda)

Registration and Breakfast (8:00 am – 9:00 am)				
9:00 am - 9:15 am	Welcome Address (Sears Atrium)	Dr. Elsayed Elbeshbishy, Conference chair, Dr. Chris Marvin, CAWQ president Dr. Usha George, Ryerson Vice President, Research and Innovation		
Keynote Speaker (Sears Atrium)				
9:15 am – 10 am	Closing the Knowing/Doing Gap Dr. Glen Daigger			
Break (10:00 am – 10:15 am)				
Time	Session (1): Bioenergy ENG (101) Chair: Ahmed Eldyasti	Session (2): BNR ENG (102) Chair: Yves Comeau	Session (3): MBR ENG (105) Chair: Domenico Santoro	Session (4): Drinking water ENG (106) Chair: Darko Joksimovic
10:15 - 10:35 am	GfSA High Rate Two Stage Anaerobic Digestion (GfSA-HRTSAD) Technology Hisham Hafez	Effective Partial Nitrification of Ammonia Rich Wastewater by a Fluidized Bed Bioreactor George Nakhla	How to Accelerate Technology Development in the Water Space? Part (1): Barriers to Overcome and the Open Innovation Approach Ted Mao	Bringing Knowledge to Decision Making Bernadette Conant
10:35 - 10:50 am	Enhancement of Anaerobic Digestion Process Using Biostreme and Vitamins as Additives P. Izadi, A. Eldyasti, M. Beckley, C. Chang, T. Saarimaki	Effect of DO on nitrification at low temperature X. Liu, M. Kim, G. Nakhla	Emerging Water Recovery Technologies: The Case of Forward Osmosis G. Kolliopoulos, V.G. Papangelakis	Experimental Evaluation of the Dose Additivity of Two UV Reactors in Series Y. Zhang, J. Wang, S. Tang, R. Hofmann, Y. Lawryshyn
10:50 - 11:05 am	Characterization of acid phase anaerobic digestion of municipal sludges to improve biological nutrient removal processes A. Albornoz, W. Parker	Evaluation of the RBF technology for primary treatment in BNR plants M. Gupta, D. Ho, S. Sarathy, D. Santoro, G. Nakhla	Impacts of Psychrophilic Conditions on Anaerobic Membrane Bioreactors Treating Municipal Wastewater L. Li, W. Parker	Effects of photocatalysis by engineered TiO ₂ nanomaterials on the formation of disinfection byproducts in natural water sources S. Gora, S. Andrews

11:05 – 11:20 am	<p>Application of Photoelectrochemical Oxygen Demand (peCOD) for Inline Monitoring of Industrial Wastewater Organic Pollution</p> <p>K. Aghasadeghi, S. Horner, K. Wanka, R. Menegotto, D. R. Latulippe</p>	<p>Estimation of the Unbiodegradable Fraction of the Thickened Waste Activated Sludge (TWAS)</p> <p>M.M.I. Chowdhury, G. Nakhla</p>	<p>Hydraulic Backwash for Flux Restoration and Irreversible Fouling in Latex Paint Effluent Ultrafiltration</p> <p>A. Abdelrasoul, H. Doan, A. Lohi</p>	<p>Estimating Remaining GAC Removal Capacity for Geosmin and MIB</p> <p>Z. Nie, Y. Huang, Y. Li, R. Hofmann</p>
11:20 – 11:35 am	<p>An energy saving wastewater treatment process combining a high-rate moving bed biofilm reactor and a chemostat</p> <p>H. Abbasi, C. Élysée, M.A. Labelle, E. Laflamme, A. Gadbois, A. Laporte, Y. Comeau</p>	<p>Denitrification with a methane-utilizing membrane biofilm reactor (MBfR)</p> <p>W. Alrashed, H.S. Lee</p>	<p>Assessment of performance of SMBR for the removal of pharmaceuticals at varying hydraulic retention time (HRT)</p> <p>B. Tiwari, Y. Ouarda, P. Drogui, R. D. Tyagi</p>	<p>Predicting the removal of THMs and other DBPs in drinking water by aeration</p> <p>Y. Huang, H. Zhang, A. Zamyadi, S. Andrews, R. Hofmann</p>
11:35 – 11:50 am	<p>Sludge Characterization Analysis for Modeling Anaerobic Digestion</p> <p>Y. Hirmiz, Y. Hong, Y. Kim</p>	<p>Optimization of Methanotrophs cultivation from activated sludge process under different conditions</p> <p>A. Alsayed, A. Fergala, A. Eldyasti</p>	<p>Simple and advanced oxidation processes as treatment for water of treated wood detoxification</p> <p>M. Landry Carter, H. Cabana, R. Leduc</p>	<p>Accumulation of cyanobacteria and cyanotoxins in low-risk water treatment plants</p> <p>Y. Cui, R. Hofmann</p>
<i>Lunch (11:50 pm – 1:00 pm)</i>				
Keynote Speaker (Sears Atrium)				
1:00 – 1:35 pm	<p>Innovative Approaches to Addressing Biomass Dewatering Challenges in Biological Wastewater Treatment</p> <p>Dr. Grant Allen</p>			

Time	Session (5): Fermentation ENG (101) Chair: Chris Marvin	Session (6): Wastewater (I) ENG (102) Chair: Scott Smith	Session (7): MEC/MFC ENG (105) Chair: Said Easa	Session (8): Watersheds ENG (106) Chair: Darko Joksimovic
1:40 - 2:00 pm	Removal of organic carbon in domestic wastewater using open fermentation: implication of polyhydroxybutyrate B.K. Kim, J. Lee, A. Hussain, A.R. Carreón, H.S. Lee	Wastewater Treatment Innovation at DC Water Ahmed Al-Omari	Significance of Proton Accumulation on Conductivity of Biofilm Anode B.R. Dhar, J. Chae, H. Ryu, H.S. Lee	Comparative Assessment of the Water Quality Performance of Low Impact Development Practices T. Van Seters
2:00 - 2:15 pm	Ethanol production from source-separated organic waste by yeast <i>S. cerevisiae</i> in fermentation process V. Bekmuradov, G. Luk, M. Crupl, E. Elbeshbishy	How to Accelerate Technology Development in the Water Space? Part (2): The Role of Multiscale Computational Modeling Domenico Santoro	Real-time electric current monitoring for enhanced substrate utilization in microbial electrolysis cells P. Yuan, Y. Kim	Stormwater Fees: Reforming Ontario Stormwater Management Funding Model J. ISAAC
2:15 - 2:30 pm	Techno-economical introspection of simultaneous C-sequestration and microbial lipid production using isolated Chemoautotrophs bacterium and process amelioration predications S.K. Ram, I.S. Thakur, R.D. Tyagi	Effect of solids retention time (SRT) on biomass activity decay rate under starvation condition R. Das, E. Hall	Towards practical applications of bioelectrochemical systems for wastewater treatment H. Guo, Y. Kim	Enhanced reporting for tracking wastewater treatment plant (WWTP) discharges to the Grand River, 2012-2015 M. Karizmeh, M. Anderson, D. Chapman
2:30 - 2:45 pm	Bioconversion of cashew apple juice to bioplastics R. Kaur, S. Yan, R.D. Tyagi, P. Drogui, B. Yao, S. Doudjo	Organic based particles for wastewater biological treatment process P. Ghahramani, S. N. Leung, A. Eldyasti	In situ generation and reaction of hydrogen peroxide for efficient electrochemical water/wastewater treatment R. Reid, H. S. Lee	Probabilistic Assessment of Nutrient Export in Lake Simcoe, Nottawasaga and Grey Sauble Watersheds for Different Precipitation Regimes with SPARROW Model A. Neumann, D. Kim, G. Arhonditsis

Break (2:45 pm – 3:00 pm)

Time	Session (9): Minerals recovery ENG (101) Chair: George Nakhla	Session (10): Wastewater (II) ENG (102) Chair: Bipro Dhar/Medhavi Gupta	Session (11): Wetland ENG (105) Chair: Alex Neumann	Session (12): Water recovery ENG (106) Chair: Darko Joksimovic
3:00 - 3:15 pm	Chemically mediated phosphorus removal and recovery from wastewater: lessons learned from geochemistry Scott Smith	Transitioning from wastewater disposal to resource recovery A. Laursen, R. A. Gossage, N. Reid	Adoption of ISO 14001 Environmental Management Systems (EMS) in Ontario Municipal Wastewater Systems - A Case Study for Durham Region and the Town of Richmond Hill Edgar Tovilla	China's Mega South-North Water Transfer Project: Opportunities and Challenges S. Easa, Y. Han
3:15 - 3:30 pm	Recovery and recycle of aluminum from municipal wastewater biosolids T. Chakraborty, M. Gabriel, A. Amiri, D. Santoro, J. Walton, G. Nakhla, M. Ray	COD mass balance in activated sludge systems treating synthetic wastewater R. Salehi, P.L. Dold, Y. Comeau	The Evaluation of Macrophytes, within Engineered Wetland, in the Removal of Excess Nutrients and Possible Contaminants, from Biosolids Runoff F. Fernandes, L. Mccarthy, V. Bostan	A modern look at the 150 mm (6 in.) diameter pipe standard: trade-offs between fire flow, cost, and water quality J. Gibson, B. Karney
3:30 - 3:45 pm	Utilizing UV-LED pulse width modulation on TiO2 advanced oxidation processes to enhance the decomposition efficiency of pharmaceutical micropollutants R. Liang, M. Arlos, J. Van Leeuwen, L. Li Chun Fong, M. Servos, N. Zhou	Biodegradability enhancement in real wastewater using new biostreme and vitamins P. Izadi, A. Eldyasti, M. Beckley, C. Chang, T. Saarimaki	Strontium-90 and Wetland Organic Matter Interactions A. Boyer, P. Ning, D. Killey, M. Klukas, C. Gallagher, D. Rowan, A. Simpson, E. Passeport	Water Recovery via Natural Freeze-Thaw E. Shum, V. Papangelakis
3:45 - 4:00 pm	Elimination of a mixture of contaminants of emerging concerns from municipal sludges by using a fungal approach S. Saibi, H. Cabana	Chronic Impact of Silver Nanoparticle on Aerobic Wastewater Biofilm S. Alizadeh, A.A. Rahmin, S. Ghoshal, Y. Comeau		
4:00 - 4:45 pm	Poster Exhibition			
4:45 - 5:00 pm	Closing Remarks and students awards			

Poster Exhibition

4:00 - 4:45 pm	<p>Dynamic Modeling of nitrite shunt process in a Sequential Batch Reactors (SBR) M. Soliman, A. Eldyasti</p> <p>Development and validation of a simple analytical method for the detection and quantification of a pharmaceuticals and pesticides in complex environmental matrices S. Saibi, H. Cabana</p> <p>Enhancement of Anaerobic Digestion of Thickened Waste Activated Sludge Using Free Nitrous Acid F. Okoye, D. Ho, S. Sarathy, W. Parker, E. Elbeshbishy</p> <p>Estimating Organophosphate Ester (OPE) Transport, Fate and Emissions in Toronto, Canada using the Multimedia Urban Model (MUM) T. Rodgers, J. Truong, L. Jantunen, P. Helm, M. Diamond</p> <p>Identification of ammonia oxidizing bacteria and archaea from three stages of municipal wastewater treatment system G. Islam</p> <p>The Characterization and Proliferation of Tetracycline Resistance Genes in Three Urban Wastewater Treatment Plants A. Tehrani</p> <p>A Comparative study of Oxidation, CF, and Chemical Precipitation Processes for Lead Drier Wastewater Treatment A. Rabii, G. Nabi Bidhendi, E. Elbeshbishy</p> <p>Effect of Extended Solids Retention Time on Biological Nutrient Removal (BNR) Performance and Sludge Reduction in a Submerged Membrane Bioreactor R. Das, E.R. Hall</p> <p>Design of a zero-discharge willow constructed wetland for the total evapotranspiration of a dioxin and furan contaminated effluent X. Lachapelle-Trouillard, S. Levesque, Y. Comeau</p> <p>Biofilm Measurement Essay for Particulate Biological Biofilm Treatment Processes A. Alsayed, A. Eldyasti, A. Kavooosi</p> <p>Applying statistical experimental design to enhance the photocatalytic activity of N-doped TiO₂ for the degradation of methyl orange M. Nasirian, C. Bustillo-Lecompte, M. Mehrvar</p> <p>Detection and Removal of Steroidal Estrogen Hormones in Pharmaceutical Wastewater Using Thermosensitive Polymers N.Z. Shiraz, E. Elbeshbishy, E.S. Sharifzadeh, E. Enferad</p>
4:45 - 5:00 pm	<p>Closing Remarks and students awards</p>