

<b>2008 IWA North American Membrane Research Conference</b>	
<b>Sunday, August 10</b>	<b>Engineering Lab II, Lobby and Auditorium</b>
<b>3:00-6:00</b>	Check into residence halls or hotels
<b>6:00 - 6:30</b>	Registration
	<b>100. Session I – Advances in Membrane Materials and Modeling</b>
<b>6:30 - 9:30</b>	Chairs: Todd Emrick (University of Massachusetts), David Ford (University of Massachusetts) and Benny Freeman (University of Texas at Austin)
	Welcome from host committee
7:00	110. David Ford, <i>Molecular modeling of transport in synthetic membranes: applications in gas- and liquid-phase separations</i>
7:30	102. Seda Keskin and David S. Sholl, <i>Accelerating development of crystalline nanoporous membranes using atomically detailed simulations</i>
8:00	103. Mingyan Zhou, Georges Belfort, Daniel G. Anderson, Robert Langer and James Kilduff, <i>Preparation of Membranes to Control NOM Fouling via High Throughput UV Graft Polymerization</i>
8:30	109. Wenqian Shan, Patrice Bacchin, Pierre Aimar, Merlin L. Bruening, Volodymyr V. Tarabara, <i>Facile control of colloidal fouling in polyelectrolyte multilayer based nanofiltration systems</i>
9:00	101. Douglas L. Gin, Meijuan Zhou, Evan S. Hatakeyama, Timothy J. Kidd, Xiaoyun Lu, Parag R. Nemade, and Richard D. Noble, <i>Polymers with <math>\leq 1</math> nm Pore Sizes for Water Nanofiltration and Desalination Based on the Polymerization of Surfactant Liquid Crystals</i>
9:30	Opening Reception Engineering Laboratory II
<b>Monday, August 11</b>	<b>Guinness Student Center</b>
<b>7:30-9:00</b>	<b>Continental Breakfast</b>
	<b>Engineering Lab II</b>
<b>9:00-12:35</b>	<b>200. Session II - Wastewater Treatment and Reuse</b>
	Chairs: Yoshimasa Watanabe (Hokkaido University) and Slav Hermanowicz (University of California, Berkeley)
9:00	202. T. David Waite, Xiao-mao Wang and Peter Kovalsky, <i>Determination of Fouling Layer Material Properties and Application to Prediction of Constant Pressure and Constant Flux Filtration Behaviour</i>
9:35	217. Z. Huang, S.L. Ong and H.Y. Ng, <i>The effect of HRT and SRT on Performance of Submerged Anaerobic Membrane Bioreactor (SAMBR) for Low-strength Wastewater Treatment</i>
9:55	205. Nancy Oram Vigneault, Venkat Mahendrakar, <i>The Design, Operation and Performance of the New Membrane Bioreactor (MBR) WWTP for the Becket-Chimney Corners YMCA</i>
10:15	206. Tim Constantine, Dan Chauvin, Mark Bainbridge, George Crawford, David Olsen, <i>Pilot test results for 500 MLD tertiary nitrification MBR in Hamilton, Ontario</i>
10:35	201. S.W. Hermanowicz, J. Cho, R.S. Trussell, R.P. Merlo, D. Jenkins, <i>Dynamic Aspects of Cake Formation in Membrane Filtration</i>
10:55	<b>Break</b>
11:15	207. Faisal Ibney Hai, Kazuo Yamamoto, Fumiyuki Nakajima and Kensuke Fukushi, <i>Long-term performance of a membrane bioreactor (MBR) with a GAC-packed anaerobic zone for textile wastewater treatment</i>
11:35	211. Chi-Wang Li, Chun-Hao Chiu, Yu-Cheng Lee, Chia-Hao Chang, Yu-Hsun Lee, and Yi-Ming Chen, <i>Integration of ceramic membrane and compressed air-assisted solvent extraction (CAXE) for Cr(VI) recovery</i>
11:55	219. Marisa Dacanal(1) and Lademir Luiz Beal, <i>Anaerobic Filter Associated With Microfiltration Membrane (MAF) Treating Sanitary Landfill Leachate</i>
12:15	204. Li, Baikun, <i>The Production of Hydrogen and Electricity as New Energy in Anaerobic Wastewater Treatment Processes</i>
12:35	<b>Lunch - Guinness Student Center</b>
1:30 - 5:00	<b>Field Trip to GE/Zenon's Camp Becket MBR facility</b>
<b>Monday Evening</b>	
<b>6:00-7:00</b>	<b>Picnic dinner - Plaza Outside Guinness Student Center</b>
	<b>Engineering Lab II</b>
<b>7:00-9:30</b>	<b>300. Session III – Desalination</b>
	Chairs: Menachem Elimelech (Yale University) and Volodymyr Tarabara, (Michigan State University)
7:00	302. Menachem Elimelech (Yale University), <i>The ammonia-carbon dioxide forward osmosis desalination process: Laboratory and pilot-scale evaluation.</i>
7:30	303. Lianfa Song (Texas Tech University), <i>Performance and energy efficiency of full-scale reverse osmosis desalination</i>
8:00	304. Richard L. Stover, <i>Energy Recovery Devices in Desalination Applications</i>
8:30	305. Robert P. Huehmer, James C. Lozier, <i>Characterization of Pretreatment Impacts on SWRO Fouling using Advanced Membrane Autopsy Techniques</i>
9:00	307. Sudipta Sarkar and Arup K. SenGupta, <i>Hybrid ion exchange - nanofiltration (HIX-NF) process for energy efficient desalination of seawater</i>

<b>Monday Evening</b>	<b>Engineering Lab II</b>
<b>9:30 - 10:30</b>	<b>General Poster Session</b>
	105. Senthilmurugan S, Shard K. Gupta, <i>Separation of aqueous ternary mixture by using radial flow hollow fiber reverse osmosis (HFRO) module</i>
	203. Sharon Zelmanowitz, <i>Treatment of Simulated Shipboard Grey Water in a Bench-Scale Membrane Bioreactor</i>
	208. Georgine Grissop, Terry Price, <i>Startup and O&amp;M support services for the country's largest advanced recycled water project the groundwater</i>
	209. Thayer A. Young, Haiou Huang, Joseph G. Jacangelo, <i>Effect of Effluent Organic Matter and Selected Water Quality Parameters on Removal of Viruses by Low Pressure Membranes</i>
	210. Hsin Shao, Shu-Fang Hsu, Ren-Yang Horng, Yen-Jung Hu, Kirk K. Hwang, Min-Chao Chang, <i>The influence of operating conditions on filtration performance of flat type non-woven membrane bioreactor system</i>
	306. Greg Wetterau, Evelyn You, <i>Control of Metal Oxide Fouling in Reverse Osmosis</i>
	308. Antonia von Gottberg, Rick Lesan, <i>Development and Application of Large Diameter RO Elements</i>
	405. Yanxiao Yuan and James E. Kilduff, <i>Predicting the effects of colloid cake formation on salt rejection during crossflow NF and UF using a two-layer transport model</i>
	406. N. Zhao, M.E. Walsh and G.A. Gagnon, <i>Development of a bench-scale immersed ultrafiltration apparatus for coagulation pretreatment assessments</i>
	407. M.E. Walsh, G. Hoffman, K. Ronzheimer, H. Daurie, and G.A. Gagnon, <i>Bench-scale evaluation of clarification process options on ultrafiltration performance</i>
	409. Jaeshin Kim and Mark M. Benjamin, <i>Distribution of NOM Foulants in Adsorbent/Membrane Systems</i>
	410. Jungju Lee, Harold W. Walker, <i>Removal of cyanotoxins from drinking water using membranes</i>
	415. Durba Chatterjee, Sudip Chakraborty, S. Basu, <i>Studies on Decontamination of river water by Microfiltration (MF)</i>
	603. Malaisamy, R., Kouwonou, Y., Berry, D., Holder, D., Borrel, T., Raskin, L. and Jones, K, <i>Membrane modification to reduce biofouling: influence of monomer on permeation, biofilm growth and flux recovery</i>
	604. Iván Moreno-Andrade, Germán Buitrón and Alejandro Vargas, <i>Optimization of filtrating conditions in a membrane sequencing batch reactor degrading 4-chlorophenol</i>
	605. Eugenio Giraldo, <i>The Significance of Mass Flux Rate for Design and Operation of Membrane Bioreactors: Redefining Critical Flux and Design Requirements for MBRs</i>
	606. Tze Chiang, Albert Ng and How Yong Ng, <i>Effect of Operating flux on Initial Fouling in Aerobic MBRs</i>
	608. George A. Brown, P.E., Geoff K. Hart, P.E., Rob B. Taylor, P.E., <i>A Comparison of Two Approaches to Achieve Acceptable Nanofiltration Process Feed Waters</i>
	610. Mark Stone, Dennis Livingston, and Jennifer Qin, <i>Improvements in Cleaning Fouled MBR Membranes</i>
	612. Etienne Brauns, <i>On the principle of measuring and controlling fouling in a membrane bioreactor by using a MBR-VFM sensor and a fuzzy set logic based advanced control system</i>
	614. Sheng Zhang, Lirong Xu, Mingchuan Zhang, Xiang Tu, Jianrong Zhu, <i>Performance and membrane fouling of a new hybrid membrane sequence batch reactor (MSBR) system</i>
<b>Tuesday, August 12</b>	<b>Gunness Student Center</b>
<b>7:30-9:00</b>	<b>Continental Breakfast</b>
	<b>Engineering Lab II</b>
<b>9:00-12:30</b>	<b>400. Session IV - Drinking Water Treatment</b>
	Chairs: John Tobiason (University of Massachusetts), Doug Owen (Malcolm Pirnie, Inc.) and Isabel Escobar (University of Toledo)
9:00	402. DiGiano, Fran, <i>In Pursuit of Innovative Membrane Technology</i>
9:30	408. Huang, H., Young, T., Schissler, J., Jacangelo, J.G. and Schwab, K., <i>Technological Sustainability of Small-Scale, Low Pressure Membrane Filtration Systems for Drinking Water Supply in Low-Income Countries</i>
10:00	403. Clement, Jonathan, <i>Developments in Ceramic Membranes</i>
10:30	<b>Break</b>
11:00	414. Matsui, Y., Hasegawa, H., Ohno, K., Matsushita, T., Aizawa, T. and Kawase, Y., <i>Combination of ceramic membrane and S-PAC to improve dissolved compound removal and filterability</i>
11:30	401. Isabel Escobar, Cyndee L. Gruden, Colleen Gorey, Cai Guang, <i>Development of nanostructured smart membrane sensors for Mycobacteria</i>
12:00	404. Alexander, Kevin, <i>Advances in Concentrate Minimization and Disposal</i>
12:30	<b>Lunch - Gunness Student Center</b>
1:30- 5:00	<b>Field Trip to UMass/Siemens Wastewater Reclamation Facility</b>

<b>Tuesday, August 12</b>	<b>Top of the Campus Center</b>
<b>5:00-7:00</b>	<b>Student Poster Session and Buffet Dinner</b>
104.	Nicolas Rios, Ingmar Nopens, Matthew W. D. Brannock and Karim Essemiani, <i>Modelling hydrodynamics in MBR systems using Computational Fluid Dynamics</i>
106.	Guoliang Xu, Yaobo Fan, Dongdong Yuan, Wenjing Yang, Yan Yu, Guangxia Wu, <i>Study of a sand plate membrane bioreactor and its application for wastewater treatment</i>
107.	Eun-Sik Kim and Baolin Deng, <i>Preparation and characterization of polyamide thin-film composite (PA-TFC) membrane with plasma-treated polyvinylidene fluoride (PVDF)</i>
108.	Huyen T. Dang, Roberto M. Narbaiz, Dipak Rana, Takeshi Matsuura, <i>Incorporation of hydrophilic additives – a promising approach for membrane surface modification in water treatment?</i>
213.	ZaiYan Mi, S.R. Grant and K.S. Singh, <i>Fouling of Flat Sheet Membrane Bioreactor (FSMBR): Impact of Stress Parameters</i>
214.	Yogesh Sharma, Baikun Li, <i>Optimizing Hydrogen Production from Organic Wastewater</i>
215.	Le Jin, How Yong Ng, Say Leong Ong, <i>The performance and fouling characteristics of different pore-size submerged ceramic membrane bioreactors (SCMBR)</i>
216.	J.S. Jo, M.J. Yu, <i>Recycle of Filter Backwash Water in AOP-MF System for Drinking Water Treatment</i>
217.	Z. Huang, S.L. Ong and H.Y. Ng, <i>The effect of HRT and SRT on Performance of Submerged Anaerobic Membrane Bioreactor (SAMBR) for Low-strength Wastewater Treatment</i>
218.	Daqian Jiang and Baikun Li, <i>Power generation by Microbial Fuel Cells (MFCs) in municipal wastewater treatment</i>
220.	Daryl Burke, Scott Christian, Shannon Grant and Kripa Singh, <i>Pilot-Scale Treatment of Potato Processing Wastewater with the Anaerobic Membrane Bioreactor (An MBR) Process</i>
309.	K. L. Mercer and J. E. Tobiasson, <i>Removal of Arsenic from Simulated High-Pressure Membrane Concentrates</i>
413.	Teresa Conneely, Ashish K Sahu, Klaus Nüsslein, Sarina J. Ergas, <i>Hydrogenotrophic Reduction of Nitrate and Perchlorate in Ion Exchange Brines Using Batch Hollow Fiber Membrane Bioreactor</i>
607.	Li, Sa, Heijman, S.G.J., van Dijk, J.Ca, <i>Complexation between cations and membrane</i>
611.	S. Jamal Khan and C. Visvanathan, <i>Effect of powdered activated carbon (PAC) and cationic polymer (MPE50) on membrane fouling mitigation in hybrid MBRs</i>
613.	N. Martin Garcia, A. Soares, M. Pidou, J.N. Lester, S. Judd and B. Jefferson, <i>Membrane Filtration of digested sludges: effect of gas sparging in crossflow and submerged configurations.</i>
615.	Fei-yun Sun and Xiao-yan Li, <i>Characterization of Biopolymer Clusters in Submerged Membrane Bioreactor and its Role on Membrane Fouling</i>
616.	Wei Shi, and Mark M. Benjamin, <i>Fouling of RO membranes in a Vibratory Shear Enhanced Filtration Process (VSEP) System</i>
617.	Anh Nguyen, John Tobiasson, Soon-Buhm Kwon, <i>Impact of model organic nitrogen compounds on fouling of low pressure hollow fiber membrane systems: First step, validation of fouling indices on fouling of low pressure hollow fiber membrane systems: First step.</i>
618.	Jon Kim, Simon H.R. Davies, Melissa J. Baumann, Susan J. Masten, Volodymyr V. Tarabara, <i>Control of NOM fouling in a hybrid ozonation-ceramic ultrafiltration system: Combined effects of hydrodynamics and solution chemistry</i>
620.	Herrera, M., Calderón K., Morgan-Sagastume, J.M. y Noyola A., <i>Characterization of some physical and biological structures in a fouling layer developed in an anaerobic membrane reactor</i>
<b>Tuesday Evening</b>	<b>Engineering Lab II</b>
7:00-9:30	<b>500. Session V – Gas Transfer Applications</b>
	Chairs: Michael Semmens and Pierre Cote
7:00	501. Thomas Buer, Dr.(GE/Zenon) and Youngseck Hong, <i>High efficiency oxygen transfer membrane supported biofilm reactor for wastewater treatment</i>
7:30	502. Eoin Casey (University College Dublin), Eoin Syron, John W Shanahan, Michael J Semmens, <i>Comparative economic analysis of full scale MABR configurations</i>
8:00	503. Robert Nerenberg, Leon Downing, Kyle Bibby, Kathleen Esposito, Tom Fascianella, <i>A hybrid membrane-biofilm process for concurrent nitrification and denitrification: bench and pilot-scale studies</i>
8:30	504. Michael Semmens, <i>Gas Transfer with Membranes -The Problems and Potential. An Overview</i>
9:00	505. Barth Smets, Akihiko Terada and Susanne Lacknerl, <i>Redox stratification controlled biofilm reactors for completely autotrophic nitrogen removal</i>
<b>Wed., August 13</b>	<b>Gunness Student Center</b>
7:30-9:00	<b>Continental Breakfast</b>
	<b>Engineering Lab II</b>
<b>9:00-1:00</b>	<b>600. Session VI - Fouling Mechanisms and Control</b>
	Chairs: Chung-Hak Lee (Seoul National University), Hongde Zhu (University of Guelph) and German Bultron (National University of Mexico)
9:00	601. Hongde Zhoua, Fengshen Fana, Lindsay LaFleura, Jeff Peetersb and Hongyuan Liua, <i>Causes and measurement of membrane fouling in MBR systems for wastewater treatment</i>
9:45	602. D. Celmer, N. Cicek, J. Oleszkiewicz, <i>Strategies for Biofilm Thickness Control and Performance in Membrane Biofilm Reactors (MBfR)</i>
10:30	609. C.C.V. Chan, P.R. Bérubé, <i>Response and Control of Surface Foulants to Oscillating Shear Events Induced by Air Sparging</i>
11:00	<b>Break</b>
11:30	613. N. Martin Garcia, A. Soares, M. Pidou, J.N. Lester, S. Judd and B. Jefferson, <i>Membrane Filtration of digested sludges: effect of gas sparging in crossflow and submerged configurations.</i>
12:00	619. Kyung-Min Yeon, Woo-Nyung Lee, Byung-Kook Hwang, Chung-Hak Lee, <i>Quorum sensing in a membrane bioreactor for wastewater treatment and reuse: From molecular level to engineering system</i>
12:30	Closing