

TECHNICAL PROGRAM

Tuesday, February 25, 2020

7:45 Registration

8:20 Welcome & Introduction

8:30 Borchardt Lecture: Health risks in distribution systems: managing integrity or microbial niches?

Michèle Prévost, Professor and Principal Chairholder, NSERC Industrial Chair on Drinking Water, Department of Civil, Geological and Mining Engineering, Polytechnique Montreal

9:30 Bench testing of metabolic biofiltration of 1,4-dioxane in drinking water

Chao Zhou, Yi Xiong, Youneng Tang, Brian Petty; Geosyntec Consultants

9:50 Droplet digital PCR (ddPCR) for quantification of antibiotic resistance genes in drinking water distribution systems

Lee K. Kimbell, Patrick J. McNamara; Marquette University

10:10 30-min Break with Refreshments

10:40 Research into evaluating lead and copper corrosion control treatment

David Cornwell, Richard Brown, Jacob Wagner; Cornwell Engineering Group and University of Florida

11:10 Nontuberculous mycobacteria (NTM) in drinking water- understanding how treatment and distribution influence abundance and composition and looking ahead to compliance monitoring

Katherine Dowdell, Sarah Potgieter, Sarah Page, Matthew Vedrin, Melina Bautista, Kirk Olsen, Lindsay J Caverly, John J LiPuma, Lutgarde Raskin; University of Michigan

11:30 Vulnerability of private well systems to flooding and opportunistic pathogen colonization

Dongjuan Dai, Maddie Brouse, Kris Mapili, William Rhoads, Laurel Strom, Adrienne Katner, Marc Edwards, Kelsey Pieper, Amy Pruden; Virginia Tech

11:50 Borchardt Award Presentation

James Borchardt (Director of Water Technology, MWH)

12:00 Lunch and Poster Session 1

1:00 Quantifying GAC performance for PFAS removal at a surface water treatment plant

Sarah E. Page, Brian Steglitz; City of Ann Arbor

1:30 Characterizing the removal efficiency of small microplastics (< 100 um) during drinking water treatment

Yongli Zhang, Allison Diehl, Tracie Baker, Ashton Lewandowski; Wayne State University

1:50 Drinking Water After Wildfire: Network Contamination and Community Impacts

Caitlin Proctor, Andrew Whelton; Purdue University

2:10 Prioritizing pathways for financially viable enzyme-based perchlorate removal from drinking waters

Amber Volmer, Indran Kamalanathan, Jess Brown, Justin Hutchison, Jeremy Guest, Julie Zilles; University of Illinois at Urbana-Champaign

2:30 Poster Session 1 Continued with Refreshments

3:30 Predicting the rejection efficiencies of small molecular weight neutral organics through RO membranes for potable reuse application.

Daisuke Minakata, Ryan Kibler, Benjamin Mohrhardt, Muxue Zhang, Lauren Breitner, Kerry Howe; Michigan Tech

3:50 Novel approaches to monitor virus fate through water treatment processes

Nicole Rockey, Lutgarde Raskin, Krista R. Wigginton; University of Michigan

4:10 Changes in groundwater quality in Ingham County, MI from the 1980 to 2020

Shuyang Wang, **Susan J. Masten**, Garry Roweb; Michigan State University

4:30 Borchardt-Glysson Water Treatment Innovation Prize Lecture: Mixing electricity and water: The evolving role of light in treatment

Karl Linden; University of Colorado Boulder

6:30 Dinner at Michigan Union

25th Triennial

2020 | **Borchardt**
Conference 

Wednesday, February 26, 2020

8:15 Registration

8:30 Glysson Lecture: Intensifying treatment and resource recovery SWIFTly and pragmatically

Charles Bott, Director of Water Technology and Research, Hampton Roads Sanitation District (HRSD) and Adjunct Professor at Virginia Tech and Old Dominion University

9:30 Characterizing the antibiotic “resistome” in an international transect of wastewater treatment plants: implications for surveillance and risk

Emily Garner, Maria Virginia Prieto Riquelme, Ayella Maile-Moskowitz, Suraj Gupta, Liqing Zhang, Diana S. Aga, Indumathi Nambi, Joakim Larsson, Helmut Burgmann, Tong Zhang, Peter J. Vikesland, Amy Pruden; West Virginia University

10:00 30-min Break with Refreshments

10:30 Going beyond the Redfield (C:N:P) ratio: the future of wastewater treatment

John Norton, Xavier Fonoll, Andrea Busch; Great Lakes Water Authority

11:00 A laboratory-scale evaluation of the factors controlling pathogen and indicator organism inactivation under ambient conditions

John P. Harron, Jennifer G. Becker, Eric A. Seagren; Michigan Tech

11:20 Effects of temperature gradients on MABR biofilms

Patricia Pérez, Emily Clements, Cristian Picioleanu, Robert Nerenberg; University of Notre Dame

11:40 Michigan’s source reduction strategy for PFAS in municipal wastewater – The Industrial Pretreatment Program PFAS Initiative

Jon Russell, Chris Alexander, **Stephanie Kammer**, Ann Tavalire, Carla Davidson, Tom Berdinski; Water Resources Division, EGLE

12:00 Lunch and Poster Session 2

1:00 Functional gas-permeable membranes for resource recovery from wastewater

Lu Lu, Dianxun Hou, Scott Singer, Joshua Jack, **Z. Jason Ren**; Princeton University

1:30 Role of advanced oxidation processes in urine-derived fertilizer production

Enrique Rodriguez, William Tarpeh, Nancy Love, Krista Wigginton; University of Michigan

1:50 Novel isothermal membrane distillation with acidic collector for selective and energy-efficient recovery of ammonia from urine

Stephanie N. McCartney, Natalie Williams, Chanhee Boo, Xi Chen, Ngai Yin Yip; Columbia University

2:10 Development of anaerobic bioreactor system for medium chain carboxylic acids recovery from organic waste streams

Shilva Shrestha, Siqi Xue, Xavier Fonoll, Dianna Kitt, Caro Truyers, Lutgarde Raskin; University of Michigan

2:30 Poster Session 2 Continued with Refreshments

3:30 Early detection of viral outbreaks in urban areas

Irene Xagorarakis, Camille McCall; Michigan State University

4:00 The prerequisite of Digital Water: How to mine information from dirty sensor data in wastewater?

Cheng Yang, Evangelina Belia, Branko Kerkez, Glen Daigger; University of Michigan

4:20 Real-time control of sewer systems to balance flow and water quantity objectives

Sara C. Troutman, Nancy G. Love, Branko Kerkez; University of Michigan

4:40 Closing Remarks and Poster Awards

TO REGISTER, visit: <https://mi-water.site-ym.com/page/BorchardtConf>

2-day attendee: \$260

1-day only attendee (incl. lunch): \$160

2-day student (incl. lunch): \$30

1-day student (incl. lunch): \$15

Borchardt Conference 25th Triennial Celebration

Dinner: \$35; pre-registration required