

# TECHNICAL PROGRAM

Tuesday, May 5, 2026

**7:45 Registration**

**8:15 Welcome & Introduction Day 1** (Moderator: Yafeng Yin)

**8:25 Borchardt Lecture** (Moderator: Alex Szczuka) **Highlights from the applied research program at OCWD: PFAS challenges and treatment innovations for drinking water and potable reuse**  
**Megan Plumlee**, Research Director; Orange County Water District

**9:25** (Moderator: Ernie Sarkipato) **Structural vulnerabilities in small drinking water systems in Appalachia: Infrastructure scale, operational stressors, and water quality**  
**Emily Garner**, Vinila Vasam, Sienna Bircher; West Virginia University

**9:50 A multi-state data-driven assessment of workforce, system, and community predictors of persistent monitoring and reporting violations in community water systems**  
**Derek Ten Pas, Sadaf Mehrabi, Lina Sela, Kaoru Ikuma**; Iowa State University

**10:10 30-min Break with Refreshments**

**10:40** (Moderator: Rebecca Lahr) **Characterization of organic carbon in drinking source water intakes and process units of GLWA water treatment plants**  
**Harrison Hee**, Andrew Marcus, John Norton, Dienne Tolofari; Great Lakes Water Authority

**11:05 Selective heavy metal removal from reverse osmosis concentrates using functionalized carbon electrodes**  
**D. Ricardo Martinez-Vargas, Shiqiang (Nick) Zou**; Michigan State University

**11:25 Floatable monolithic Ag single-atom/nanoparticle photocatalysts for synergistic solar disinfection of off-grid water**  
**Jian Wang, Jiahe Zhang, Yang Li, Hengjing Yang, Jae-Hong Kim, Wen Zhang**; New Jersey Institute of Technology

**11:45 Borchardt Award Presentation** (Moderator: Jim Borchardt)

**12:00 Lunch and Poster Session 1**

**1:30** (Moderator: Maggie Williams) **Alternative virus log reduction crediting frameworks for un- and under-credited advanced water treatment processes**  
**Delaney Snead**, Anna Kilts, Alexis Bandy, Avery Sanchez, Blake Xi, Lars Andersland, Daniel Gerrity, Charles Haas, Brian Pecson, Adam Olivieri, Krista Wigginton; University of Michigan

**1:50 Reactivity of viral capsids with chlorine and chlorine dioxide**  
**Chonglin Zhu, Allison Fin, Kerry Princin, Leah Ward, YinYin Ye**; University at Buffalo

**2:05 Examining the effect of UV disinfection on nontuberculous mycobacteria (NTM) in a full-scale drinking water treatment system**  
**Soojung Lee**, Sarah Potgieter, Alana Boelter, Yining Sun, Rebecca Lahr, Lutgarde Raskin; University of Michigan and City of Ann Arbor

**2:20** (Moderator: Ariana Wade) **Evaluating pilot-to-full-scale transferability in drinking water treatment performance**  
**Monika Poonia**, Rebecca Ostman, Brianna Calado, Harrison Hee, John W. Norton, Carol J. Miller, Yongli Wager; Wayne State University

**2:40 Evaluating the effects of GAC filter operational strategies and seasonality on biomass activity and contaminant removal at pilot scale**  
**Sarah Potgieter, Cemre Birben, Xiaojun Tang, Gauri Jere, Lutgarde Raskin, Alex Szczuka, Rebecca Lahr**; University of Michigan

**2:55 Techno-economic decision frameworks to assess the service expansion potential of local water utility infrastructure**  
**Shannay Rawal**, Kevin Orner; West Virginia University

**3:10 Poster Session 1 Continued with Refreshments**

**4:20 AEESP Distinguished Lecture** (Moderator: Alex Szczuka) **Using small-scale treatment systems to solve some of the world's water crises**  
**David Sedlak**, Plato Malozemoff Distinguished Professor; University of California, Berkeley

27<sup>th</sup> Triennial

2026

**Borchardt**  
Conference 

Wednesday, May 6, 2026

**7:45 Registration**

**8:15 Welcome & Introduction Day 1** (Moderator: Lutgarde Raskin)

**8:25 Glysson Lecture** (Moderator: Lina Belia) **Low dissolved oxygen biological nutrient removal systems: Anaerobic selectors, comammox, and simultaneous nitrification-denitrification**  
Belinda Sturm, Professor and Ross McKinney Faculty Fellow; University of Kansas

**9:25** (Moderator: Bryan VanDuinen) **From microbes to carbon footprint: Linking low-DO nitrifier adaptation with greenhouse gas impacts in full-scale WRRFs**  
Fabrizio Sabba, Prachi Salekar, Caitlin Ruff, Bishav Bhattarai, Leon Downing; Syracuse University

**9:50 Nitrification in the high-purity oxygen-activated sludge process**  
Michael Stenstrom; University of California, Los Angeles

**10:10 30-min Break with Refreshments**

**10:40** (Moderator: Joshua Jack) **A process intensification strategy for simultaneous nitrate and suspended solids removal in municipal wastewater treatment using recirculating dynamic membrane bioreactors**  
Hang (Alex) Song, Kate Giammalvo, Tim Fairley-Wax, Steven Skerlos, Lutgarde Raskin; University of Michigan

**11:05 Primary treatment intensification using integrated biofiltration for wet-weather resilience and process sustainability**  
Victory Dsane, Daehwan Rhu, Derya Dursun, Yaunbin Wu, Onder Caliskaner, S. Joh Kang, Glen Daigger; Water & Energy Advisors

**11:25 Holistic treatment of high-strength livestock wastewater in an Anaerobic Membrane Bioreactor (AnMBR) platform**  
Huu Tuan Tran, Chinmay Deore, Parnian Mohammadiansemnani, Jack Murphy, Ganga Hettiarachchi, Prathap Parameswaran; Kansas State University

**11:45 Electrochemical solvent extraction for nitrogen recovery from digested sludge**  
Shih-Kuan Tsai, Zhen He; Washington University in St. Louis

**12:00 Lunch and Poster Session 2**

**1:30** (Moderator: Phil Argiroff) **A full-scale EBPR case study: Changes in microbial community activity associated with diminished biological phosphorus removal performance**  
Jessica A. Deaver, Amy Grunden, Doug Call; North Carolina State University

**1:50 Nanobubbles for SBR optimization: Enabling BPR and reducing costs**  
Daniel Fahr, Gary Hunter, Lina Herrera Estrada, John Crisman, Baji Gobburu, Kyle Schoenheit, Cedella Beazley; Black & Veatch

**2:05 An agentic AI framework enabling natural language interaction with mechanistic process models for environmental engineering education and practice**  
Ga-Yeong Kim, Jooman Kim, Jeremy Guest; University of Illinois Urbana-Champaign

**2:20** (Moderator: Anne Warrow) **Upstream matters: How wastewater infrastructure shapes surveillance signals and antimicrobial resistance**  
Ishi Keenum, Israel Adeoye; Michigan Technological University

**2:40 Life cycle environmental and economic impacts of nutrient management in small community lagoon wastewater systems**  
Denis Ruto, Corbin Vincent, Ziya Jang, Pablo Cornejo, Harold Leverenz, Steffen Mehl, Kevin Orner; West Virginia University

**2:55 High-efficiency sulfate removal in tertiary wastewater treatment using barium-based chemical precipitation**  
Elli Castonguay, Britton Evans, Meijun Cai, Leon Downing, Adam Markos; Black & Veatch

**3:10 Poster Session 2 Continued with Refreshments**

**4:10 Borchardt-Glysson Water Treatment Innovation Prize & Lecture** (Moderators: Yafeng Yin, Lutgarde Raskin) **From data science to decarbonization: Quantifying and directing carbon flows in wastewater**  
Z. Jason Ren, Professor; Princeton University

**5:10 Poster Awards & Closing Remarks** (Moderators: Alex Szczuka, Lina Belia)