Clean Water Symposium

POSTER SESSION

Thursday, April 17, 2025

Development of a wetland geospatial framework to support agricultural nutrient management across the conterminous United States

Author: Scott Alford, ORISE c/o US EPA Office of Research and Development

Co-authors: Ryan Hill, US EPA Office of Research and Development; Selia Markley, ORISE c/o US EPA Office of Research and Development; Marc Weber, US EPA Office of Research and Development; Jana Compton, US EPA Office of Research and Development; Meredith Brehob, ORISE c/o US EPA Office of Research and Development

Integrating microbial and isotopic approaches for nitrate source tracking in groundwater: A machine learning framework for land use prediction in the Lower Umatilla Basin

Author: Madison Anzarut, Department of Biological & Ecological Engineering, Water Resource Science

Exploring the Optimization of Geologic Carbon Sequestration via Injection Rate Variation to Prevent Upward Migration to Groundwater Reservoirs

Author: Simone Baumgartner, School of Chemical, Biological, and Environmental Engineering, Chemical Engineering

Co-authors: Daniel Enebe, School of Chemical, Biological, and Environmental Engineering; Dorthe Wildenschild, School of Chemical, Biological, and Environmental Engineering

UPLC Fluorescence Detection for Monitoring of PAH Bioremediation

Author: Brandon Beck, Environmental Engineering

Co-authors: Mohammad Azizian, School of Chemical, Biological, and Environmental Engineering, Environmental Engineering; Lewis Semprini, School of Chemical, Biological, and Environmental Engineering, Environmental Engineering

Exploring how Biofilms can Help Clean Water: Investigating Lugol's Iodine as a Fixative and as a Contrast Agent for Biofilm Imaging

Author: Alice Bokman, School of Chemical, Biological, and Environmental Engineering

Co-authors: Mads Kent, School of Chemical, Biological, and Environmental Engineering; Laura Osborne, School of Chemical, Biological and Environmental Engineering; Margaret Robinett, School of Chemical, Biological, and Environmental Engineering; Julia Lauterbach, School of Chemical, Biological, and Environmental Engineering; Dorthe Wildenschild, School of Chemical, Biological, and Environmental Engineering

Development and Prototyping of a Compact, 3D-Printed Passive Environmental Sampler for Wastewater-Based Disease Surveillance

Author: Joshua Bradshaw, School of Chemical, Biological, and Environmental Engineering

Co-authors: Felix Leahey, School of Chemical, Biological, and Environmental Engineering

Air, surface, and wastewater surveillance of SARS-CoV-2; a multimodal evaluation of COVID-19 detection in a built environment

Author: Leslie Dietz, Oregon State University

Co-authors: Andreas Olsen-Martinez, Los Alamos National Laboratory, Los Alamos, NM; Hooman Parhizkar, Environmental and Occupational Health Sciences Institutes (EOHSI), Rutgers University; Devrim Kaya, School of Public Health and Imperial Valley, San Diego State University; Dale Northcutt, Energy Studies in Buildings Laboratory, University of Oregon; Patrick Horve, Institute of Molecular Biology, University of Oregon

Micro- and Nanoplastics in the Environment: Insights from the Degradation of Fossil fuel- and Bio-Based Plastics

Author: Megan Dodge, School of Chemical, Biological, and Environmental Engineering: Chemical Engineering

Co-authors: Bryan Harper, Environmental and Molecular Toxicology / Harper Lab; Kolette Miller, Bioresource Research; Caden Anderton, School of Chemical, Biological, and Environmental Engineering

Enhancing Residual Trapping Efficiency in Geologic Carbon Sequestration: The Influence of Flow Rate on Fluid Connectivity

Author: Daniel Enebe, Chemical, Biological, and Environmental Engineering

Co-authors: Simone Baumgartner, Chemical, Biological and Environmental Engineering; Dorthe Wildenschild, Chemical, Biological and Environmental Engineering

Using GIS to Address Inequitable Flood Risks in Los Angeles County

Author: Susanna Eng, Civil and Construction Engineering (Geomatics Research Group)

Co-authors: Justin Thomas, California State Polytechnic University, Pomona/ Los Angeles County Department of Public Works

Advancing Water Security: Recent Developments in Deep Vadose Zone Injection Wells

Author: Ruan Gomes, College of Engineering, Department of Biological & Ecological Engineering

Co-authors: Salini Sasidharan, College of Engineering, Department of Biological & Ecological Engineering

Comparison of Contrast Agents for Reliable microCT Imaging of Biofilm Growth in Porous Media

Author: Ashtin Hofert, School of Chemical, Biological, and Environmental Engineering

Co-authors: Julia Lauterbach,School of Chemical, Biological, and Environmental Engineering; Dorthe Lauterbach, School of Chemical, Biological, and Environmental Engineering

Efficient Biofilm Reduction in Enhanced Aquifer Recharge Operation via Hydrogen Peroxide Injection

Author: Keon Kiser, School of Chemical, Biological, and Environmental Engineering

Superbugs in Our Sewers: Wastewater's Role in the Antimicrobial Resistance Crisis

Author: Matthew Latham, School of Chemical, Biological, and Environmental Engineering

Co-authors: Amanda Eness, School of Chemical, Biological, and Environmental Engineering; Manuel Garcia-Jaramillo, Environmental and Molecular Toxicology; Gerrad Jones, Department of Biological & Ecological Engineering; Tyler Radniecki, School of Chemical, Biological, and Environmental Engineering; Tala Navab, School of Chemical, Biological, and Environmental Engineering

Influence of Anaerobic and Aerobic Conditions on 3D Biofilm Growth Patterns in Porous Media

Author: Julia Lauterbach, Environmental Engineering

Co-authors: Mads Kent, Chemical Engineering; Laura Osborne, Chemical Engineering; Maggie Robinett, Environmental Engineering; Alice Bokman, Environmental Engineering

Microbial Memory in Anaerobic Digesters: Enhancing Resistance and Resilience to FOG Overloads

Author: David Lisboa, OSU School of Chemical, Biological, and Environmental Engineering

Co-authors: Brian Zhou, School of Chemical, Biological, and Environmental Engineering; Grace Baker, Department of Biological & Ecological Engineering; Kieran Parreno, School of Chemical, Biological, and Environmental Engineering; John Dones, School of Chemical, Biological, and Environmental Engineering; Tyler Radniecki, School of Chemical, Biological, and Environmental Engineering

Identifying Pollution Sources Through Chemical Fingerprinting of Water Environments in the Lower Umatilla Basin Groundwater Management Area

Author: Alexia Mackey, Department of Biological & Ecological Engineering

Co-authors: Salini Sasidharan, Department of Biological & Ecological Engineering

Incorporating US EPA's NextGen National Nutrient Inventory into StreamCat's Database: Making Novel High-Resolution Nutrient Metrics Available to the Public

Author: Selia Markley, US Environmental Protection Agency

Co-authors: Marc Weber, US Environmental Protection Agency; Meredith Brehob, US Environmental Protection Agency; Robert Sabo, US Environmental Protection Agency; Michael Pennino, US Environmental Protection Agency; Jana Compton, US Environmental Protection Agency

Comparative Toxicity of Micro, Nano, and Leachate Fractions of Three Rubber Materials to Freshwater Species: Zebrafish and Daphnia

Author: Miranda Jackson, Department of Environmental & Molecular Toxicology

Co-authors: Bryan Harper, Department of Environmental & Molecular Toxicology; Manuel Garcia-Jaramillo, Department of Environmental & Molecular Toxicology; Stacey Harper, Department of Environmental & Molecular Toxicology and School of Chemical, Biological, and Environmental Engineering

Biochar Addition and Phytoremediation of Biosolids Amended Soil: Chemical Mitigation Strategies for Wastewater Sludge Reuse

Author: Marie Olland, School of Chemical, Biological, and Environmental Engineering

Co-authors: Tala Navab, School of Chemical, Biological, and Environmental Engineering; Gerrad Jones, Department of Biological & Ecological Engineering; Manuel Garcia-Jaramillo, Department of Environmental & Molecular Toxicology; Lewis Semprini, School of Chemical, Biological, and Environmental Engineering

The Effect and toxicity of PBAT and PLA Bioplastics in algal (Raphidocellus) growth

Author: Hana Omrane, College of Science

Rheological Characterization of Biofilm Fixatives for Clean Water Bioremediation

Author: Laura Osborne, School of Chemical, Biological, and Environmental Engineering

Co-authors: Alice Bokman, School of Chemical, Biological, and Environmental Engineering; Mads Kent, School of Chemical, Biological, and Environmental Engineering; Margaret Robinett, School of Chemical, Biological, and Environmental Engineering; Julia Lauterbach, School of Chemical, Biological, and Environmental Engineering; Tala Navab-Daneshmand, School of Chemical, Biological, and Environmental Engineering; Dorthe Wildenschild, School of Chemical, Biological, and Environmental Engineering

Column Study on Aerobic Cometabolsim of 1,2,3 Trichloropropane with Co-Encapsulated Hydrogel Beads

Author: Abigail Pradere, School of Chemical, Biological, and Environmental Engineering

Co-authors: Lewis Semprini, School of Chemical, Biological, and Environmental Engineering; Mohammad Azizian, School of Chemical, Biological, and Environmental Engineering

Wastewater Surveillance of Multi-Drug Resistant Organisms

Author: Niksen Renshaw, School of Chemical, Biological, and Environmental Engineering, Wastewater Surveillance Lab

Co-authors: Ollie Cook, School of Chemical, Biological, and Environmental Engineering, Wastewater Surveillance Lab

Predicting Toxic Algal Bloom Risk in 124,500 lakes across the Conterminous United States using Lake and Landscape Drivers of Water Quality

Author: Melanie Reynolds, US Environmental Protection Agency (currently a post-masters ORISE research fellow)

Co-authors: Amalia Handler, US EPA Office of Research and Development; Jana Compton, US EPA; Meredith Brehob, Oak Ridge Institute for Science and Education Fellow c/o U.S. Environmental Protection Agency, Office of Research and Development; Michael Dumelle, US EPA ORD; Ryan Hill, US EPA ORD

Studying Bioremediation Employed in Water Treatment: Using ImageJ to Measure Biofilm Shrinkage in Resin

Author: Margaret Robinett, School of Chemical, Biological, and Environmental Engineering

Co-authors: Julia Lauterbach, School of Chemical, Biological, and Environmental Engineering; Mads Kent, School of Chemical, Biological, and Environmental Engineering; Alice Bokmann, School of Chemical, Biological, and Environmental Engineering; Laura Osborne, School of Chemical, Biological, and Environmental Engineering; Dorthe Wildenschild, School of Chemical, Biological, and Environmental Engineering

Groundwater Well Nitrate Trend Analysis in the Southern Willamette Valley

Author: Lena Wang, Industry Professional

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