

Partnerships with University Researchers in Water

The Innovation Council has made an effort to reach out to water-focused researchers in the academic ecosystem. The academic professionals listed below have agreed to become a Water Innovation Collaborator within NEWEA and offer their expertise, mentorship, and/or their network to an innovator in need.

Amy Mueller - Northeastern University

Research Interests: Biogeochemistry of natural and engineered systems; in-situ sensors and instrumentation for high-resolution process characterization; remediation and sustainability in natural and built coastal environments; sensor-driven closed-loop controls for resource optimization in engineered systems; signal processing and machine learning, embedded systems, and sensor networks; data science

Carlos Hidrovo - Northeastern University

Research Interests: Multiscale and multiphase flow and transport phenomena; surface tension interactions in micro/nanoengineered structures, and electrokinetic ion transport in porous media for applications in energy storage; portable biochemical diagnostics; thermal management, and water treatment systems

Paul P. Mathisen - WPI

Research Interests: Contaminant transport modeling; water resources management; stormwater management

Corey Dehner - WPI

Research Interests: Storm water; drinking water; environmental justice and dam removal policies

Harold Webb Walker - WPI

Research Interests: Predicting the fate and transport of manufactured nanomaterials, cyanotoxins, and other “emerging” contaminants in groundwater, lakes, oceans, and water treatment plants; developing novel membrane treatment systems and membrane cleaning approaches; and the research and development of innovative, on-site wastewater treatment systems for removal of nitrogen

Appala Raju Badireddy - University of Vermont

Research Interests: Water quality engineering; membrane separation processes; resource recovery from solid- and liquid-waste; environmental photochemistry

Lesley-Ann L. Dupigny-Giroux - University of Vermont

Research Interests: Climate variability and change; historical climatology; climate literacy; severe weather hazards; drought; remote sensing Geographic Information Science

Joseph Goodwill - University of Rhode Island

Research Interests: Physical-chemical treatment processes; water reuse; iron oxide nanoparticles; water system corrosion; international water-poverty issues; water quality data and sensors

Kurt Pennell - Brown University

Research Interests: Groundwater remediation technologies; environmental toxicology; engineered nanomaterials; fate and transport of environmental contaminants

Jean D. MacRae - University of Maine

Research Interests: Microbial processes that affect pollutant and nutrient cycling; sustainability issues and access to water; sanitation in the developing world

Jeffrey McCutcheon - University of Connecticut

Research Interests: Membrane separations; 3D printed membranes; thin film composite membrane design and fabrication; organic solvent nanofiltration; forward osmosis/osmotic dewatering; electrospun nanofibers for separations; polymeric membrane characterization

David F. Boutt - University of Massachusetts Amherst

Research Interests: Research is focused on the subsurface part of the hydrologic cycle and how water becomes groundwater and the sub-surface processes that impact it along its journey

Caitlyn Butler - University of Massachusetts Amherst

Research Interests: Biofilm processes for water and wastewater treatment; bioelectrochemical systems for removal of organic and oxidized contaminants; microbial community structure and function of electrode-associated biofilms

John Fortner - Yale University

Research Interests: Advancing water-related technologies and understanding; engineering novel material interfaces as they relate to critical environmental-based health, security, and energy challenges

Rohit Karnik - Massachusetts Institute of Technology

Research Interests: Nanotechnology; fluid mechanics; biosensors; water filtration and desalination; separation processes; nanoparticles

Soni M. Pradhanang - University of Rhode Island

Research Interests: Watershed hydrology and biogeochemistry; hydrology and water quality modeling; fate and transport of nutrients and emerging contaminants; climate change impacts on watershed biogeochemistry; reservoir hydrodynamics; surface water groundwater interactions

Weile Yan - University of Massachusetts Lowell

Research Interests: Water quality engineering; groundwater and subsurface remediation; environmental interface chemistry; environmental catalysis