

# 2024 ITRC ANNUAL MEETING

## PLENARY AGENDA



WEDNESDAY, APRIL 10	
8:00 am – 10:00 am	Plenary Breakfast
8:15 am	Welcoming Remarks
<p><u>Introduction:</u> Charles Reyes, ITRC Director</p> <p>ITRC Leadership will welcome attendees to the ITRC Annual Meeting.</p>	
8:25 am	<b><i>Artificial Intelligence and Machine Learning for Advanced Long-Term Environmental Monitoring Systems</i></b>
<p><u>Introduction:</u> Randy Chapman, Virginia Department of Environmental Quality/ITRC Co-Chair</p> <p><u>Speaker:</u> Carol A. Eddy-Dilek, U.S. Department of Energy (DOE), Savannah River National Laboratory</p> <p>The DOE's ALTEMIS project is a multi-laboratory and university applied research project led by Savannah River National Laboratory and Lawrence Berkeley Laboratory. This presentation will provide an overview of DOE's ALTEMIS project and the implementation of artificial intelligence and machine learning (AI/ML) technologies to provide an innovative framework for long-term monitoring at one of DOE's complex groundwater plumes using state-of-art hardware and software technologies. Applications of these approaches and technologies at additional sites in Canada, UK, and in the US will also be presented.</p>	
9:10 am	<b><i>Artificial Intelligence for PFAS Biogeochemistry and Source Attribution</i></b>
<p><u>Introduction:</u> Rebecca Higgins, Minnesota Pollution Control Agency/ITRC Co-Chair</p> <p><u>Speaker:</u> Dr. Bridger J. Ruyle, Carnegie Institution for Science Department of Global Ecology, Stanford University</p> <p>Concentrations of PFAS exceed regulations in drinking water supplies serving tens of millions of Americans. However, the large diversity of chemistries and sources complicate our ability to study the distribution of PFAS in the environment and predict drinking water hazards. Dr. Ruyle will demonstrate how AI tools can be leveraged to identify the pathways and timescales of PFAS migration away from contaminated sites into downgradient drinking water resources. The presentation will also illustrate how ML models are trained and evaluated using private well contamination in the state of New Hampshire as a case study.</p>	
9:45 am	Closing Remarks
<p>Randy Chapman, VA Department of Environmental Quality/ ITRC Co-Chair</p>	