<u>FRTR Spring 2022 Web Meeting</u>

Application of Robotics, Machine Learning and Artificial Intelligence Technologies to Site Remediation

Meeting Objectives

The FRTR Spring 2022 Meeting will explore advances in applying artificial intelligence technologies to site cleanup. Artificial intelligence technologies are beginning to transform how people and machines work together. Robotics and unmanned systems provide opportunities to access dangerous or toxic environments, and improve worker safety. Advances in machine learning are making it possible to process and analyze large data sets in new ways to support remediation decisions. Specific objectives are

- Review recent technology advances supporting site characterization and remediation.
- Identify potential benefits, risks and limits of robotics and unmanned aerial systems to support site characterization and remediation.
- Discuss appropriate use of machine learning and artificial intelligence to support remediation decisions.

Session 2: Advances in Processing Large Data Sets and Machine Learning for Remediation Decision Support
June 13, 2022, 1:00 to 3:45 PM (EDT)

1:00	**Meeting Opening** *Kent Glover, FRTR Steering Committee Chair*
1:05	**Recap of Day 1 and Introduction to Day 2 Focus** *Moderators: Kent Glover, AFCEC and Jean P. Pabon, DOE*
1:15	**The DOE Altemis Project: Combining Innovative Technologies to Improve Long-Term Management of Radionuclide-Contaminated Sites** *Speaker: Carol Eddy-Dilek, Savannah River National Laboratory*
1:40	**Use of In situ Real-Time Monitoring for Early Warning Systems at SRS F-area and D-area Coal Ash Basins** *Speaker: Tom Danielson, Savannah River National Laboratory*
2:05	**Artificial Intelligence and Machine Learning Techniques for Long Term Monitoring of Soil and Groundwater Contamination** *Speaker: Himanshu Upadhyay, Florida International University*
2:30	**Break – Agency Announcement Slides**
2:45	**Application of Imaging Spectroscopy and Machine Learning to Chemometrics** *Speaker: David Williams, EPA ORD Center for Environmental Measurement and Modeling*
3:10	**Overview of NIEHS Projects Applying Machine Learning to Support Remediation Decisions** *Speaker: Heather Henry, NIEHS Superfund Research Program*
3:20	**Discussion and Concluding Remarks** *Moderator: Jean P. Pabon, DOE*
3:45	**Adjourn**