

2024 Laboratory Directed Research and Development Most Valuable Project

Savannah River National Laboratory awarded the 2024 Laboratory Directed Research and Development Most Valuable Project to Joseph Mannion and his team for their work on “Comprehensive Chemical Fingerprinting by Multidimensional GC and Supervised Machine Learning.” By leveraging advances in modern machine-learning-based data analysis strategies and untargeted analytical methods for organic analysis, Mannion and his team helped to advance SRNL’s capability to characterize complex emission profiles within the atmosphere.

The LDRD MVP is awarded annually and recognizes the SRNL LDRD project that generated the highest return on investment during the previous five-year period. Mannion’s project continues to accumulate a remarkable return on investment, including:

- \$7.8 million in follow-on projects.
- One SRNL copyright for the team’s GCxGC Preprocessing and Analysis tool published on Comprehensive R Archive Network.
- Adding five new employees.

https://www.srnl.gov/srnl_news/comprehensive-chemical-fingerprinting-by-multidimensional-gc-and-supervised-machine-learning-named-2024-laboratory-directed-research-and-development-most-valuable-project/



SRNL Laboratory Director Vahid Majidi (right) presents Joseph Mannion with the LDRD MVP Award.

SRNL Scientists Among American Chemical Society Heroes of Chemistry



An aerial view of the Salt Waste Processing Facility at the Savannah River Site.

Scientists from the U.S. Department of Energy Office of Environmental Management were distinguished as “Heroes of Chemistry” for making the world better through their effort, ingenuity, creativity and perseverance. The American Chemical Society recognized a team representing Savannah River Mission Completion, SRNL, Argonne National Laboratory, Oak Ridge National Laboratory, and the Department of Energy for the integrated effort in developing and deploying a first-of-its-kind separations chemistry that is remediating millions of gallons of radioactive waste through Savannah River Site’s Salt Waste Processing Facility.

The ACS Heroes of Chemistry award recognizes the role of industrial chemical scientists and their companies in developing successful commercialized products embedded with chemistry for the benefit of humankind.

<https://www.energy.gov/em/articles/heroes-honored-groundbreaking-science-srs-tank-waste-cleanup>

SRNL Researcher Confirmed as Member of the Defense Nuclear Facilities Safety Board



SRNL Researcher
Patricia L. Lee, Ph.D.

The U.S. Senate confirmed SRNL researcher Patricia L. Lee, Ph.D., to be a member of the Defense Nuclear Facilities Safety Board. Lee’s extensive career spans more than three decades working at SRNL and the Centers for Disease Control and Prevention. She served on a variety of technical, non-technical and community affiliated boards. Lee holds a doctorate in nuclear engineering/health physics and a Master of Science in health physics from the Georgia Institute of

Technology, a Master of Science in physics from Clark Atlanta University, and a Bachelor of Science in physics from Lincoln University.

<https://www.dnfsb.gov/sites/default/files/document/30896/Confirmation%20Press%20Release-Dr.%20Patricia%20Lee%2007.15.2024.pdf>

SRNL and SC Nexus Partners Advance Cyber-Secure Grid Resilience Technologies

SRNL is working with SC Nexus for Advanced Resilient Energy partners to further develop South Carolina’s energy future and economic competitiveness by advancing cyber-secure grid resilience technologies. SRNL will lead a Grid Enabled Cyber Operations Range project, which will establish a cyber testing range for grid connected equipment, with both grid operator training and equipment testing benefits. The project is part of the U.S. Department of Commerce’s Economic Development Administration Tech Hubs program, which is designed to scale up the production of critical technologies, create jobs in innovative industries, and strengthen U.S. economic competitiveness and national security.



SC NEXUS

<https://governor.sc.gov/news/2024-07/sc-nexus-one-12-tech-hubs-receive-millions-federal-funding>

SRNL Wearable Robotics Team Demonstrates Devices at Hanford



The Ironhand device being used to assist with drilling.

Savannah River National Laboratory's Wearable Robotics Team travelled to the Department of Energy Hanford Site in Washington to demonstrate and market wearable safety devices.

The primary device that SRNL showcased was the Ironhand device. The Ironhand device assists the fingers with repetitive, often difficult tactile manipulation. The team demonstrated how the device works and how it can provide assistance with a broad range of tasks typically encountered at DOE sites.

SRNL's visit included an extensive tour of Pacific Northwest National Laboratory. Industrial hygienists from several national labs and departments at PNNL were briefed on the use of the devices and their potential benefits.

https://www.srnl.gov/srnl_news/srnl-wearable-robotics-team-demonstrates-devices-at-doe-sites/

SRNL Intern Research Poster Session

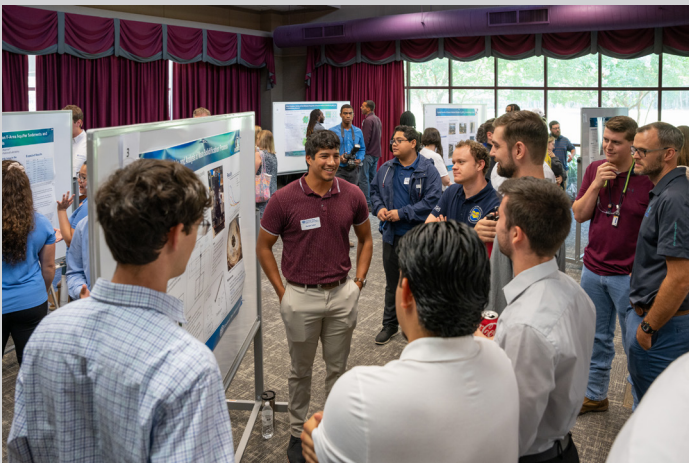
SRNL hosted its annual Summer Intern Research Poster Session at the Applied Research Center in Aiken, South Carolina. The poster session provided an opportunity for summer interns to showcase research they completed during their summer internship.

This year SRNL hosted the largest group of summer interns in its history – more than 80 interns representing 34 universities across the country and a variety of academic disciplines.



(Top photo) Kinalya Hughes, from University of South Carolina, presents her research poster, "High and Low Activity Residue Characterization System Phase II."

(Bottom photo) Austin Salas, from New Mexico State University, presents his research poster, "Design, Assembly, and Analysis of Waste Solidification Process."



Advanced Long Term Environmental Monitoring Systems Project Featured on SRNL Website

A new section of the SRNL website highlights work by SRNL researchers to successfully develop, implement and deploy a new approach for robust monitoring of residual contaminants at groundwater sites. The ALTEMIS approach includes incorporating in situ, real-time early warning systems, deploying spatially integrative monitoring methods, and developing modeling approaches to improve the success and quality of monitoring, while reducing overall cost.

<https://www.srnl.gov/research-areas/environmental-and-legacy-management/groundwater-soil-remediation/about-altemis/>



Real-time sensor in Savannah River Site F-Area.

SRNL in the Community

SRNL Night at SRP Park

Join SRNL for an evening of GreenJackets baseball Aug. 30, 7 p.m. at SRP Park, North Augusta, South Carolina, as SRNL continues to celebrate its 20th anniversary of being designated as a Department of Energy national laboratory. Laboratory Director Vahid Majidi will throw out the first pitch of what will surely be an exciting baseball game between the Augusta GreenJackets and Columbia Fireflies.

<https://www.milb.com/augusta>

