OPPORTUNITIES
Events current at time of publication. Have a virtual resource or event to share? Email us!

- November 13-17 – RemPlex: Global Summit on Environmental Remediation
- November 16-17 – Innovation Summit for Preparedness & Resilience (InSPIRE)
- November 28-30 – Defense TechConnect Summit & Expo, Resilience Week 2023
- December 4/11 – Deadline to apply for Virtual Reality Training Development for Law Enforcement
- January 9-12 – Consumer Electronic Show
- April 2-4 – Partners in Emergency Preparedness

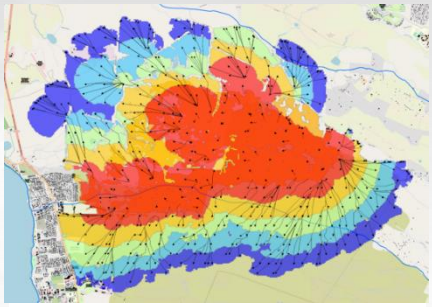
CONTACT
Want to know more? Visit us at pnnl.gov/projects/nwrtc. Contact the NWRTC with questions and comments at nwrtc@pnnl.gov.

AROUND THE REGION IN HOMELAND SECURITY

The Northwest Regional Technology Center (NWRTC) is a virtual resource center, operated by Pacific Northwest National Laboratory (PNNL), to support regional preparedness, resilience, response, and recovery. The center enables homeland security solutions for emergency responder communities and federal, state, and local stakeholders in the Northwest.

ARTIFICIAL INTELLIGENCE AIDES DISASTER RESPONSE

While talk about artificial intelligence (AI) can sometimes sound like science fiction, researchers at PNNL are using AI techniques to predict and plan for emergencies, such as wildfires and hurricanes, and to help respond and recover from them as quickly as possible.



RADR fire-spread forecast model during the Maui wildfires

PNNL's Rapid Analytics for Disaster Response (RADR) tool provides situational awareness and damage assessments within hours of a natural disaster or other emergency. RADR combines image-capturing technology, AI, and cloud computing to assess damage and predict risks.

"We are enhancing our tools and algorithms to better understand different kinds of hazards and impacts, like fuel conditions, damage to power lines, or changes in the landscape. We get the most current picture of what's going on and make that information available to help first responders with decision-making," said Andre Coleman, data scientist.

RADR has been used in hundreds of events to assist emergency support functions, energy providers, and state and local governments. This summer, RADR was used to analyze flooding after Ukraine's Kakhovka Dam was breached and to aid response and recovery efforts during and after the tragic Maui wildfires.

Coleman recently showcased RADR capabilities in "Automated Modeling and Analytics for Fire Resiliency" at the U.S. Fire Administrator's Summit on Fire Prevention and Control 2023. Visit the event website or see the PNNL Director's Column to learn more.

SECURING THE FOOD PIPELINE FROM CYBERATTACKS

Has the same technology designed to improve agriculture and food production created potential risk for cyberattacks?

The Food and Agriculture Risk Modeling (FARM) project, led by PNNL's Mary Lancaster, is the first investigation into cybersecurity vulnerabilities of an increasingly smart food and agriculture sector for the Department of Homeland Security (DHS).

"This is a first attempt at trying to characterize how big and where those vulnerabilities are, and the impacts if something goes wrong," said Lancaster.

While the future of farming continues to be defined, FARM is proactively identifying the potential vulnerabilities within smart technology systems and calculating the consequences of successful cyberattacks to the economy, animals, humans, and the environment—from financial losses to contamination of food and even death.

"After COVID-19, the world started paying more attention to how animals, plants, and human health are related," said Lauren Charles, FARM project manager and veterinarian. "The project uses a One Health approach, aiming to secure the health of agricultural animals and crop plants, which directly impacts the health of humans and their shared environments."

Read the web feature to learn more.

CELEBRATING 75 YEARS OF SERVICE

In October, the National Urban Security Technology Laboratory (NUSTL) celebrated 75 years of service advancing first responder technology. Within the DHS Science and Technology Directorate (S&T), NUSTL is a federal laboratory for first responder technology testing and evaluation. NUSTL works side-by-side with the nation's first responders to effectively plan and execute tests, evaluations, and assessments of existing and emerging technologies. Established in 1947, NUSTL provides the first responder community with services, products, and tools to prevent, protect against, mitigate, respond to, and recover from homeland security threats and events.

PNNL has collaborated with NUSTL on numerous occasions over the years, joining in its efforts to provide the emergency response community with assessments and validations of critical equipment to inform procurement decisions. PNNL scientists and engineers have served as subject matter experts and facilitators for these assessments as part of the System Assessment and Validation for Emergency Responders (SAVER) program. Previous efforts focused on respiratory protection technologies, physiological monitoring systems, Raman spectrometers, and field-portable instruments. This year, the team also supported the publication of the TechNote "AI-Facilitated Emergency Medical Services Call Center Software."

Read more in the DHS S&T news room.

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