NWRTC
Northwest Regional
Technology Center
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Pacific Northwest
NATIONAL LABORATORY

OPPORTUNITIES

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

- October 9-12 – National Emergency Management Association 2025 Annual Forum
- October 18-21 – International Association of Chiefs of Police Annual Conference
- October 29-30 – Partners in Emergency Preparedness
- November 14-20 – International Association of Emergency Managers Annual Conference
- November 23-26 – Texas EMS Conference

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), that supports 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.

SUMMIT HIGHLIGHTS TECH FOR HOMELAND SECURITY

Advances in artificial intelligence (AI), advanced imaging, and cybersecurity are changing the fight against evolving threats. Researchers from PNNL shared how their science and technology are enhancing homeland security at the Department of Homeland Security (DHS) Research, Development, Test, and Evaluation Summit, held virtually in August 2025.

During the event, experts at PNNL participated on panels and presented on the following subjects:

- Using foresight processes to understand scientific challenges and opportunities likely to face the nation.
- Benefits of partnering with national laboratories, with representatives from PNNL along with Argonne, Idaho, Sandia, and Brookhaven national laboratories.
- AI and machine vision for X-ray cargo screening for border security.
- How a tool called Cache is used in the mission to counter transnational organized crime.
- Automating cyber red teaming via large language models, including a framework to mitigate new cyber threats against critical infrastructure.
- Efforts to automate cyber defense by leveraging the Control Environment Laboratory Resource digital twins and adversary emulators for streamlined threat, techniques, and procedures testing.

The three-day event featured subject matter experts presenting on more than 60 diverse topics, delivering insightful and informative insights to the DHS and national laboratory participants alike. Read the PNNL article to learn more.

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REPORTS GUIDE TECH CHOICES FOR RESPONDERS

Two new publications, developed in collaboration between the National Urban Security Technology Laboratory and PNNL, provide emergency response agencies with critical insights into commercially available unmanned ground vehicles used for hazardous materials response, surveillance, reconnaissance, search and rescue, and payload transport.

The reports are available on the DHS Science and Technology Directorate System Assessment and Validation for Emergency Responder website. The market survey identifies 22 products, with detailed comparisons of technical specifications, capabilities, and use cases. The focus group report captures feedback from responders across the United States to establish procurement criteria and assessment priorities.

Read the PNNL article to learn more.

COAST GUARD CYBER TEAM TRAINS WITH MARITIME PLATFORM

PNNL recently hosted a training exercise that immersed the U.S. Coast Guard 2013 Cyber Protection Team (CPT) in a lifelike simulation of a cyberattack on a U.S. port terminal.

The exercise featured PNNL's maritime platform, designed to replicate real-world seaport operations at a small scale. The platform is one of five jointly developed and operated by PNNL and the Cybersecurity and Infrastructure Security Agency as part of the Control Environment Laboratory Resource.

The CPT exercise used the maritime platform to immerse CPT members in a simulation of a multistage cyberattack on a U.S. container terminal. CPT members worked together to detect, contain, and respond to the simulated attack in real time, including identifying how attackers gained access to the terminal's operating system and developing mitigation strategies.

To learn more, watch this video and read the PNNL article.

PANEL HIGHLIGHTS AI FOR FIRST RESPONDERS

At the recent Texas Department of Emergency Management (TDEM) Annual Conference, a panel of emergency managers, researchers, and industry representatives explored the intersection of AI, first responders, and emergency management, and the opportunities and challenges that come with it.

"It is important that PNNL and other national laboratories are engaged with the community to understand what the real needs are and provide information on the tools in development to meet those needs," said panelist and PNNL Systems Engineer Jonathan Barr. "This ensures the work we're doing at the Lab can be adopted or deployed for operational impact in this community."

The TDEM conference is one of the largest of its type in the country, focused on fostering innovation, collaboration, and knowledge-sharing in emergency management and public safety. Barr also had the opportunity to share research he has been conducting with Alex Hagen, PNNL data scientist, that was recently featured in "Opportunities for AI in Emergency Management" in the *Domestic Preparedness Journal*.

PNNL's involvement at the TDEM Conference highlights its commitment to advancements in emergency management through AI, backed by deep expertise and ethical governance in AI systems development. Read the PNNL staff accomplishment to learn more.

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