



NWRTC

Northwest Regional
Technology Center
@ PNNL



OPPORTUNITIES

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

- October 3-5 – [Annual Oregon Emergency Management Association Conference](#)
- October 14-17 – [International Association of Chiefs of Police Annual Conference and Exposition](#)
- November 1-2 – [2023 National Summit on K-12 School Safety and Security](#)
- November 2 – [PISCES 5th Annual Academic Workshop and 27th Colloquium for Information System Security Education](#)
- November 3-9 – [International Association of Emergency Managers Annual 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), 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.

RESEARCH TO EXPLORE FUTURE OF EMERGENCY MANAGEMENT

The Department of Homeland Security (DHS) [Science and Technology Directorate](#) (S&T) announced the award of \$1.67 million to PNNL to conduct research on strengthening and reimagining the future emergency response structure. Tactical actions will focus on advancing next-generation emergency operation centers (EOCs); supporting state, local, tribal, and territorial emergency managers to enhance communication and coordination; improving response capabilities during emergencies; and aiming to reduce societal and economic costs of disasters.

“Emergency managers play a crucial role in mitigating multiple types of casualties and economic losses, while grappling with the daunting task of safeguarding their communities against unprecedented and escalating threats, ranging from severe weather events to cyber-attacks on our critical infrastructure,” said Dr. Dimitri Kusnezov, DHS Under Secretary for Science and Technology. “This research is aimed at providing local and state emergency managers with scientific advancements and technologies, empowering them to adapt and scale their capabilities for the challenges of tomorrow.”

S&T and PNNL will work with emergency management practitioners, technologists, futurists, and others to develop concepts, requirements, and vision for next-generation EOCs. The research will consider emerging innovations in areas such as artificial intelligence, geospatial intelligence, machine learning, data analytics, and decision aids, to equip and support emergency managers for the future.

To learn more, see the [DHS news release](#).



STRENGTHENING DEFENSES AGAINST CYBERATTACKS

PNNL scientists have developed a better way to recognize a common Internet attack, improving detection by 90 percent compared to current methods.



The new technique works by keeping a watchful eye over ever-changing traffic patterns on the Internet. The findings were presented by PNNL scientist [Omer Subasi](#) at the [IEEE International Conference on Cyber Security and Resilience](#). In their work, the scientists modified the playbook most commonly used to detect denial-of-service attacks, where perpetrators try to shut down a website by bombarding it with requests. Motives vary: Attackers might hold a website for ransom. Or their aim might be to disrupt businesses or users.

Looking forward, the team is investigating how the buildout of 5G networking and the booming Internet of Things landscape will have an impact on denial-of-service attacks. Read the [PNNL news release](#) to learn more.

PANEL HIGHLIGHTS TOOLS FOR CRITICAL INFRASTRUCTURE RESILIENCE

At the National Homeland Security Conference in Chicago, PNNL researchers joined the DHS Cybersecurity and Infrastructure Security Agency (CISA) in sharing the latest modeling and operational tools aiding response.

The panel presentation, titled “Collaborative Research and Development of Operational Tools Developed by

CISA to Address Critical Infrastructure Resiliency,” highlighted PNNL’s work being done on behalf of the [National Infrastructure Simulation and Analysis Center \(NISAC\)](#). Panel participants included PNNL’s Brent Daniel, Xue Li, and moderator Krystal Ayala alongside Merideth Secor, NISAC sector chief, and Dr. Jason Reinhardt from Sandia National Laboratories.

“Critical infrastructure represents a complicated system of systems. Through modeling and simulations, we can better understand the interdependencies of those systems and their assets and how their disruption could impact continuity of operations in things like public health and national security,” said Daniel, PNNL NISAC principal investigator and data scientist.

Read the [PNNL web story](#) to learn more.



ROADMAP HIGHLIGHTS PATH FOR ENHANCED SECURITY SCREENINGS

The Transportation Security Administration (TSA) published its [Open Architecture Roadmap](#) that defines a long-term strategy to enhance screening capabilities. The roadmap will drive benefits such as improving the security screening performance, enhancing the customer experience and expanding engagement with aviation security industry partners. Read the TSA press release to [learn more](#).



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