



NWRTC

Northwest Regional
Technology Center
@PNNL



Pacific Northwest
NATIONAL LABORATORY

OPPORTUNITIES

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

- July 16-20 – [Pacific NorthWest Economic Region Annual Summit](#)
- July 24-27 – [National Homeland Security Conference](#)
- August 29-31 – [Chemical Security Summit 2023](#)
- October 3-5 – [Annual Oregon Emergency Management Association Conference](#)
- November 2 – [PISCES 5th Annual Academic Workshop and 27th Colloquium for Information System Security Education 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.

PARTNERSHIP TARGETS PORTABLE DRUG DETECTION SYSTEMS

The Department of Homeland Security (DHS) [Science and Technology Directorate \(S&T\)](#) is working with vendors and manufacturers of portable drug detectors to improve their ability to identify different narcotics, like fentanyl. Through collaboration with PNNL, DHS S&T has offered 12 original equipment manufacturers (OEMs) access to collect reference data on 17 commercial-off-the-shelf systems. In return, OEMs will provide an updated version of their libraries to first responders who use their systems.



This work is part of a two-phase Fentanyl Reference Spectra project initiated in 2020. Phase 1 included a request for information, down-selection, and collection of baseline reference data on the systems selected. Phase 2 focuses on rigorous testing and evaluation of the selected systems, equipped with upgraded detection libraries, against challenging standards.

The standards were developed by PNNL with S&T funding and published by the American Society for Testing and Materials International. In projects led by the NWRTC Deputy Director Rich Ozanich, PNNL and DHS S&T brought together more than 100 scientists, first responders, drug enforcement officials, equipment manufacturers, and others to update the detection libraries and develop the new laboratory standards. For details, see [“Complicating the Opioid Epidemic: The Many Faces of Fentanyl.”](#)

Ultimately, S&T and PNNL will publish a public report later this year detailing the results to inform the procurement of field detection systems by DHS components, first responder agencies, and other end users.

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



AI MODEL AIMS TO PLUG KEY GAP IN CYBERSECURITY READINESS

A team of scientists at PNNL, Purdue University, Carnegie Mellon University, and Boise State University have worked together to harness artificial intelligence (AI) to link resources to increase cybersecurity.

The researchers knitted together three large databases of information about computer vulnerabilities, weaknesses, and likely attack patterns. The AI-based model automatically links vulnerabilities to specific lines of attack that adversaries could use to compromise computer systems. The work should help defenders spot and prevent attacks more often and more quickly. The work is open source with a portion [available on GitHub](#). The team will release the rest of the code soon.

The new AI model uses natural language processing and supervised learning to bridge information in three separate cybersecurity databases:

- [National Vulnerability Database](#) maintained by the National Institute of Standards and Technology Information Technology Laboratory.
- [Common Weakness Enumeration database](#) maintained by MITRE Corp.
- [Common Attack Pattern Enumeration and Classification \(CAPEC™\) resource](#) maintained by MITRE.

To learn more, read the [press release](#).

PODCAST HIGHLIGHTS TECHNOLOGY ENHANCING AIRPORT SECURITY SCREENING

What if the airport security line was more like self-checkout at the grocery store? In a two-part episode of Technologically Speaking, the DHS S&T podcast, host John Verrico, S&T [Screening at Speed](#) Program Manager



Dr. John Fortune, and Robert Klueg from the DHS Transportation Security Laboratory explore the future of passenger screening. The sessions highlight new technologies that will make the screening process both quick and secure, including [next-generation, high-definition security scanning using PNNL's millimeter-wave technology](#). To learn more, tune in to the podcast: [Episode 7: 300 People Per Hour Per Lane](#) and [Episode 8: Improving the Current Fleet](#).

WEBSITE, NEWSLETTER CAPTURE SOFT TARGET PROTECTION

The DHS [Soft target Engineering to Neutralize the Threat Reality](#) (SENTRY) Center of Excellence led by Northeastern University has launched a new website and newsletter to share efforts to better secure soft targets and crowded spaces and to educate the homeland security workforce in this space.

The new digital forum connects community members and informs the public about SENTRY's work, such as the Future of School Security virtual workshop. Coordinated by PNNL and SENTRY, the workshop convened first responders; federal, state, and local government; industry technologists; school administration; and school security personnel to take a 5- to 10-year look into the future of school security. Specifically, participants envisioned how a well-structured Virtual Sentry Framework could support a safe, learning-conducive environment.

To learn more, visit <https://sentry.northeastern.edu/>.

For more information, contact Director Ann Lesperance (ann.lesperance@pnnl.gov) | (206) 528-3223) or Deputy Director Richard Ozanich (richard.ozanich@pnnl.gov) | (509) 375-4586) or visit pnnl.gov/projects/nwrtc. PNNL-SA-186834