



## NWRTC

Northwest Regional  
Technology Center  
@PNNL



### OPPORTUNITIES

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

- May 28-31 – [Texas Emergency Management Conference](#)
- July 21-25 – [33<sup>rd</sup> Pacific NorthWest Economic Region Annual Summit](#)
- July 22-25 – [2024 National Homeland Security Conference](#)
- August 4-7 – [APCO International's Conference and Expo](#)
- October 1-4 – [National Emergency Management Association Annual Forum](#)

### CONTACT

Want to know more? Visit us at [pnnl.gov/projects/nwrtc](https://pnnl.gov/projects/nwrtc). Contact the NWRTC with questions and comments at [nwrtc@pnnl.gov](mailto: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.

## COMPETITION EXPLORES AI FOR EMERGENCY MANAGEMENT

Emerging technology like artificial intelligence (AI) poses unprecedented opportunity and challenges to emergency management operations. At the “AI2EM: Harnessing AI to Manage Future Emergencies” competition, students at the University of Albany in New York State (UAlbany) shared their ideas on how AI can support emergency managers.



The university's College of Emergency Preparedness, Homeland Security and Cybersecurity, in partnership with the U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T) and PNNL, hosted a hackathon-style exercise focused on the use of AI to manage future emergencies.

“The duties of emergency managers have always been multifaceted, addressing a complex threat landscape, but the frequency and intensity of emergencies is accelerating and the diversity and number of incidents is increasing. The insights gained from events such as AI2EM let us better inform future technology planning and development,” said Dan Cotter, Executive Director, Office of Science and Engineering, DHS S&T. “I was truly impressed by the students from UAlbany and Rensselaer Polytechnic Institute, very fast to grab new concepts and apply cutting-edge technologies from their studies to develop innovative solutions. UAlbany's new College of Emergency Preparedness, Homeland Security and Cybersecurity building was a great place to hold this event.

“It was great to see students challenge each other to bring bold concepts to the table that can be applied during a real disaster,” said Jon Barr, senior systems engineer at PNNL.



Seventeen teams, totaling 90 students, were provided with an emergency scenario for which they developed AI-based solutions to improve an emergency operations center. They presented their concepts to a panel of judges from DHS, PNNL, practicing emergency managers, and UAlbany faculty. Proposed solutions underwent evaluation by a panel of judges, providing competitors with insights into the real-world challenges of emergency response.

The event was conducted as part of the [Emergency Management of Tomorrow Research Program](#), in which PNNL is collaborating with DHS S&T to better understand emergency management technology requirements to inform future technology planning and development for emergency operations centers. To learn more about the event, [see the University of Albany news story](#) and watch this [news clip](#).

## PARTNERSHIPS SHAPING EMERGENCY MANAGEMENT

At the 2024 Partners in Emergency Preparedness Conference, advisors from PNNL joined representatives from Washington State in a panel to discuss how partnerships with national laboratories are enabling science and technology solutions.

In the panel “[Partnering for the Future of Emergency Management](#),” moderator and PNNL Director of Homeland Security Programs [Ryan Eddy](#) was joined by panelists [Ann Lesperance](#), director of NWRTC; Curry Mayer, director of the Seattle Office of Emergency Management; and Robert Ezelle, director of the Washington Military Department Emergency Management Division. Panelists shared insights into technology challenges and opportunities facing their professions and highlighted current partnerships and research projects exploring the future.

“The challenges are always changing. Today we might be focused on cybersecurity and how we protect our critical infrastructure, and tomorrow it might be something different,” Ezelle said. “I appreciate that PNNL has the time and the technical expertise to give perspective on challenges we face at the state level and where science and technology might help.”



Participants also spoke about the role national laboratories, like PNNL, have in advancing first responder and emergency management solutions.

“Both new problems and new solutions have to do with technology. Unfortunately, emergency management organizations don’t typically have researchers on staff to find, vet, and understand what’s new,” said Mayer. “National laboratories are a partner that we can tap into. They have researchers, innovators, and technical experts that will sit with us and talk about what problems we’re facing and help us see and explore where we can better work with technology.”

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

## STUDENTS TACKLE FRONTIERS OF CYBERSECURITY

In a curriculum designed to provide real-world cybersecurity experience, nothing gets more real than detecting an actual threat. Students participating in the Public Infrastructure Security Cyber Education System (PISCES) program at the University of Montana recently discovered and appropriately escalated an anomaly that turned out to be a concern.

The blog post “[On The Cyber Front Line In Big Sky Country](#)” by the PISCES team highlights the “delicate dance of investigation and collaboration” that occurs when student analysts identify something suspicious in anonymized data shared from a community partner. In this recent example, students flagged the alert and worked with a PISCES oversight analyst to guide the community partner in responding to the cyber threat, which was lurking in the community’s critical infrastructure. Read the [PNNL article](#) to learn more.

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