OPPORTUNITIES

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

- May 4 – Navigation Workshop: Partnering with DHS using CRADAs
- May 17-19 – 2021 International Association of Chiefs of Police Technology Conference
- June 1 – Innovative Solutions | Start-up Spotlights (see Upcoming Webinars)
- August 15-19 – Pacific NorthWest Economic Region Annual Summit
- August 30-September 2 - National Homeland Security 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.

HELPING FEDERAL FACILITIES NAVIGATE RESILIENCE PLANNING

As climate events and security breaches increase in severity and frequency, people are beginning to realize just how devastating threats and hazards can be to a facility's water and energy supplies—and ultimately an organization's mission.

PNNL is piloting the U.S. Department of Energy (DOE) Technical Resilience Navigator (TRN), a novel web-based resilience planning tool co-developed by PNNL in partnership with the National Renewable Energy Laboratory for the Federal Energy Management Program (FEMP). The TRN helps users identify and manage risk to mission-critical infrastructure from disruptions in energy and water services.

"Billion-dollar disasters have been growing in recent years," said Julia Rotondo, project manager for distributed systems research at PNNL. "While emergency response plans can help respond to disasters, holistic planning helps anticipate, withstand, or reduce the impact from energy and water supply outages caused by a host of changing conditions."

The TRN uses a risk-informed approach to identify and address site-specific vulnerabilities, hazards, and threats to critical loads. By using the TRN, users can understand if a facility's water and energy supplies are able to sustain mission-critical functions, both under normal operations and under disrupted conditions. PNNL and other federal sites are piloting the TRN and providing feedback to FEMP to guide future improvements of the tool. See the news feature to learn more.

STUDIO UNLOCKING POTENTIAL OF 5G IN EMERGENCY RESPONSE

One year ago, Verizon announced a partnership with PNNL. Today, the partnership is exploring exciting new applications in emergency response, from bomb-disposal robots to wearable sensors for mass casualty response.

The 5G Innovation Studio allows PNNL researchers to explore how 5G can transform diverse mission areas, including port and border security, grid infrastructure engagement, and augmented human-machine teaming capabilities for first responders. With the network on-site, researchers can push the limits of 5G capabilities through their expertise in cybersecurity, artificial intelligence, augmented/virtual/mixed reality, and Internet of Things to benefit everything from chemistry and Earth sciences, to the needs of law enforcement.

"The rollout of 5G is of high interest to our federal sponsors," said Scott Godwin, mission manager of Advanced Wireless Communications at PNNL. "It presents significant opportunities for researchers to identify opportunities and risks that come with next-generation connectivity."

Read the news feature and check out this video to learn more about the 5G Innovation Studio.

PROTECTING THE GRID FROM MOTHER NATURE

As co-leader of DOE's Grid Modernization Laboratory Consortium, PNNL is one of 14 national laboratories teaming with more than 200 industry partners to better understand the interdependencies and operational constraints across the energy system during extreme conditions.

The tools being developed—many using artificial intelligence and machine learning techniques—focus on analyzing, modeling, and simulating the interconnection of the electric grid, as well as other critical energy and information systems. Equipped with this kind of situational awareness, operators can better predict, plan for, and respond to hazards. Example tools include:

- The Dynamic Contingency Analysis Tool simulates cascading failures in which generators, transmission lines, and end users become disconnected in a series of events that ultimately could spiral into a wide-area blackout.
- Rapid Analytics for Disaster Response (RAPD) software suite analyzes aerial and satellite imagery to provide detailed damage assessments in the wake of an extreme event.
- Where RAPD helps assess damage after it has happened, the Rapid Infrastructure Flood Tool helps predict where flooding might occur, allowing planners to better prepare and respond.

See the director's column or visit PNNL Available Technologies to learn more.

DHS S&T OFFERS NEW FUNDING OPPORTUNITIES

The Department of Homeland Security (DHS) Science and Technology Directorate recently released its annual announcement of the Long-Range Broad Agency Announcement. This announcement calls out 23 topics, including 11 new topics, two updated topics, and 10 enduring topics. The announcement is a standing, open invitation to scientific and technical communities to propose novel ideas that address the highest priority operational needs of DHS Components. The six research and development priority areas are securing aviation, securing borders, securing cyberspace, preventing terrorism, protecting from terrorist attacks, and managing incidents. See the news release to learn more.

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.
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