



## 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.

### UPCOMING EVENTS

- June 20, 2018 – [2018 Summit on Infrastructure](#), Denver, CO
- July 22–26, 2018 – [Pacific NorthWest Economic Region Annual Summit](#), Spokane, WA
- August 2-4, 2018 – [Community College Cybersecurity Summit](#), Portland, OR
- August 5-8, 2018 – [2018 Association of Public-Safety Communications Officials](#), Las Vegas, NV

### CONTACT

- Want to know more? Visit us on the web at <http://nwrtec.pnnl.gov>
- Contact the NWRTC with questions and comments at [nwrtec@pnnl.gov](mailto:nwrtec@pnnl.gov).

## JOINT INSTITUTES TO STRENGTHEN REGIONAL RESEARCH TIES, SHAPE FUTURE

The Northwest region is a hotbed of partnership and innovation, and that synergy just got a little stronger with the launch of several new partnerships. Three joint institutes of Washington State University (WSU) and PNNL will advance discoveries and innovation in nuclear science and technology, the advanced grid, and bioproducts:



Photo credit: Robert Hubner, WSU Photo Services.

- **Nuclear Science and Technology Institute:** Understand and control how materials evolve in radiation environments to prevent the use of illicit nuclear materials, resolve issues in nuclear waste management, and advance next-generation nuclear energy.
- **Advanced Grid Institute:** Create and implement a national-scale simulation platform and data framework to enable advanced grid controls and operations for complex power systems of the future.
- **Bioproducts Institute:** Leverage cutting-edge science, engineering, and analysis to transform engineered plants and industrial, agricultural, and municipal waste into valuable materials and chemicals.

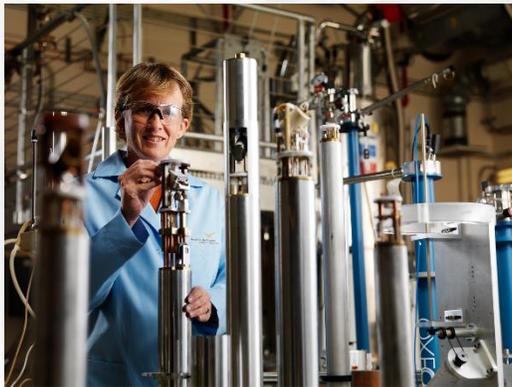
At the opening ceremony, which welcomed U.S. Senator Maria Cantwell, institute leaders noted that these areas are critical for the nation and the Northwest. The institutes will offer participants access to some of the world's most advanced analytical and characterization instrumentation. To learn more about the institutes, visit <https://thewsu-pnnlinstitutes.labworks.org>.

Earlier this year, PNNL also launched the Northwest Institute for Materials Physics, Chemistry, and Technology (or [NW IMPACT](#)) with the University of

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Washington as well as the [Precision Medicine Innovation Co-Laboratory](#), called PMedIC, with the Oregon Health and Science University.

Together, these joint institutes are enabling researchers, faculty, and students to access each other's unique expertise, specialized facilities, and state-of-the-art instrumentation to maximize scientific impact across the region.



## COMPETITION CHALLENGES NEXT GENERATION OF CYBER PROS

With an estimated 1.5 million cybersecurity professionals needed by 2019, the Department of Energy (DOE) is generating interest in the field through interactive, scenario-based events with national laboratories and university partners nationwide.

In April, nearly 200 students and three national laboratories (Argonne, Oak Ridge, and PNNL) came together in DOE's third and largest cyber defense competition to date. The coast-to-coast event tested students' cybersecurity skills in realistic challenges defending crucial infrastructure—in this scenario, an oil-and-gas rig. The students earned points for creativity, risk-taking, and learning while building their cyber defense skills against intrusions and anomalies.

"Protecting critical energy infrastructure is essential to the security of the nation, and we need more cybersecurity professionals to help protect it," wrote Devon Streit, the DOE Deputy Assistant Secretary for Infrastructure Security and Energy Restoration, in her

blog post, "[Creating a Real-World Competition to Inspire Tomorrow's Cyber Workforce.](#)"

The Oregon State University team took top honors at PNNL, while the national winner was Lewis University in Illinois. To learn more about the event or stay tuned for future events, visit <https://cyberdefense.anl.gov>.



## VIDEO HIGHLIGHTS RESILIENT TUNNEL PLUG CAPABILITIES

The U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T), through its Resilient Tunnel Plug project, is developing technologies that prevent or limit flooding in subway tunnels. A video published this spring provides an in-depth look at the technology. The project is a partnership between S&T, PNNL, West Virginia University, and ILC Dover. Watch the Resilient Tunnel Plug Video online at [https://youtu.be/9F8U0\\_VtZ-4](https://youtu.be/9F8U0_VtZ-4). To learn more, visit [the DHS S&T web site](#).



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