

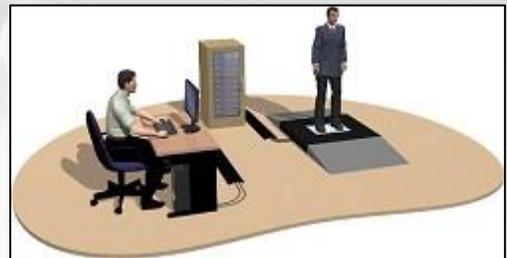


## AROUND THE REGION IN HOMELAND SECURITY

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.

### SHOE SCANNER, SELF-HEALING CEMENT, SOFTWARE GARNER R&D 100 HONORS

Five innovations developed at PNNL were bestowed six honors in the annual R&D 100 international research and development competition.



The [Millimeter-Wave Shoe Scanner](#), which uses imaging

to detect concealed objects in footwear, won in the IT/Electrical R&D 100 Award category. The technology could potentially be integrated into the floor of a body-scanning portal—passengers would not need to remove their shoes to pass through airport security, reducing screening bottlenecks.

[Rapid Analytics for Disaster Response \(RADR\)](#), software that can assess post-disaster structural damage, earned an R&D 100 Award in the Software/Services category. The RADR software suite provides utilities, energy providers, disaster managers, first responders, and others with a damage assessment capability using image analytics.



A winner in the R&D 100 Mechanical/Materials category, the [self-healing cement](#) can repair itself when cracked or damaged. The innovation also was bestowed a silver medal for the R&D 100 Award Green Tech category.

[Shear Assisted Processing and Extrusion \(ShAPE™\)](#), an energy-efficient manufacturing method that transforms and improves metals, earned an R&D 100 Award in the

Process/Prototyping category. ShAPE™ transforms metal feedstocks such as ingots, powders, or recycled scrap into higher-performing components in a single step.

### OPPORTUNITIES

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

- November 1-30 – [Infrastructure Security Month](#)
- November 6 – [Building Community Resilience 2020 Virtual Conference](#)
- November 10 – [A New Standard for Mining Industry](#), by Pacific Northwest Economic Region
- November 16-18 – [International Association of Emergency Managers Reimagined](#)
- December 2, 9, 16 – [Chemical Security Seminars](#)

### CONTACT

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



ShAPE™ uses less energy than conventional extrusion and delivers better products, enabling next-generation materials for a variety of high-tech industries.

Lastly, PNNL shared an R&D 100 Award with lead developer Los Alamos National Laboratory for the mapping software application, “[Amanzi-ATS](#): Modeling Environmental Systems across Scales.”

The awards will be presented online November 5, 12, and 19 at the R&D 100 Conference. Read more in the [press release](#).

## FEMA OPENS GRANT FOR FLOOD, RESILIENT INFRASTRUCTURE

The Federal Emergency Management Agency (FEMA) opened applications for two hazard mitigation grant programs totaling \$660 million.

The two grant programs, the Flood Mitigation Assistance grant and the Building Resilient Infrastructure and Communities grant, will provide funds to states, local communities, tribes, and territories for eligible mitigation activities. These programs allow for funding to be used on projects that will reduce future disaster losses and strengthen our nation’s ability to build a culture of preparedness.

Both grant applications will be open until January 21, 2021. Eligible applicants must apply for funding using the new [FEMA Grants Outcome \(FEMA GO\)](#). See the [press release](#) for details.



*From left: Abhishek Somani and Vishvas Chalishazar*

## TEAM WINS BEST PAPER AT RESILIENCE CONFERENCE

PNNL researchers Abhishek Somani and Vishvas Chalishazar and their partners at Idaho National Laboratory earned “Best Paper” at the international Resilience Week conference for research on the performance of [hydropower](#) related to extreme events.

The paper, “A Metric Framework for Evaluating the Resilience Contribution of Hydropower to the Grid,” contributes to building a foundation for the future power [grid](#) with an emphasis on how hydropower flexibility can provide stability and resilience in the event of rolling blackouts, hurricanes, and earthquakes. The research evaluates hydropower’s contributions to grid resilience. The paper is part of a year-long power systems analysis project funded by the U.S. Department of Energy’s [Water Power Technologies Office](#). See the [web feature](#) for details.

## INTERESTED IN LEARNING ABOUT AVAILABLE TECH?

For a limited time, PNNL is offering its entire portfolio of patented technologies on a research trial basis—at no cost. Through December 31, 2020, the standard \$1,000 fee will be waived for organizations and entrepreneurs interested in signing a nonexclusive exploratory license agreement, which means more than one organization can hold a license for the same technology. Read the [news release](#) to learn more or visit <http://availabletechnologies.pnnl.gov> to learn more about PNNL intellectual property.

For more information, contact Director Ann Lesperance at [ann.lesperance@pnnl.gov](mailto:ann.lesperance@pnnl.gov) | (206) 528-3223, or Deputy Directors Ryan Eddy at [ryan.eddy@pnnl.gov](mailto:ryan.eddy@pnnl.gov) | (509) 372-6622 and Rob Jasper at [robert.jasper@pnnl.gov](mailto:robert.jasper@pnnl.gov) | (509) 371-6430, or visit [pnnl.gov/projects/nwrtc](http://pnnl.gov/projects/nwrtc).

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