NWRTC
Northwest Regional Technology Center @PNNL

Pacific Northwest
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CONTACT

- Want to know more? Visit us at pnnl.gov/projects/nwrtc.
- Contact the NWRTC with questions and comments at nwrtc@pnnl.gov.
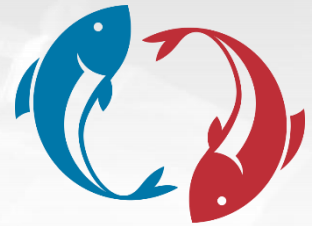
AROUND THE REGION IN HOMELAND SECURITY

NOTES FROM THE FIELD

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.

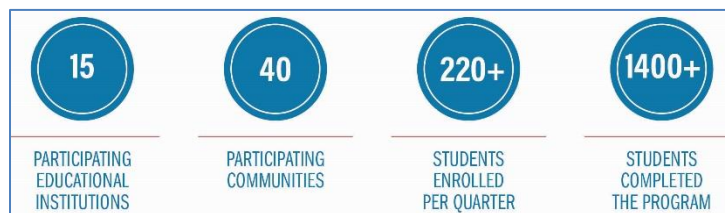## BUILDING A PIPELINE OF NEXT-GENERATION CYBER PROFESSIONALS

Cybersecurity issues represent one of the fastest growing threats to businesses, communities, and government. Unfortunately, smaller communities have limited resources and support to effectively monitor cybersecurity issues. At the same time—despite increasing job market demand for cybersecurity analysts—there is a shortage of qualified talent.
Fortunately, the Public Infrastructure Security Cyber Education System (PISCES) is here to help.

PISCES is a nonprofit organization dedicated to developing the future cybersecurity workforce through an innovative model that creates collaboration with the private sector, colleges and universities, and local governments to provide a no-cost cybersecurity monitoring effort for small public organizations.

"Through PISCES, we've built a reliable and replicable partnership and curriculum model for developing high-quality, entry-level cyber analysts. PISCES students deliver valuable monitoring to municipalities and critical infrastructure that need it while gaining the operational experience fit for the workforce," said Steve Stein, PISCES executive director.

15	40	220+	1400+
PARTICIPATING EDUCATIONAL INSTITUTIONS	PARTICIPATING COMMUNITIES	STUDENTS ENROLLED PER QUARTER	STUDENTS COMPLETED THE PROGRAM

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PISCES Founder Mike Hamilton was recently featured on the SC Magazine Cyber for Hire podcast in "Populating the Talent Pipeline through Professional Development."

PISCES began as a volunteer effort and garnered support and engagement from PNNL and the Department of Homeland Security Cybersecurity and Infrastructure Security Agency to accelerate the growth and impact of the program as it exists today. Since its founding in 2017, the program has expanded to include 15 academic institutions and 40 communities across the nation. More than 1,400 students have completed the program, with over 220 students enrolled per quarter. In 2022, the program launched a PISCES Analyst Certification to bolster students' credentials and an alumni group to sustain the program's network and information sharing beyond the academic year.

As PISCES partnerships and pipeline continue to grow, student analysts are making a difference to the communities they support. For example, a student discovered an anomaly indicating potential suspicious network activity on two different network addresses of a community partner. Upon conducting a thorough investigation, the student determined a high likelihood this communication was originating from another country. The student promptly created a case ticket and escalated the matter to a PISCES cyber analyst for verification. Upon verification, the community was immediately notified and took appropriate remediation measures. The resolution revealed that these addresses were connected to the HVAC systems responsible for regulating a building's temperature—posing a threat when outdoor temperatures often drop to 25 degrees or lower. In the wake of these types of increasing and complex attacks, the vigilance PISCES helps establish helps communities with public infrastructure protection.

Looking forward, the program is prime to continue its expansion to new academic institutions and communities.

"The cybersecurity threat will only continue to grow and with it, so will the need for more monitoring and more analysts. With adequate future resources, PISCES is striving to make this capability available across the nation," said Stein.

Academic institutions, communities, and others interested in PISCES can learn more by checking out the resources below or visiting https://pisces-intl.org/.

Academic Institutions   Students

Communities   Faculty

CALL FOR PAPERS

PISCES is accepting papers for its 5th Annual Academic Workshop to be held November 2, 2023 in conjunction with the 27th Colloquium for Information Systems Security Education Conference at Kennesaw State University in Kennesaw, GA.

The workshop aims to provide a platform for students and academics to present new research and developments in cybersecurity. Example topics include tools and techniques for cybersecurity, student engagement and learning, workforce development, and public infrastructure protection.

The deadline to submit your paper is **September 15, 2023**. For more information on preparing and submitting your paper, visit: https://pisces-intl.org/partners/cisse