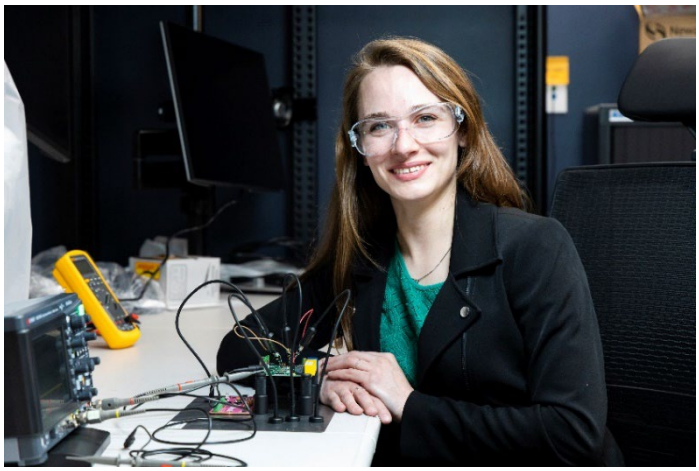
OAK RIDGE NATIONAL LABORATORY

Cyber Science Research Facility

Advancing the science of cybersecurity

ORNL's Cyber Science Research Facility provides consolidated, dedicated laboratory space for researching and advancing the science of cyber security in support of national security. The facility contains well-equipped lab spaces that form the collaborative components essential to anticipate, address, and improve the resilience of critical infrastructure from dynamic, emerging cyber threats.



CSRF Research Capabilities

Vulnerability sciences

Tools for identifying vulnerabilities in software, hardware, and complex systems

Energy and control systems security

Researching cyber-physical systems security and resilience to address risks to critical infrastructure

Embedded systems security

Conducting hardware and software forensics, supply chain analysis, and system vulnerability evaluation

Cybersecurity research exercises

Test bed with a full-scale clone of a supercomputer, deploying protection systems and testing attacks on them in a realistic environment

AI/ML-based testing and evaluation

Isolated network of HPCs to conduct large-scale cybersecurity experiments, tests, and evaluations

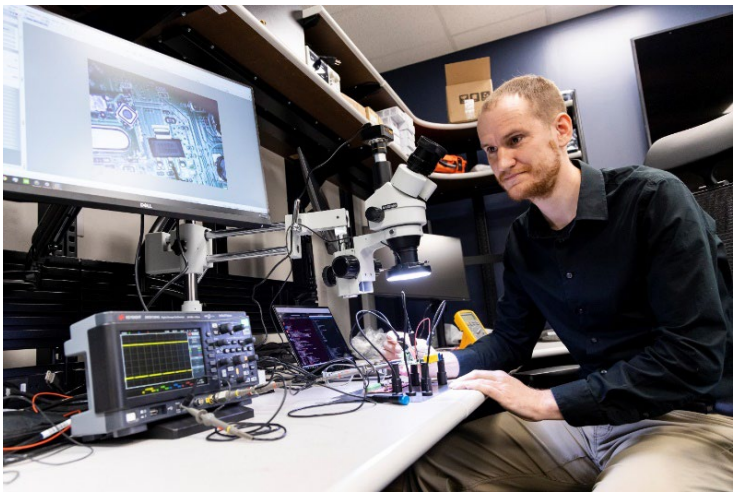
Cyber sensing and analytics

Enabling attribution and specific details of adversarial attacks to inform the most effective mitigations

Cyber Science Research Facility

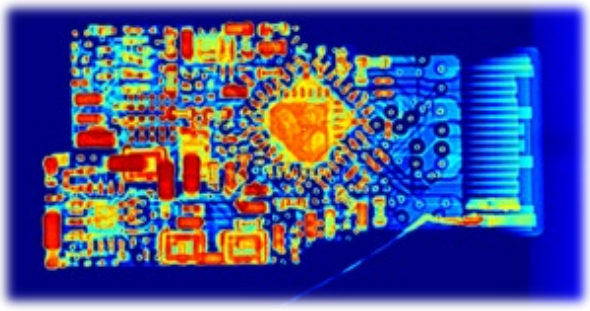
CSRF provides connectivity to all ORNL's cyber-physical research infrastructure, including the National Transportation Research Center, Distributed Energy Communications & Controls Laboratory, Grid Research Integration and Deployment Center, and Radio Frequency Anechoic Chamber.

Future expansion plans include hosting the DOE Center for Alternate Synchronization and Timing (CAST) and cybersecurity resilience research elements of the DarkNet architecture.



What's unique at CSRF?

- **10,000 ft^2 of lab spaces** dedicated to national security research
- **Embedded Systems Laboratory** with advanced reverse engineering and forensics capabilities
- **World-class equipment** to perform reverse engineering research
- **3D-printing equipment** to conduct intrusion detection research
- **Controlled-access spaces** to perform Official Use Only cyber research
- **Hot Work capabilities** with particulate mitigation systems
- **4 Server Decks** to support standalone or integrated projects
- **4 Separate networks** that are customizable to meet project goals
- **Dedicated cyber range** for enterprise network security research with emulation capabilities for networks, users, and attacks
- **Access to multi-lab facilities** to collaborate with other national labs



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