

NSF Campus Cyberinfrastructure PI and

Cybersecurity Innovation for Cyberinfrastructure PI Workshop

September 23 – 25, 2019 | Minneapolis, MN

NSF Program (either CC or CICI): CC*

Program Area: CC*DNI

Award Number: 1925747

- **PI: Matthew Ketterling**
- co-Pls: Dr. Jürgen Brune, Yuri Csapo, Michael Erickson

Project Title: CC* Network Infrastructure: Enabling Research with Mines' Underground Research Facility



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Quad Chart for:

CC* Network Infrastructure: Enabling Research with Mines' Underground Research Facility

Challenge Project Seeks to Address:

Research limited by lack of CI

- Limited WAN connectivity to large research facility
- Lack of file transfer and storage ability
- Lack of connectivity to Mines campus resources
- Limited connectivity for external partners

Deliverables:

- Robust CI for remote underground facility
- "on-campus" services for remote facility
- 10GB WAN and LAN connection to remote facility
- Wireless and wired access throughout miles of tunnels to promote and support research





Scientific Impact and Broader Impacts:

- Establish Edgar Experimental Mine as a premier underground research facility
- Expand sub-surface research
- Research and testing in a specialized environment
- Unique environment benefiting students, educator, researchers, and external partners across a variety of scientific disciplines

Metadata tags:

- Cyberinfrastructure
- Underground wireless
- Researcher engagement
- Research collaboration
- University partnerships
- Sub-surface projects