Nuclear Cybersecurity Breakout Session

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National Need
- 10 CFR 73.54
  “Protection of digital computer and communication systems and networks.”
- PPD 21
  DHS/NRC/FERC/DOE/EP A roles
  NRC Reg Guide 5.71
- NEI Guides
  NEI 08-09 & 13-10
- IAEA & NNSA
- Industry
- Other USG’s

Potential University Collaboration Areas
- Research Reactors
- Human Performance
- M&S
- CIE Curricula
- Continuing Education
- Big Data/Metrics/Risk Prioritization
- Convergence of Wireless and ICS

INL Focuses on: ICS Cybersecurity & Physical Security – RDD&D
Analyses, Designs, Tools, Skills, Methodologies, and Standards
Threats, Reverse Engineering, Assessment, Architecture, Response, Mitigation...
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#### Potential Funding Sources

- **NEUP**
  - Awards: Secure Architectures, Operator Response, RR Assessment, Vulnerability discovery
  - 2018 FOA M&S of ICS
    - [https://nsuf.inl.gov/Page/2018_cinr_foa_webinar](https://nsuf.inl.gov/Page/2018_cinr_foa_webinar)
- **NSF**
- **NRC**
- **DHS S&T**
- **Industry**
- **ONR**

#### Potential Outcomes & Impacts

- Papers
- Experimental Infrastructure
- Foundationed and Principled Researchers
- Cyber Resistant Designs
- Science-based Methods
- Prioritized Risk Acceptance

*Safe, Reliable, Cost-effective and Secure Nuclear Power, and Cradle-to-Grave control, accountability and safeguards of nuc/rad materials*