PCS Research at UMR

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The University of Missouri – Rolla

- Predominantly engineering and technology
- Departments include:
  - Electrical and Computer Engineering
  - Civil Engineering
  - Petroleum Engineering
  - Nuclear Engineering
  - Computer Science
The University of Missouri – Rolla

- We are a small university; our strength is in our inter-disciplinary research
  - Center for Critical Infrastructure Protection
  - Intelligent Systems Center
  - Center for Infrastructure Engineering System
  - Transportation Institute
- Sample studies follow
Factory Automation Lab

- 3-tiered factory automation laboratory for Supervisory, Control, and Data Acquisition (SCADA)
  - Workstations
  - Programmable Logic Controllers (PLCs)
  - Sensors
UMR Power Engineering Research

- "Incorporation of Energy Storage into FACTS Devices," (Sandia National Laboratories)
- "Fault Tolerance and Security for Power Grid Configuration with FACTS Devices, " (National Science Foundation)
- "Hybrid Interconnected Systems Laboratory Project," (Missouri Research Board)
- "Verification of Protective Device Coordination on Distribution Feeders," (Illinois Power)
Electric Power Related


Oil and Gas Pipeline Related


General: Vulnerability Analysis

Vulnerability Analysis: PCS and SCADA System Specific

General: Assurance Cases for Security


Assurance Cases for SCADA Security