DE-FOA-0001960

CLEAN ENERGY MANUFACTURING INNOVATION INSTITUTE: CYBERSECURITY IN ENERGY EFFICIENT MANUFACTURING

TEAMING PARTNER LIST

UPDATED JUNE 19, 2019

Organization Name	Contact Name	Organization Type	Area of Technical Expertise	Brief Description of Capabilities	Contact Information
Y-12 National Security Complex | Pantex Assembly Plant	Dennis B. Miller	DOE/NNSA Non-FFRDC federal facility managed and operated by Consolidated Nuclear Security, LLC (CNS)	See Brief Description of Capabilities.	Y-12/Pantex represents, among other things, the Nuclear Security Enterprise's primary nuclear and non-nuclear manufacturing and assembly resources for the manufacture and refurbishment of the nuclear deterrent. In this role, CNS managed sites have been at the nexus of cybersecurity and manufacturing, pioneering methods and approaches for securing the production shop floor and its associated supply chain of small to medium size manufacturers, for both our classified and unclassified mission areas. Our unique perspective and depth and breadth of expertise in cybersecurity for manufacturing, spanning the inception of the internet, model-based engineering, etc., makes us well suited as a collaborator for the proposed institute.	Address: Y-12 National Security Complex | Pantex Assembly Plant FM 2373 & Hwy 60 Amarillo, TX 79120 Email: Dennis.Miller@cns.doe.gov Phone: (865) 206-9661 (mob.) (865) 241-9590 (off.)
NextEnergy, Inc.	Jim Saber	501-C(3) not for profit technology accelerator	NextEnergy develops and executes technical demonstrations and pilots which support technology development and commercialization for networked SCADA and IoT based smart mobility and smart grid applications.	NextEnergy capabilities include: SCADA Operations Technical Program Management Technology Commercialization Management of a diverse network of industry partners within mobility, energy, and communications. Development of public private partnerships	Address: NextEnergy, Inc. 461 Burroughs St, Detroit, MI 48202 Email: saberj@nextenergy.org Phone: (313) 833-0100 ext 240

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Colorado State University	Steve Simske	Domestic Institution of Higher Education	Threat assessment, red-team/blue-team activity, identifying anomalies, identity and access management, mitigating distributed denial of service attacks, cryptography, educational programming and curriculum, and workforce development	CSU's capabilities include expertise in: cybersecurity in distributed systems, including energy microgrids, transportation networks, and supply chains; cyber security and cyber physical systems security; heavy vehicle security; phishing detection and privacy preserving information disclosure; next generation attribute-based access control models; additive manufacturing; microgrid technology; observation and the verification technologies; disrupting operations of illicit supply networks. CSU holds key research assets associated with the above areas, including the Cyber Center for Colorado, and a Phase II NSF IUCRC Center for Cybersecurity Analytics and Automation. CSU also offers a robust series of educational and workforce development programs associated with cybersecurity, securing automation and securing supply chains.	Address: Colorado State University, 1374 Campus Delivery, Fort Collins, CO, 80523 Email: Steve.Simske@colostate.edu Phone: 970-491-1908
The Energy Institute at Salt Lake Community College	Dr. Jennifer Saunders, Assistant Vice President	Educational Institution, Community College, 501(c)(3)	Workforce training, technical education, credentialing and curriculum development	The Energy Institute at Salt Lake Community College (SLCC) focus areas include Advanced Manufacturing, Energy Management, Energy Control Strategies, Energy Modeling, Building Automation, HVAC Energy Analysis, Energy Auditing, Energy Efficient Lighting, Energy Accounting, Solar Installation and Solar Sales. SLCC ranks among the largest community colleges in the United States with flexible course schedules and delivery modalities including online, livecast, hybrid (online + in-person labs) and accelerated courses to serve students across a wide geographical area. The Advanced Manufacturing Lab and Solar Training facility are located at SLCC's newest state-of-the-art campus, Westpointe, near the Salt Lake International Airport. Additionally, SLCC has expertise in engaging business and industry in order to inform its workforce training curriculum development work. The College has both lead and participated in state, regional and national consortiums in the development of career and technical education.	Address: 9750 S 300 W MFEC 211, Sandy UT 84070 Email: jennifer.saunders@slcc.edu Phone: 801-957-5370

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Architecture Technology Corporation	Vic Thomas	Small Business	Appliance for protecting SCADA networks; CyberRange for CyberSecurity research and education; Hands-on labs for SCADA system security training with individual and team exercises; Labs for Enterprise CyberSecurity IT training.	(1) AIID, an appliance for detecting and thwarting attacks on SCADA networks. AIID is a network appliance and is completely transparent to the rest of the SCADA system; installing AIID is minimally disruptive to plant operations. (2) CYRIN, a CyberRange for building distributed systems and networks that can be used for CyberSecurity research and education. CYRIN includes a number of "labs", which are pre-built distributed systems used to teach or experiment with different kinds of CyberSecurity threats and defenses. CYRIN SCADA systems labs incorporate CyberSecurity attacks on SCADA networks, complete with HMI and engineering workstations, SCADA servers and PLCs. CYRIN supports exercises with cooperative or adversarial (red/blue) teams. CYRIN's authoring interface makes it easy to create new systems and scenarios. **Topic Areas:** Securing Automation, Education and Workforce Development	Address: 9971 Valley View Road, Eden Prairie, MN 55344 Email: vthomas@atcorp.com Phone: 952-829-5864 x 145
Syracuse University	Young Moon	Domestic Institution of Higher Education	Cyber-Manufacturing Systems Security, Intrusion Detection of Cyber-Physical Attacks, Prevention of Cyber-Physical Attacks, Resilient Cyber-Manufacturing Systems, Sustainable Manufacturing, Renewable Energy Systems, Energy-Efficient and Intelligent Indoor Environment Systems, Supply Chain Management and Modeling, Cyber-Physical Security Education and Training	Syracuse University (SU) has expertise in cyber-manufacturing systems security including early detection of cyber-physical attacks, preventive systems from cyber intrusions, and development of resilient cyber-manufacturing systems. Since 2002, SU has provided cyber-security workshops to faculty members from all over the world and more than 80 schools have adopted the workshop exercise materials (by Dr. Kevin Du through NSF support). SU has developed a testbed specifically built for cyber-manufacturing security investigations. In addition, SU has unique strengths at the intersection of renewable energy systems and intelligent indoor environment systems. SU also has capabilities in supply chain management and modeling to support secure cyber-manufacturing systems.	Address: 263 Link Hall, Syracuse University, Syracuse, NY 13244 Email: ybmoon@syr.edu Phone: 315-443-4366