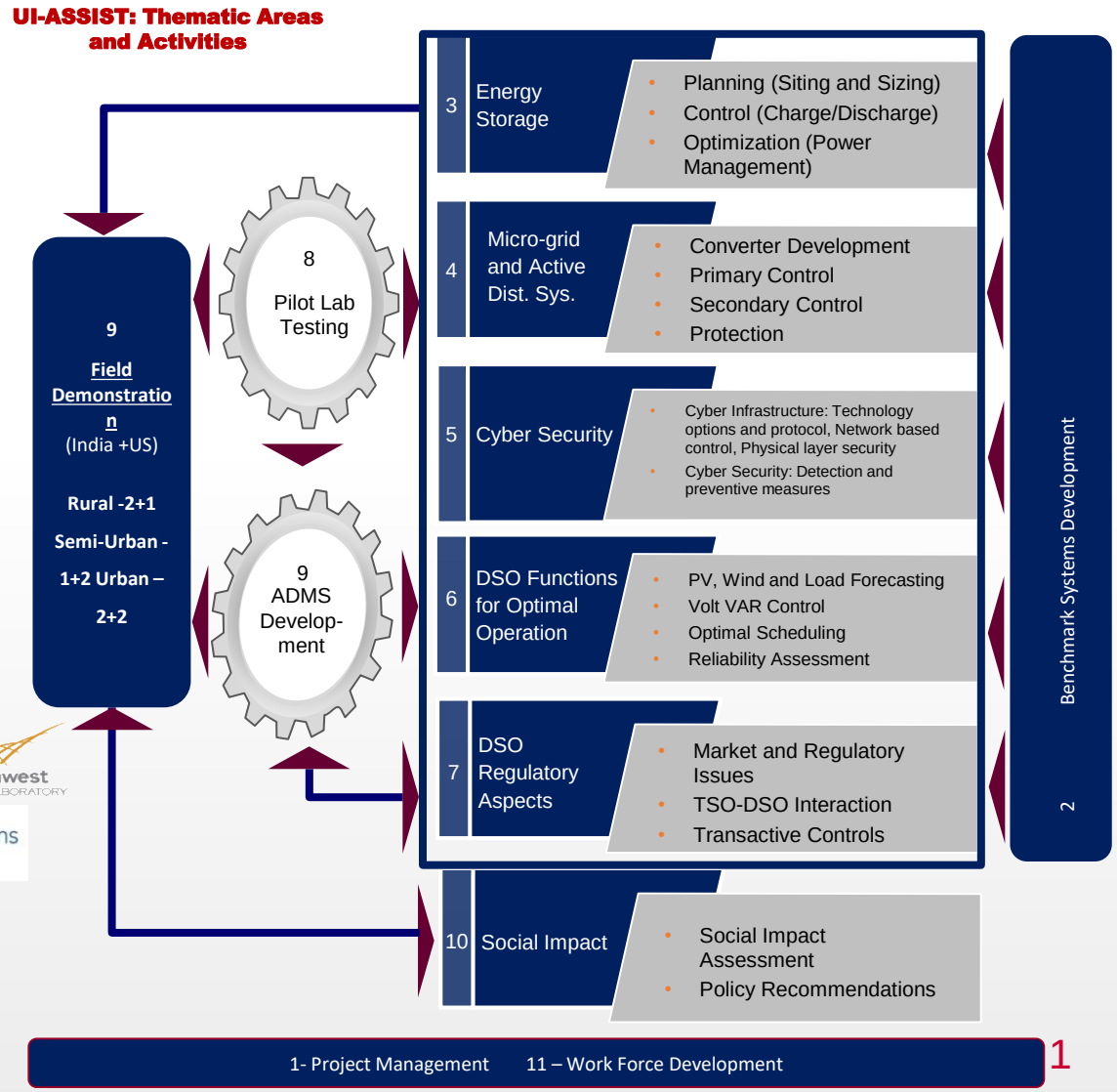
US-India Collaborative for Smart Distribution System With Storage (UI-ASSIST) UI-ASSIST (uiassist.org)

- Funded by US Department of Energy & Government of India Department of Science & Technology
- Fifteen Partners in India and Fifteen Partners in US, 2017-2023, $30M
- Project Objectives
  - To evolve *future distribution grid that will allow the continuing increase of Distributed Energy Resources (DER)* penetration towards a sustainable electricity system.
  - To develop and demonstrate the DSO functions for optimal utilization and management of DER by interfacing with DER control and microgrid control system with high penetration of energy storage.

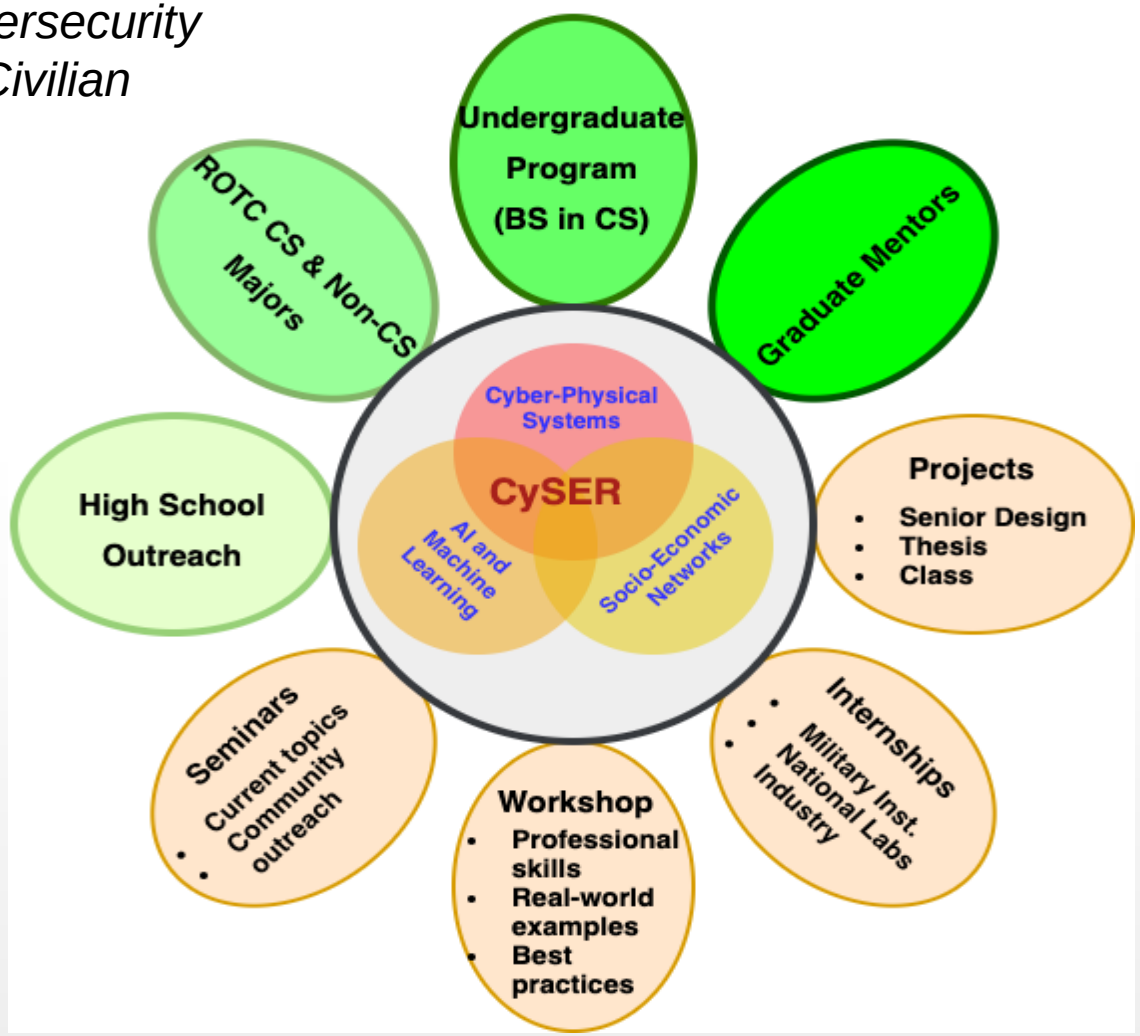


Building an Enhanced Center for Academic Excellence in Cybersecurity Knowledge, Skills & Abilities for a Military & Defense-aligned Civilian Workforce

CySER Vision

- **Directly respond to the VICEROY call**
  - **Training ROTC and DoD-aligned civilians in cybersecurity at the undergraduate and graduate level, with primary emphasis on undergraduate**
- **Build a strong consortium in the Pacific Northwest for cybersecurity education and research**
  - **CySER brings together 5 institutions with complementary strengths and diversity of populations served**
- **Position WSU to attain Center of Academic Excellence in Cyber Operations (CAE-CO) designation**
  - **Designation conferred by National Security Agency**
  - **Requirements: 10 Mandatory and 10 (out of 17) Optional Knowledge Units**

Washington State University · Montana State University · University of Idaho · CBC Columbia Basin College · CWU Central Washington University



Interdisciplinary Graduate Training Program in AI and Data Science for Complex Engineering Applications (TAIDCEA[1])

Institution: Washington State University, Pullman, WA
Type of Application: Inter-Disciplinary
Area of national need: Computer and Information Sciences (specifically Artificial Intelligence) and Engineering (specifically Electrical, Electronic, and Communications Engineering) *Degree Level*: Doctorate
Length of time degree program has been in existence: 50 years
Number of GAANN fellows requested: 6 (plus 2 through institutional cost-share)

Abstract

AI and data science are crucial enabling technologies across a range of domains, and they are center pieces for understanding complex systems. The US electric power industry is increasingly adopting machine learning and data analytics technologies to improve the reliability, resiliency, and efficiency of power systems. The intersection of the power systems and information systems technologies helps define new architectures for the electric system with enhanced ability to accommodate a range of options from distributed to central station assets. As a result, the power industry is looking for people who "speak" both data science and power engineering. Moreover, advancements in algorithms, software, and computing platforms have made AI empower and influence almost every aspect of our lives. Software engineers should not only know how to build and maintain complex software, but they also need to know how to extract knowledge from massive amounts of available data and adapt that knowledge to consider different human factors. Thus, there is huge demand for highly skilled cross-disciplinary manpower across these domains, but the talent to meet this demand is glaringly lagging behind.

To fill in this critical national need, the School of Electrical Engineering and Computer Science (EECS) at Washington State University (WSU) is seeking funds to educate and train the highest quality domestic PhD students at the intersections of AI, data science, and engineering.

The specific objectives of this program are: (i) To increase the number of domestic PhD students focusing on the application of AI and data science for use in complex engineering applications;
(ii) actively recruit, mentor and retain students from underrepresented groups in Engineering and Computer Science, including women, black, and Hispanic students; (iii) provide excellent academic experiences to GAANN fellows through integrated mentoring and internship opportunities at national labs, industry settings and technology/community alliances.
Having strong and thriving programs in power engineering, machine learning and AI, and software engineering, EECS is ideally situated to provide opportunities for this interdisciplinary education and to attract and retain underrepresented groups. The school currently has more than 200 doctoral students; several have won prestigious fellowships and awards, including the National Academies of Engineering, Science and Medicine Award. Additionally, over the last 5 years the school has graduated a higher percentage of women PhDs in Computer Science than the US national average, and is a strong advocate for blacks in AI and Engineering. This program will expand up on these successful efforts to recruit outstanding candidates from underrepresented groups and train and mentor them for successful careers in academia and industry.

[1] Pronounced: "tide sea"

New EE Faculty Positions – 3 positions

The School of Electrical Engineering and Computer Science (EECS) at Washington State University (WSU) in Pullman, WA invites applications for multiple permanent full-time tenured/tenure-track faculty positions in Electrical Engineering at the assistant/associate/full professor level.

Although all areas of electrical engineering will be considered, research emphasis will be on the following areas: power systems, power electronics, cybersecurity for power systems, and data analytics, machine learning, and artificial intelligence applied to power.