



**Remotely Accessible Hardware Labs for Education and Research
in Power Electronics, Power Systems, and Electric Drives
Virtual Workshop**



May 20, 2022

PROGRAM (All Times are Central Time)

- 9:00 am Welcome: The Importance of Laboratories in Education and Research
- Randall Victora**, Professor and Head of Department of Electrical and Computer Engineering, University of Minnesota
- Aranya Chakraborty**, Program Director, National Science Foundation
- Lynn J. Petersen**, CAPT USN(Ret) – Program Officer, Office of Naval Research
- Al Romig** – Executive Officer, National Academy of Engineering
- 10:30 am ONR-funded Courses and Laboratories at CUSP (<https://cusp.umn.edu>) – Overview of 19 courses and laboratories – Prof. Ned Mohan, UMN
- As an example, the material for one CUSP course, “Power Generation, Operation & Control” – Prof. Bruce Wollenberg, UMN
- 11:00 am Open Discussion: Value and accessibility of the CUSP laboratories
- Chaired by - Professor **Saifur Rahman**, 2022 IEEE President-Elect, with the following panelists:
 - o Prof. Prasad Enjeti – Texas A&M
 - o Prof. Bill Robbins, UMN, and
 - o Dr. Manikanta Pallantla – TI-Dallas who, as a TA, transitioned the lab mid-semester from in-person to online due to covid
- Lunchbreak
- 1:00 pm **Demonstration** of online labs for the following courses by Prof. Siddharth Raju, and David Maiden Mueller
- Freshman and Sophomore-levels** (also in high schools and Community Colleges as a pipeline to ECE and STEM)
- Solutions to Climate Crisis (with no prerequisites)
 - Sustainable Electricity (with the pre-requisite of Engineering Physics)
- Senior-level**
- Power Electronics
 - Electric Drives
- Graduate-level**
- Power Electronics
 - Electric Drives
- Power Systems Lab using PSS®E and Python** - Dr. Swaroop Guggilam of EPRI
- To accompany the first course on Power Systems to calculate Line Constants, and modeling IBRs, HVDC, STATCOM and OPF

Please click [here](#) to register.