



NSF-Sponsored Faculty/Industry Workshop

(Approved by the NAE; Organized by the University of Minnesota)

Reinventing Electric Power Curriculum with Sustainability Focus

June 15-17, 2017 [University of Minnesota](#), Minneapolis, Minnesota

Workshop Objectives:

Discuss the Electric Power/Energy Systems Curriculum with emphasis on Sustainability

- Describe and disseminate undergraduate/graduate curriculum developed through ONR funding
- Grand challenge on inspiring and training students to solve global problems in sustainability
- Discuss challenges facing ECE departments in identifying national needs and attracting students
- Create a large and vibrant community of teaching/learning scholars

Friday June 16, 2017

- 8:00-10:15 Welcome Remarks and Importance of Reform in Electric Energy Education:
- [Prof. Randall Victora](#), Head of ECE Dept (UMN)
 - [Dr. Al Romig](#), Executive Officer, National Academy of Engineering ([NAE](#))
 - [CAPT Lynn Petersen](#), Program Officer, Office of Naval Research ([ONR](#))
 - [Dr. Anthony Kuh](#), Program Director, National Science Foundation ([NSF](#))
 - [Dr. Gavin Schmidt](#) on Climate Change; Director of [NASA Goddard](#) Institute for Space Studies
- 10:15-10:45 Networking; coffee
- 10:45-11:30 Power-Related CUSP™ Curriculum - [Ned Mohan](#), University of Minnesota
- 11:30-1:00 p.m. Lunch (provided)
- Working Group Meeting of Engineering Deans, ECE Dept Heads, and Industry/Utility Representatives (Chair: [Dr. Sarah Rajala](#), Dean of Engineering, Iowa State University):
“What are the pressing issues facing education in “Electric Power” and can a holistic and realistic (beyond-the-hype) view of it meet some of the challenges?”
- 1:00-1:30 UMN Driving Tomorrow Research Initiatives – UMN Provost [Prof. Karen Hanson](#)
- 1:30-3:00 Session on Success with Distance Learning:
- Online Courses - [Dr. Deanna Raineri](#), VP of Partnerships at [Coursera](#)
 - Online Undergraduate Engineering Education - [Prof. Stephen M. Phillips](#), Director of the School of ECEE - Arizona State University
 - Online Master's Degree in Computer Science at Georgia Tech - [Dr. Nelson Baker](#), Dean of Professional Education, Georgia Tech
- 3:00-3:30 Networking; refreshments
- 3:30-4:00 How much renewables can our grid take? – [Mark Lauby](#), Senior Vice President and Chief Reliability Officer, North American Electric Reliability Corporation ([NERC](#))
- 4:00-5:00 Report from the Chair of the Working Group Dr. Rajala and Open Discussion
- 5:00-6:00 Networking; Social Hour
- 6:00-7:00 Banquet
- 7:00-8:00 Banquet Presentation: The Nature of the Cosmos: *There is No Planet B!* - [Prof. Chick Woodward](#), Professor, Minnesota Institute for Astrophysics, UMN

Saturday June 17, 2017

8:00-11:00

1. Demonstration of experiments in Power Electronics and Electric Drives Laboratories
2. Demos prepared for the course EE1701 “Energy, Environment and Society” described on <http://z.umn.edu/ee1701> , [to be promoted in high schools](#).
3. Demonstration of an “Extremely Low-Cost Embedded Controller, Programmed through a Model-Based Simulation Platform,” being developed through our ONR Funding, and
4. Research Lab on grid interface of utility-scale renewables (wind and solar) and storage

Accommodations

A block of rooms has been reserved at a hotel (<http://www.commonshotel.com/>) adjacent to the event location. Our NSF grant will pay for two nights of lodging of the faculty in the U.S. universities: Engineering Deans, ECE Department Heads, and “Power Faculty” (tenured and tenure-track), on a first-come basis. Participants are responsible for making their own reservation with the hotel ([click](#) here); we will supply names of the eligible faculty to the hotel so they are not charged for these two nights of lodging.

Industry and Other Participants

The procedure for industry and other participants to register is the same as that for the faculty. Please note that our grant will not be able to cover your lodging.

Registration: This workshop is open to everyone interested in this field. The Registration Fee is \$195 through <http://z.umn.edu/nsfenergy2017>.

Contact: Prof. Ned Mohan (www.ece.umn.edu/~mohan); Email: mohan@umn.edu

Location: U of M campus in Minneapolis (<http://mac-events.org/rooms/memorial.html>)

Transit:

Transit from the MSP airport or any of the hotels along the Light Rail Line:

<http://www.metrotransit.org> (The train stop is only a short distance from the workshop venue.)

