**Workshop Agenda**

**Friday, Oct 21, 2022**

8:00 am  Welcome and the Urgency of this topic:
Amy Klobuchar (recoded video) – US Senator from Minnesota, US Senate
Andrew Alleyne – Dean, College of Science and Engineering, Univ. of Minnesota
Aranya Chakrabortty - Program Director, National Science Foundation
Lynn J. Petersen, CAPT USN(Ret) – Program Officer, Office of Naval Research (ONR)
Guru Madhavan – Senior Director of programs and Senior Scholar, National Academy of Engineering
Mingyan Liu – Chair of ECE, University of Michigan-Ann Arbor, and Treasurer, ECE Department Heads Association (ECEDHA)

9:45 am  Workforce needed for the country to benefit from the opportunities offered by new federal budget appropriations – Isik Kizilyalli, Associate Director, ARPA-E

10:15 am  Coffee break

10:30 am  Enrollment in EE Program at Howard University – Ahmed Rubaai, Professor and Chair, Department of Electrical Engineering and Computer Science, Howard University

10:50 am  Role of Community and Technical Colleges – Larry Lundblad, Executive Director of Workforce and Economic Development, Minnesota State Colleges, and Universities

11:10 am  Creating a Pipeline of Students from High Schools into Power Engineering – Joe Gothard, Superintendent and Anna Morawiecki, Career Pathways Supervisor, Saint Paul Public Schools

11:30 am  Lunch; Luncheon speaker on “The Mission of Public Land Grant Universities”: David McMillan, Chancellor, University of Minnesota, Duluth

12:30 pm  Proposed Multiple Pathways to a Robust Power Engineering Education (please see the figure on the previous page) – UMN Team*
- Pipeline Course and Lab that can be taught in High Schools
- Proposed Three Courses and Labs that Community and Technical Colleges can offer for a Certificate in “Power” Engineering
- Overview of Courses and Labs for BS/MS/PhD degrees to be discussed on Saturday

1:30 pm  Lightning Talks: Combining Personal Passion with Secure and Financially Rewarding Careers in “Power” Engineering
- Electric Utilities –
  - John Reinhart, Great River Energy
- Developing Renewables/Storage Plants
  - Jim Greer, ACES Delta (aces-delta.com)
  - Anushree Ramanath, Form Energy
- Future of EVs: Jukka Kukkonen, Author: 12 EV Trends to Watch

3:00 pm  Coffee break
3:15 pm  Lightning Talks (Continued........)
- Automotive: EVs, EV Charging – Kartik Iyer, Tesla
- Industrial Manufacturing –
  o Brad Palmer, Cummins Power Generation
  o Brij Singh, John Deere
  o Mukul Rastogi, Siemens USA
- Microchip-related manufacturing – Sameer Shekhar, Intel
- Defense – Roger Brewer, Lockheed Martin

5:00 pm  Open Discussion and Developing Action Items
6:00 pm  Poster Presentations along with Hearty(!) Appetizers

Saturday, Oct 22, 2022
8:30 am  Descriptions and Demonstration of courses (here) and online labs (here, here) by UMN Team*:
  **Freshman and Sophomore-level** (also in high schools and Community Colleges)
  - Solutions to Climate Crisis (no prerequisites)
  - Sustainable Electricity Supply (prerequisite: Physics)
  **Senior- and Graduate-level**
  - Power Systems
  - Power Electronics
  - Electric Machines/Drives and their Control
  - Energy Conversion and Storage

11:30 am  Adjourn

*UMN Team: Ned Mohan, Bill Robbins, Siddharth Raju, David Maiden Mueller, Madhukar Rao Airineni, Swaroop Guggilam

Registration: Please click here to register. There is no registration fee.

Location:  The workshop would take place at the Graduate Hotel near our ECE Building.

Lodging:  There are no more rooms at the Graduate Hotel. However, there are several hotels nearby within walking distance.