Tuesday, May 17, 2016
7:00–9:00 PM Informal Gathering – Union South SETT Pub

Wednesday, May 18, 2016
7:15 Registration/Breakfast
8:00 Welcome Remarks: Susan Hagness
Associate Dean for Research and Graduate Affairs
8:10 Opening Comments
Tom Jahns
Bob Lorenz
8:25 WEMPEC Update, Education and Research
Jim Sember
8:50 Welcome Remarks: Steve Ackerman
Associate Vice Chancellor for Research and Graduate Education

Technical Presentations
9:00 Mahima Gupta: Stored Energy Modulation – Next Frontier in High Density Power Converters
9:20 Zhentao Du: Low Torque Ripple PM Motor Design
9:40 Yukai Wang: Using Accurate Volt-sec. Sensing to Improve Drive Performance
10:00 Ju Hyung Kim: Axial Flux FSPM Machine
10:20 Refreshment Break
10:40 Yichao Zhang: Current-Source Drives for PM Synchronous Machines
11:00 Skyler Hagen: Wireless Power Transfer Through off-the-shelf Bearings
11:20 Parikhshith Channegowda: Capacitive Coupled DC-DC Converters – An Alternative to Transformer Coupling
11:40 Wenbo Liu: Synchronous Motor with Increased Saliency for Efficiency Improvement
12:00 Lunch
1:15 WEMPEC Emeritus Group (WEG)
Don Novotny
1:20 Distance Learning Graduate Program and Short Course Program, Susan Ottman, Program Dir. EPD
1:30 Technology Licensing
Leah Haman, Intellectual Property Assoc., WARF
1:40 Brent Gagas: Effects of Magnet Temperature on the Useful Properties of Variable Flux PM Machines
2:00 Di Han: Elimination of Common Mode Voltage in Modern Motor Drives using Wide Bandgap Devices
2:20 Gilsu Choi: Converter-Induced Fault-Mode Operation and Mitigation in PM Synchronous Machine Traction Drives
2:40 Ryan Knippel: Mechanical Design Considerations for Wound Field Synchronous Machines in Traction Applications

3:00 – 5:00 Poster Presentations/Laboratory Demos
- Novel electric machines
- Multilevel & matrix converters
- Surface & interior PM machines
- Plug-in hybrid & battery electric vehicle technologies
- Battery monitoring & management
- High voltage power converters
- Novel drive control techniques
- Power conversion for renewable energy
- Wisconsin Energy Institute
- Integrated power modules
- Distributed generation and microgrids
- Active control of power devices for reliability
- Self-sensing motion control
- Modular motor drive
- Sensor integration in power electronics
- Wireless power transfer
- Wide bandgap devices
- And more...

5:00 – 6:00 Social Hour – Concourse Hotel
Sponsored by WARF
6:00 – 9:00 Banquet – Concourse Hotel

Thursday, May 19, 2016
7:15 Registration/Breakfast

Guest Presentations – Future Vision of Power Electronics and Machines
8:00 Prof. Paul Chow: Wide Bandgap Power Devices for Energy Efficient Systems
9:00 Prof. Annette Muetze: A Perspective on Emerging Electric Machines
10:00 Refreshment Break

10:30 Prof. Seung-Ki Sul: Control of Power Electronics – Past, Present, and Future of High Frequency Signal Injection Techniques
11:30 Prof. Deepak Divan: Distributed Control of the Grid - The Next Frontier for Power Electronics

12:30 Lunch

2:00 – 4:30 Poster Presentations/Laboratory Demos
See Wednesday afternoon list above for details.

5:30 – 8:30 Betty Lou Cruise