Super Session Topic Details:

Big Data and Machine Learning Applications in Power Systems

- Big data collection and storage
- Machine learning applications and efficacy
- Data and model – unique perspective of power system engineering
- Advantages gained
- New lessons learned

Energy Systems Integration

- Electricity, heat and fuel systems
- Maximizing energy for power, heat, water, and transportation
- Integrating multiple energy systems
- Enabling clean, reliable and affordable energy systems
- The opportunity for zero marginal cost energy
- Decarbonizing the transportation system
- Decarbonizing the buildings and industry sectors

Decarbonization Through Electrification

- Impact of electrification of transportation
- GHG reduction
- Carbon sequestration

Facing the Changing Resource Mix

- Mitigate gas uncertainties
- Facilitate high penetration of intermittent resources
- Operate with less system inertia
- Harness full potential of battery resources
- Essential grid services in a changing world
- Impact of DER on the BPS
- Managing a low inertia grid
- System economics
- System reliability and stability