



Learning to Predict, Trade and Operate in the Electricity Market

AMPS BDA Subcommittee Panel

Co-chairs: Nanpeng Yu (UCR) and Hao Zhu (UT-Austin)

Our scope

- The combination of strict environmental policies, uncertain weather patterns, and intermittent renewable energy resources makes it increasingly challenging to predict, trade, and operate in the electricity market.
- This panel session brings together experts to discuss the best strategy to leverage and apply machine learning techniques in electricity market, with applications in improving the market efficiency and market participants' utility.

Speakers

- Hao Zhu, The University of Texas at Austin. haozhu@utexas.edu.
Graph neural networks for achieving real-time optimal power flow (OPF)
- Nanpeng Yu, University of California, Riverside. nyu@ece.ucr.edu.
Algorithmic Trading Strategy with Virtual Bids in Electricity Market.
- Feng Qiu, Argonne National Laboratory, fqiu@anl.gov,
Learning to Solve Large-scale Security-Constrained Unit Commitment Problems
- Yonghong Chen, MISO, ychen@misoenergy.org
Machine Learning Application and Experiment at MISO