



Distributed Energy Management Algorithms in Future Power Systems

Dr. Ziang (John) Zhang

Electrical and Computer Engineering
Binghamton University



Wednesday February 18th, 2015

8:30-9:30am

**Engineering Building R-3
(SSIE Conference Room)**

The conventional power system is encountering a lot of challenges which it was not initially designed to handle. In recent decades, numerous new technologies such as Distributed Generation (DG), Photovoltaic (PV), wind turbine, Plug-in Hybrid Electric Vehicles (PHEVs), advanced power electronic device, as well as Information and Communication Technologies (ICT) have become available to revolutionize the power grid. However, there are system level problems that need to be considered during the system integration process: how to model such a complex large-scale system, how to design real-time control and coordination algorithms to ensure system level performance, etc. This seminar provides an overview of several key challenges of systems integration on future grids and some ongoing research efforts on complex network modeling, distributed energy management and power system simulation.

Dr. Ziang (John) Zhang is an Assistant Professor in the Department of Electrical and Computer Engineering. His research focuses on control and modeling of smart grids, distributed algorithms, cyber-physical systems and multi-agent systems.

For more information, contact Hiroki Sayama (sayama@binghamton.edu)

<http://coco.binghamton.edu/>