



Séminaire conjoint avec / Joint Seminar with
La Chaire de recherche industrielle CRSNG/Hydro-Québec en optimisation stochastique de la production
d'électricité
NSERC/Hydro-Québec Industrial Chair on the Stochastic Optimization of Electricity Generation



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THE (ROCKY) PATH TO 80 PERCENT RENEWABLES

The Obama administration has set a goal of generating 80 percent of our electricity from renewables, and providing the infrastructure to support one million electric vehicles. This is a daunting challenge for areas such as the mid-Atlantic region of the United States, which has limited access to hydroelectric power and biomass, leaving wind and solar as the primary sources of renewables. In this talk, I will review the issues of variability and uncertainty that arise with wind and solar, highlighting the hopes and realities of using wind and solar to power our grid. I will then describe SMART-ISO, a stochastic, multiscale model of the PJM energy markets and power grid, which has been designed to carefully model the sequencing of decisions and information that arises in energy markets. SMART-ISO has been used to calibrate a robust policy based on a hybrid lookahead model with cost function approximation to handle the variability and uncertainty of energy from wind and solar. We demonstrate the model in a study of off-shore wind.

JEUDI / THURSDAY

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10h30

Salle / Room 5441
Pavillon André-Aisenstadt
Université de Montréal

Ouvert à tous / Open to all

Organisateur / Organizer
Michel Gendreau

