Renewable energy and energy efficiency technologies are rapidly entering the global marketplace with the potential to disrupt and leapfrog a century of electricity generation, distribution, and consumption infrastructure. Insights into future energy patterns underpin the selection of technical and non-technical policies, from electric grid planning to tax incentive structuring. The advent of granular spatiotemporal energy data streams, the availability of large administrative datasets, and an expanding knowledge base of decision-making models beyond the rational choice framework present a compelling opportunity for computational scientists to push the state of the art in innovation diffusion research.

This symposium focuses on challenges related to the wide-scale consumer adoption of clean energy technologies. Consumer-focused clean tech covers a broad scope of products and services including: distributed energy generation and management (e.g., solar panels, battery storage, and load shifting), usage analysis (e.g., smart-grid enabled metering), and energy-saving technologies (e.g., hybrid and electric cars, CFL and LED bulbs, and Energy Star appliances). There are economic, social, cognitive and technical challenges and issues that underlie adoption of this diverse set of technologies.

Papers are invited on topics including, but not limited to, the following:

1. Computational approaches to the marketing of clean energy/sustainable technologies
2. Factors that influence consumer adoption
   a. Data analysis of consumer adoption data, surveys, etc.
   b. Laboratory experiments on framing, attitudes, incentives, etc.
3. Model building to predict consumer adoption
   a. Social networks: Information diffusion, influence maximization, etc.
   b. Economic aspects: Game theory, network economics, and information economics addressing the problem of clean energy technology evolution and diffusion
   c. Validation/verification and uncertainty quantification of adoption models
   d. Techniques to enhance adoption (e.g., policy optimization, economic incentives, and information dissemination campaigns)
4. Models to estimate cost changes in clean energy technology (e.g., price reduction in solar panel technology)
5. Evaluating the impact of clean energy adoption on power system infrastructure
   a. Resilient deployment of clean energy technologies on the electricity grid
   b. Resource forecasting models

Important Dates
Submission Deadline: June 13th, 2014
Notification: July 11th, 2014
Symposium Nov. 13-14th, 2014

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