ICDM WORKSHOP ON DATA MINING FOR ENERGY MODELING AND OPTIMATION (DaMEMO'16)

CALL FOR PAPERS

Machine learning and data mining techniques have been successfully applied in domains such as social media, e-commerce, health informatics, natural language processing and computer vision. There are ample opportunities for using data mining techniques to tackle the significant energy challenges we are faced with nowadays in energy modelling, analysis and conservation, for instance:

- The rising awareness of sustainability and environmental preservation has contributed to a boom in renewable energies such as solar and wind power whose intermittency and dynamics need to be harnessed systematically.

- A large amount of data from smart meters is being collected and there is a need to understand usage patterns of customers and plan changes and incentives to optimise the electricity usage, ensuring reliable supple at a minimum cost.

- The increasing use and reliance on digital technologies have contribute to the proliferation of electrical and electronic equipment, devices, phones and sensors which all consume energy constantly.

- While aggregating computing power, the popularization of cloud computing has led to the colossal energy consumption in data centres, much of which can be adaptively planned and reduced.

This workshop aims at bringing researchers from data mining, forecasting, energy and power engineering and other disciplines to explore the utilization of data mining techniques to develop intelligent solutions for energy related modelling and optimization problems.

Topics of interest to the workshop include, but are not limited to:

- Time series prediction of energy related time series
- Renewable energy modelling and prediction
- Electricity consumption prediction
- Price modelling and prediction for energy markets
- Smart meters and usage patterns data analysis
- Energy conservation in smart homes
- Energy efficient compressed sensing
- Smart grid data analysis
- Outage and risk prediction
- Spatial-temporal energy data mining
- Feature extraction and selection in energy data
- Anomaly detection in energy data
- Algorithms for real-time analysis of energy data
- Kinetic energy modelling
- Optimized self-organization of micro-grids
- Energy-optimized cloud computing
- Distributed data mining on sensor networks

Please follow the paper submission instructions to prepare your submission and submit it through the ICDM CyberChair system. All submitted papers will go through a triple-blind review process by the program committee. The workshop proceedings will be published by IEEE Computer Society Press, and will also be included in the IEEE Xplore Digital Library.

For more information, please visit Workshop website at URL http://www.covic.otago.ac.nz/DaMEMO16/

Organizers

- Jeremiah Deng, University of Otago, New Zealand
- Irena Koprinska, University of Sydney, Australia
- Alicia Troncoso, Pablo de Olavide University, Spain

Important Dates

- Submissions Due: August 12, 2016
- Notifications: September 13, 2016
- Camera-Ready: September 20, 2016