



Call for Papers



2015 IEEE Workshop on Modeling and Simulation of Cyber-Physical Energy Systems

13 April 2015, Seattle, WA, USA

Technically co-sponsored by the IEEE Industrial Electronics Society

Modern energy systems combine information technology, electrical and thermal infrastructure, autonomous roles and interact with other systems like markets and regulations. Existing modeling and simulation tools are not capable to cover such systems in all of their aspects, new languages, methods and tools are necessary. A combination of universal modeling languages and established, specialized tools like grid simulators and telecommunication simulators is necessary. This leads to modeling and co-simulating hybrid systems where for instance a multi-agent framework and an electric grid simulator are combined to investigate smart electric vehicle charging algorithms. It is especially the potential size of such systems that constitute a challenge for modeling and simulation. Implementing these future CPS are another substantial challenge. The designed algorithms need to be compact, computationally inexpensive, potentially self-organizing and intrinsically stable if applied to real energy systems.

This workshop brings together researchers and industrialists to exchange newest research results, and is embedded into the "Cyber-Physical Systems Week" <http://www.cpsweek.org/2015>

Topics:

- Hybrid modeling and simulation
- Co-Simulation of multi-domain systems
- Ontologies for energy systems
- Applications of cyber-physical energy systems
- Distributed algorithms and control
- Standards in interfacing components
- Formal languages for energy systems
- Smart Grid modeling
- Smart Cities modeling
- Demand response and power quality
- Information and communication technology for intelligent energy systems
- Design of simulations/experiments

General Chairs:

- Edward A. Lee (UC Berkeley, USA)
- Peter Palensky (AIT, Austria)

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- Anurag Srivastava (Washington State University, USA)
- Kishor S. Trivedi (Duke University, USA)

Important Information:

- Full paper submissions are peer-reviewed by at least 3 reviewers.
- Submission deadline: 30.01.2015
- Notification of acceptance: 27.02.2015
- Final paper submission deadline: 13.03.2015
- www.palensky.org/mscpes/2015