



Call for Papers

2018 Workshop on Modeling and Simulation of Cyber-Physical Energy Systems

10 April 2018, Porto, Portugal

technically co-sponsored by the [IEEE Industrial Electronics Society](#)

Modern energy systems combine information technology with electrical and thermal infrastructure. They also interact with other systems like markets and are subject to many regulations. Existing modeling and simulation tools are not capable to cover such systems in all of their aspects, hence new languages, methods and tools are necessary. A combination of universal modeling languages and established, domain-specific tools (like grid simulators and telecommunication simulators) is necessary. This leads to hybrid energy systems models, where for instance a multi-agent framework and an electric grid simulator are combined to investigate smart electric vehicle charging algorithms. Also the potential size of such systems poses a challenge for modeling and simulation. And implementing these future cyber-physical systems is 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. Authors are invited to submit full-length high-quality papers (max. 6 pages), formatted according to the [manuscript templates](#) for IEEE conference proceedings. **Contributions on work in progress are welcome.**

During the workshop, a dedicated session for demos is foreseen. We encourage tool developers (with industrial as well as academic background) to apply for a slot in this session. Please contact the workshop organizers to get in touch.

The workshop will be held as part of the [Cyber-Physical System Week 2018](#).

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
- Design of simulations/experiments

General Chairs:

- Peter Palensky (TU Delft, Netherlands)
- Anurag Srivastava (Washington State Univ., USA)

Program Chair:

- Edmund Widl (AIT, Austria)

Program Committee:

- Wilfried Elmenreich (University of Klagenfurt, Austria)
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- Yan Liu (Concordia University, Canada)
- Antonello Monti (RWTH Aachen University, Germany)
- Sven Christian Müller (Logarithmo, Germany)
- Ming Ni (NARI Group Corporation, China)
- Hiroaki Nishi (Keio University, Japan)
- Bryan Palmintier (NREL, USA)
- Yiyu Shi (University of Notre Dame, USA)
- Pierluigi Siano (University of Salerno, Italy)
- Alfonso Valdes (University of Illinois, USA)
- Luigi Vanfretti (Rensselaer Polytechnic Institute, USA)
- Xiaoyu Wang (Carleton University, Canada)
- Tim Yardley (University of Illinois, USA)

Important Information:

- Submission deadline: 04.02.2018
- Notification of acceptance: 25.02.2018
- Final paper submission deadline: 11.03.2018
- Full paper submissions are peer-reviewed by at least 3 reviewers.
- Please format papers according to the [manuscript templates](#) for IEEE conference proceedings.
- The conference proceedings will be published on IEEE Xplore.
- www.palensky.org/mscpes/2018

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