Call for Papers

12th Workshop on Modeling and Simulation of Cyber-Physical Energy Systems

May 13, 2024

Hong Kong, China

Automation and digitalization have become important topics in the energy sector in recent years, as modern energy systems increasingly rely on communication and information technology to combine smart controls with hardware infrastructure. With the emergence of cyber-physical systems (CPS) as a transdisciplinary field, such modern energy systems can be classified as cyber-physical energy systems (CPES), integrating the related research and development within a broader scope.

An important aspect of the research and development related to CPS is to bridge the gap between the traditional engineering domains and computer science. This is especially true for CPES, where the related engineering domains have in the past come up with proven and reliable methods for designing even large and complex systems. However, existing modeling and simulation tools still struggle to cover all aspects of CPES. Hence, a combination of universal modeling languages and established, domain-specific tools (like grid simulators and telecommunication simulators) is necessary. New methods, tools and algorithms are needed that are compact, computationally inexpensive, potentially self-organizing and intrinsically stable if applied to real energy systems.

This workshop brings together researchers and professionals from industry to exchange newest 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 Systems and Internet-of-Things Week 2024. Technically co-sponsored by the IEEE Industrial Electronics Society (application pending).

Topics:

- Digital twins
- Hybrid modeling and simulation
- Co-Simulation of multi-domain energy systems
- Formal languages for energy systems
- Ontologies for energy systems
- Distributed algorithms and control
- Machine learning and AI applications
- Testing and validation of CPES
- Design of simulations/experiments

General Chairs:

- Peter Palensky (TU Delft, Netherlands)
- Anurag Srivastava (West Virginia University, USA)

Program Chairs:

- Edmund Widl (AIT, Austria)
- Filip Pröstl Andren (AIT, Austria)

Important Information:

- Submission deadline: February 25, 2024
- Notification of acceptance: March 22, 2024
- Final paper submission deadline: April 5, 2024
- Full paper submissions are peer-reviewed by at least 3 reviewers.
- Papers must not be longer than 6 pages.
- Papers must be formatted according to the manuscript templates for IEEE conference proceedings.
- The conference proceedings will be submitted to IEEE Xplore for publication, subject to final decision by IEEE.
- Link to paper submission system: https://easychair.org/conferences/?conf=mscpes2024
- Website with up-to-date information: http://www.palensky.org/mscpes/2024

Contact:

- Peter Palensky, p.palensky@tudelft.nl
- Anurag Srivastava, anurag.srivastava@mail.wvu.edu