



Call for Papers

10th Workshop on Modeling and Simulation of Cyber-Physical Energy Systems

May 3, 2022

Hybrid event held online and in Milan, Italy

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 2022](#). Technically co-sponsored by the [IEEE Industrial Electronics Society](#).

Topics:

- Hybrid modeling and simulation
- Co-Simulation of multi-domain systems
- Ontologies for CPES
- Applications of CPES
- Distributed algorithms and control
- Formal languages for CPES
- Smart Grid and Smart Cities modeling
- Design of simulations/experiments for CPES
- Data generation using CPES simulation for big data analytics

General Chairs:

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

Program Chair:

- Edmund Widl (AIT, Austria)

Program Committee:

- Thomas Edgar (PNNL, USA)
- Wilfried Elmenreich (University of Klagenfurt, Austria)
- Christoph Grimm (TU Kaiserslautern, Germany)
- Wolfgang Kastner (TU Vienna, Austria)
- Sebastian Lehnhoff (OFFIS, Germany)
- Yan Liu (Concordia University, Canada)
- Antonello Monti (RWTH Aachen University, Germany)
- Chuma Francis Mugombozi (IREQ, Canada)
- Sven Christian Müller (Logarithmo, Germany)
- Hiroaki Nishi (Keio University, Japan)
- Bryan Palmintier (NREL, USA)
- Pierluigi Siano (University of Salerno, Italy)
- Mohammad Shahidehpour (Illinois Tech, USA)
- Alfonso Valdes (University of Illinois, USA, ret.)
- Luigi Vanfretti (Rensselaer Polytechnic Institute, USA)
- Gregor Verbic (University of Sydney, Australia)
- Mengmeng Yu (Hanyang University, South Korea)

Important Information:

- Submission deadline: February 20, 2022
- Notification of acceptance: March 18, 2022
- Final paper submission deadline: March 27, 2022
- Full paper submissions are peer-reviewed by at least 3 reviewers.
- Papers must not be longer than 6 pages.
- Please format papers 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.
- <http://www.palensky.org/mscpes/2022>

Contact:

- Peter Palensky, p.palensky@tudelft.nl
- Anurag Srivastava, anurag.srivastava@mail.wvu.edu
- Edmund Widl, edmund.widl@ait.ac.at