

Workshop Call for Papers



**2024 8th International Conference on Power Energy Systems and Applications
(ICoPESA 2024)**

Hong Kong | March 1-3, 2024 | www.icpesa.org

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ICoPESA 2024 WORKSHOP

Real-Time Digital Simulation and Hardware-in-the-loop Testing of Power and Energy Systems

Introduction

Future power and energy systems with increasing integration of emergent technologies, converter-interfaced distributed generations, and energy storage units as well as responsive loads, require suitable testbed setups to evaluate their performance, reliability, and stability. Power Hardware-in-the-Loop (P-HIL) systems have been considered a testbed which offers a reasonable tradeoff between test fidelity and coverage. This workshop intends to address P-HIL technique for real-time simulation and testing of the integration of new technologies into various types of energy systems, mainly power electronic-based power systems. In addition to presenting the concepts and trends, the lab demonstrations will also be covered in this workshop. The effectiveness and practicality of the high-fidelity PHIL-based platform is evaluated by using the interconnection of a grid-forming power converter, operating as equipment under test, with a simulated network in the digital real-time simulator.

Topics

- Introduction to modern energy systems
- Real-Time Simulation Concepts
- P-HIL Concepts, Benefits, and Applications
- Real-Time Modelling and P-HIL testing experience
- Laboratory Demonstrations at Integrated Energy Systems Lab (IES Lab) - AAU Energy

Submission

System: <https://easychair.org/conferences/?conf=icopesa2024>

Submission Deadline: **December 10th, 2023**

Template: <http://icpesa.org/flies/IEEE-Template.docx>

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