

2013 Workshop on Modeling and Simulation of Cyber-Physical Energy Systems

(MSCPES 2013)

**Berkeley, California, USA
20 May 2013**



**IEEE Catalog Number: CFP1394U-POD
ISBN: 978-1-4799-1306-0**

Program

09:00-9:45	<p>Opening and Keynote</p> <p>Kyle Anderson, Jimmy Du, Amit Narayan and Abbas El Gamal: <i>GridSpice: A Distributed Simulation Platform for the Smart Grid</i></p>
09:45-10:00	Coffee
10:00-12:00	<p>Session 1</p> <p>Ayan Banerjee, Joydeep Banerjee, Georgios Varsamopoulos, Zahra Abbasi and Sandeep Gupta: <i>Hybrid Simulation of CyberPhysical Energy Systems</i></p> <p>Yi Deng, Hua Lin, Sandeep Shukla, James Thorp and Lamine Mili: <i>Co-Simulating Power Systems and Communication Network for Accurate Modeling and Simulation of PMU based Wide Area Measurement Systems using a Global Event Scheduling Technique</i></p> <p>Jason Fuller, Selim Ciraci, Jeff Daily, Andrew Fisher and Matthew Hauer: <i>Communication Simulations for Power System Applications</i></p> <p>Atiyah Elsheikh, Muhammed Usman Awais, Edmund Widl and Peter Palensky: <i>Modelica-enabled rapid prototyping of cyber-physical energy systems via the functional mockup interface</i></p> <p>Edmund Widl, Wolfgang Mueller, Atiyah Elsheikh, Matthias Hoertenhuber and Peter Palensky: <i>The FMI++ Library: A High-level Utility Package for FMI for Model Exchange</i></p> <p>Matthias Stifter, Roman Schwalbe, Filip Andr�n and Thomas Strasser: <i>Steady-State Co-Simulation with PowerFactory</i></p>
12:00-12:45	Lunch

12:45-14:45	<p>Session 2</p> <p>Andrea Monacchi, Dominik Egarter and Wilfried Elmenreich: <i>Integrating Households into the Smart Grid</i></p> <p>Marco Grassi, Michele Nucci and Francesco Piazza: <i>Ontologies for Smart Homes and Energy Management: an Implementation-driven Survey</i></p> <p>Jibonananda Sanyal and Joshua New: <i>Simulation and Big Data Challenges in Tuning Building Energy Models</i></p> <p>Soumyo Chakraborty, Sandeep Shukla and James Thorp: <i>A Hierarchical Networked Micro-Simulator to Study Grid-Integration of Renewables and Electric Vehicles</i></p> <p>Alberto Lamadrid, Tim Mount and Ray Zimmerman: <i>On the Capacity value of Renewable Energy Sources in the presence of Energy Storage and Ramping Constraints</i></p> <p>Mengmeng Yu, Seung Ho Hong, Min Wei and Aidong Xu: <i>A Homogeneous Group Bargaining Algorithm in a Smart Grid</i></p>
14:45-15:00	<p>Coffee</p>
15:00-16:40	<p>Session 3</p> <p>Ilge Akkaya, Edward A. Lee and Patricia Derler: <i>Model-Based Evaluation of GPS Spoofing Attacks on Power Grid Sensors</i></p> <p>Javier Moreno Molina, Xiao Pan, Christoph Grimm and Markus Damm: <i>A Framework for Model-Based Design of Embedded Systems for Energy Management</i></p> <p>Usman Khan and Alex Stankovic: <i>Security in cyber-physical energy systems</i></p> <p>Alexander Schirrer, Oliver Koenig, Sara Ghaemi, Friederich Kupzog and Martin Kozek: <i>Hierarchical application of model-predictive control for efficient integration of active buildings into low voltage grids</i></p> <p>Sven Christian Müller, Ulf Häger and Christian Rehtanz: <i>Integrated Coordination of AC Power Flow Controllers and HVDC Transmission by a Multi-Agent System</i></p>
16:40-17:30	<p>Closing Keynote, Discussion</p> <p>C. Zhao, U. Topcu, N. Li and S. H. Low : <i>Power system dynamics as primal-dual algorithm for optimal load control. (presentation only)</i> V</p>