



SEMINAR series

IN CONJUNCTION WITH ENERGY AND INFORMATION SEMINARS

Thursday, September 18, 2014, 12:30 p.m. | Porter Hall B34



PETER PALENSKY
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Complex Energy Systems

Peter Palensky is Principal Scientist at the AIT Austrian Institute of Technology / Energy Department. Before that he was Head of Business Unit "Sustainable Building Technologies" at the AIT, CTO of Envidatec Corp., Hamburg, Germany, Associate Professor at the University of Pretoria, South Africa, Department of Electrical, Electronic and Computer Engineering, University Assistant at the Vienna University of Technology, Austria, and researcher at the Lawrence Berkeley National Laboratory, California. He is active in international committees like ISO, IEEE and CEN. His main research fields are complex energy systems and intelligent buildings.



EDMUND WIDL
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Edmund Widl received an M.Sc. and Ph.D. in Physics from the Vienna University of Technology, Vienna, Austria, in 2004 and 2008 respectively. From 2003 to 2011 he worked for the Institute of High Energy Physics (HEPHY), Vienna, Austria, on several projects for the CMS Collaboration, one of the particle physics experiments at the Large Hadron Collider (LHC) at CERN, Geneva, Switzerland. In 2011 he joined the Complex Energy Systems group of the Austrian Institute of Technology (AIT), where he works on topics related to the modeling and simulation of cyber-physical multi-domain energy systems.

Hosted by: Prof. Marija Ilic

Prof. Pulkit Grover

Department of ECE

Modeling and Simulation of Cyber-Physical Energy Systems

The energy system of the future is expected to host a large variety of technologies and applications. However, the diverse nature of these components, their interlinked topology and the sheer size of the system lead to an unprecedented level of complexity. Industry is confronted with severe problems in designing interoperable grid components, analyzing system stability, or improving efficiency. This talk will show the drawbacks of traditional modeling methods (component based, monolithic) and explain, how co-simulation can solve most of the problems in this area. Concepts like the Functional Mockup Interface are presented and first demonstration use cases will explain the benefits of this approach.