



Pre-Conference Workshop on DYMONDS-Based General Purpose Smart Grid in a Room Simulator (SGRS) – Theoretical Foundations, Modelling and Demonstrations

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Agenda (1/3)

- 1:00-1:45 p.m. – **"Models and Functionality of the SGRS Simulator based on DYMONDS,"** Marija Ilic
- 1:45-2:15 p.m. – **"Introduction to SGRS Multi-Layered Simulation Platform Design,"** Martin Wagner, Jovan Ilic, Franz Franchetti

Part I: Examples of applications of the SGRS

- 2:15-2:35 p.m. – **"Simulation of Electric Vehicle Participation in Electric Power Markets Using the ALM Framework and the Smart Grid in a Room Simulator"** Jonathan Donadee, Hadi Amini
- 2:35–3 p.m. – **"Adaptive Load Management/Transactive Energy – Demonstration on the SGRS"** Martin Wagner

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Part I: Examples of applications of the SGRS (cont.)

- 3:15-3:35 p.m. – **"Towards Feasible Power Delivery in AC Electric Networks Using Smart Wires; Demonstration"** Andrew Hsu, Marija Ilic
- 3:35-3:55 p.m. – **"Enhanced AGC (E-AGC) for Quality of Response (QoR) Control in Dynamic Electric Power Systems"** Qixing Liu, Xia Miao, Marija Ilic
- 3:55-4:15 p.m. – **"Transient Stabilization using FACTS; Demonstration"** Milos Cvetkovic
- 4:15-4:35 p.m. – **"Simulation of Power System Dynamics and Transient Stabilization Using Flywheel Energy Storage; Demonstration"** Kevin Bachovchin

Part II: Examples of multilayered applications of the SGRS

- 4:35-4:55 p.m. – **"Multi-layered Simulation using the SGRS Simulator; Interaction of TE and Flywheel Controlled Dynamic System"** K. Bachovchin, M. Wagner, M. Ilic

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Part III: Emerging applications

- 4:55-5:10 p.m. – **"Designing Incentives for Flexibility in the Transmission Sector"** Chin Yen Tee
- 5:10-5:25 p.m. – **"Making the Case for Locational Allocation and Pricing of Power Systems Operating Contingency Reserves"** Jose Fernando Prada
- 5:25-5:45 p.m. – **"Novel Control Schemes for Wind DFIGs with Integrated Energy Storage and their Application to IBAs"** Stefanos Baros
- 5:45-6:00 p.m.– **"Implications on Standards"** Marija Ilic