OSMSES 2026 - Overview Accepted Papers

Authors	Title	Session
Tim Kappler, Felix Schofer, Nina Munzke and Marc Hiller	Zero-Shot Solar Power Forecasting under Shading Using PV Simulation with DSM and MSG Irradiance Data	Day 1 - 16:30-16:45
João Almeida, Zenaida Mourão, Adrian Galvez and Tiago Soares	Decarbonisation of Seaports Using OSeMOSYS: A Case Study of the Port of Sines	Day 1 - 16:45-17:00
Felix Clemens Alexander Auer, Diego Alejandro Tejada-Arango and Sonja Wogrin	Uncovering Hidden Biases in Hydropower: Why Detailed Inflow Data is Crucial for Energy System Optimization Models	Day 1 - 17:00-17:15
Daniel Jung, Saikrishna Vallabhaneni, Frank Schuldt and Karsten von Maydell	A Seamless Workflow from Open-Source Planning Models to Industry-Standard Stability Simulations	Day 1 - 17:15-17:30
Yiwen Pan, Andrea Benigni and Thiemo Pesch	Towards PowerMarketSim – A Tight and Compact Unit Commitment Formulation for Europe's 15-Minute Day-Ahead Electricity Market	Day 1 - 17:30-17:45
Adrian Carrillo-Galvez, Rui Rodrigues, João Almeida, Pedro Costa, Tiago Soares and Zenaida Mourão	Simulation-Based Assessment of Decarbonization Alternatives in Container Terminals	Day 1 - 17:45-18:00
Alexandra Bach, Jitpanu Maneeratpongsuk and Antonelle Monti	VILLASnode API Gateway demonstrated for FMU and OpenDSS Co-Simulation of IEEE13bus System	Day 2 - 09:45-10:00
Sebastian Eichhorn, Darlene Dullius, Anurag Mohapatra and Reinaldo Tonkoski	From Co-Simulation to Composition: A Data-Driven Transformer with OLTC for Scalable Open-Source Power System Modeling	Day 2 - 10:00-10:15
Erfan Tajalli-Ardekani, Haozhen Cheng, Alexander Kocher, Jovana Kovačević, Simon Waczowicz, Hüseyin K. Çakmak, Giovanni Delibra, Alessandro Corsini and Veit Hagenmeyer	GIS-AWBEM: GIS-based Automated White-Box Building Energy Modeling	Day 2 - 10:15-10:30
Sara Ferrero, Daniele Salvatore Schiera, Francesco Demetrio Minuto and Andrea Lanzini	Enhancing pandapipes for Dynamic Simulation of District Heating Networks	Day 2 - 10:45-11:00
Eike Schulte, Jan Sören Schwarz, Malte Stomberg, Sharaf Alsharif, Danila Valko and Jirapa Kamsamrong	mosaiks are made of tesserae: GUI design for a co-simulation framework	Day 2 - 11:00-11:15
Fabio Chini, Davide Canali, Pietro Rando Mazzarino, Daniele Schiera, Luca Barbierato, Lorenzo Bottaccioli, Edoardo Patti and Alessandro Margara	Benchmarking Co-Simulation Orchestration Engines for Integrated Energy Systems: A Comparative Study of Mosaik and HELICS	Day 2 - 11:15-11:30
Mohammadreza Taheri, Pietro Rando Mazzarino and Daniele Salvatore Schiera	Towards a Semantic-driven Automation of Modelling and Co-Simulation of Energy Systems	Day 2 - 11:30-11:45
Trevor Hardy, Philip Top and Ryan Mast	Co-Simulation Distributed Time Management in HELICS	Day 2 - 11:45-12:00
Philipp Schmurr, Nan Liu, Andreas Schmidt, Hüseyin K. Çakmak, Alexander Kocher, Kai Baumgarten and Veit Hagenmeyer	Generating RSCAD FX Models for Real-Time EMT-Simulation using Component Graphs and PyAPI-RTS	Day 2 - 12:00-12:15

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Corinna Seiwerth and Reinhard German	A Standardized Data Schema for Co-Simulation of Open-Source Power Flow Simulators	Day 2 - 12:15-12:30
Rabia Eda Patoğlu and Mustafa Alparslan Zehir	An Open-Source Analysis Methodology for Battery Supported Islanded Operation in Residential Distribution Networks	Day 2 - 14:15-14:30
Marc Hunkemöller, Dirk Witthaut, Lars Schewe, Joost van Dijk, Mikhail Farber and Nico Westerbeck	A GPU-based Newton--Raphson Algorithm for Power Flow under Topology Changes	Day 2 - 14:30-14:45
Ramon Zambetti, Marco Rossi and Giacomo Viganò	OptiFlex.py – An open-source tool for electricity distribution planning with local flexibility	Day 2 - 14:45-15:00
Arsen Askar, Andreas Abart and Gerald Steinmaurer	Open Distribution System Model	Day 2 - 15:00-15:15
Eric Lupascu, Xiao Li and Benjamin Schäfer	Predicting Power grid frequency dynamics with invertible Koopman-based architectures	Day 2 - 15:15-15:30
Isabella Pizzuti and Giovanni Delibra	pyRES: An Open-Source Python Package for Renewable Energy Community Design	Day 2 - 15:45-16:00
Kai Heussen, Jawad Kazmi, Narges Mehran, Artjoms Obushevs, Terence O'Donnell and Thomas Strasser	Towards Reproducible Test Annotation for Cyber-Physical Energy Systems using Ontology-driven Dataspaces	Day 2 - 16:00-16:15
Henrik Wagner, Carsten Wegkamp, Constantin von Lützow, Marcel Lüdecke, Michel Meinert, Eike Niehs, Finnja Oestereich, Julien Essers, Lukas Ebbert and Bernd Engel	Extending eELib: Enhancing the Open-Source Model Library for Prosumer Power Systems and Energy Management Strategies	Day 2 - 16:15-16:30
Mohammad Arhum, Marcel Otte and Carsten Krüger	A Structured Validation Framework for Smart Metering: From Simulation to Field Readiness	Day 2 - 16:30-16:45
Georgii Tishenin, Armin Teskeredzic and Antonello Monti	Evaluating Time Step Effects in Shifted-Frequency Analysis for Converter-Dominated Power Systems	Day 2 - 16:45-17:00
Xuanhao Mu, Jianlei Liu, Gökhan Demirel, Thorsten Schlachter and Veit Hagenmeyer	The Model-Build-Manifest: A Dependency Injection pattern for Structural Coupling in Sector-Coupled Energy Systems	Day 2 - 17:00-17:15
Florian Strebl, Catalin Gavriluta and Qianwen Xu	From Image Generation to Power Systems – Learning the Representation of System Transients	Day 2 - 17:15-17:30
Blerant Ramadani and Vangel Fustic	Physics-Informed Digital Twin for Pre-Deployment Validation of LSTM-Based Wind Power Forecasting Models	Day 3 - 09:00-09:15
Mahamat Habib Bechir, Filipe Tadeu Oliveira and Hermano Bernardo	Temporal Resolution Matters: Assessing Its Impact on Variable Renewable Integration in Open-Source Long-Term Energy Planning Models	Day 3 - 09:15-09:30

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Edmund Widl, Marc Dünser and Jort Groen	A Framework for Digital Twin Runtime and Lifecycle Management	Day 3 - 09:30-09:45
Seyede Zahra Tajalli, Kai Heussen, Sridevi Krishnamurthi, Marcos Blanco, Jorge Na'Jera, A' Ngel Herna'Ndez, Gabriella Ferruzzi and Raffaele Liberatore	Toward Reproducible and Automated Benchmarking on the Case of Renewable Energy Communities	Day 3 - 09:45-10:00
Jianlei Liu, Xuanhao Mu, Jannik Sidler, Richard Lutz, Jakob Geiges, Michael Maier, Thorsten Schlachter and Veit Hagenmeyer	Tackling Heterogeneity with Containerized Wrappers and Synchronization Methods for Multi-Domain Energy Systems	Day 3 - 10:00-10:15
Yifei Lu, Junjie Zhang, Marcel Zimmer, Thiemo Pesch and Andrea Benigni	Benchmark Test Grids for Coupled Power and Gas Systems Studies	Day 3 - 10:15-10:30
Antonio De Padova, Daniele Salvatore Schiera, Francesco Demetrio Minuto, Claudio Carbone, Alessandro Agostini and Andrea Lanzini	Energy Transition Scenarios for Sardinia Island: Exploring Alternative Options for Decarbonization	Day 3 - 10:30-10:45