



PESS 2024 Programm

Montag, 21. Oktober

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| Ab 14:00 Uhr | Registrierung |
| 15:00 – 15:10 | Eröffnung, Vorstellung TU Dresden Prof. Dr.-Ing. Peter Schegner – TU Dresden |
| 15:10 – 15:30 | Vorstellung IEEE PES German Chapter Dr.-Ing. Anne-Katrin Marten – 50Hertz Transmission GmbH / Member of the IEEE PES German Chapter |
| 15:30 – 16:00 | Entwicklungen in der Energietechnik Prof. Dr.-Ing. habil. Martin Wolter – OVGU Magdeburg / Vice-Chairman of the IEEE PES German Chapter |
| 16:00 – 16:30 | Kaffeepause |
| 16:30 – 18:00 | Special-Session: Aktuelle Entwicklungen in der elektrischen Energieversorgung – Einblicke aus der Praxis Dr.-Ing. Sebastian Palm - DigSilent GmbH Prof. Dr.-Ing. Matthias Hable – Sachsen Energie Liya Ma – GE Vernova Dr.-Ing. Karsten Wenzlaff – Schneider Electric GmbH |
| 18:00 – 22:30 | Get Together Party |
| 22:30 | Ende des ersten Tages |



PESS 2024 Programm

Dienstag, 22. Oktober

08:30 – 09:00 Registrierung und Kaffee

09:00 – 10:30 Session 1: Grid Modelling

Cornelius Heck – 50Hertz Transmission GmbH

Session-Eröffnung

Quantitative comparison of power system operation using angle-based control versus frequency-based Control

Shahriar Sheybani, Hassan Alhomsy, Dirk Westermann – TU Ilmenau

Inertia Assessment of Interconnected Power Systems Based on Frequency and Tie-line Power Flow Measurements

Adrian Terstege, Dominik Frauenknecht, Ilya Burlakin, Matthias Luther, Chris Heyde, Jan Henzgen – FAU Erlangen/ Siemens AG

Efficient method for calculating the reactive power supply by applying analytical load flow calculations

Wendelin Angermann, Robert Schürhuber – TU Graz

Modular Synthesis of DC Grids through Ordinary Differential Equations

Anton Wichmann, Robert Annuth, Christian Becker – TU Hamburg

10:30 – 11:00 Kaffeepause

11:00 – 12:30 Session 2: Inverter based grids (1)

Prof. Dr.-Ing. Steffen Bernet - TU Dresden

Session-Eröffnung

Evaluating Grid-forming Converter Performance: Insights from Power Hardware-in-the-Loop Testing

Gregor Schöpf, Philipp Hackl, Ziqian Zhang, Robert Schuerhuber – TU Graz

Employing a Reduced Component Count Inverter Fed by Multiple Sources for Grid Support

Gabriel Maier Cocco, João Pedro Scherer Cipriani, Christoph Sauer, Martin Wolter, Fábio Ecke Bisogno, Humberto Pinheiro - OVGU Magdeburg

Virtual impedance concept for voltage angle-based operation in converter-dominated grids

Kiarash Ghanbariadi, Hassan Alhomsy, Dirk Westermann – TU Ilmenau

Using a Doubly Fed Induction Machine (DFIM) in an Active Filter for Grid Commutated Rectifiers - A Feasibility Study

Ludwig Jostes, Simon Puteanus – TU Dresden

12:30 – 13:30 Mittagspause

13:30 – 15:00 Session 3: Inverter based grids (2)

Prof. Dr.-Ing. habil. Martin Wolter – OVGU Magdeburg

Session-Eröffnung

Hysteresis Current Control for the Three-Phase PFC-Rectifier with two AC side Transistors
BIrectifier P2S6

Simon Peter, Liska Steenbock, Karl Stephan Stille, Jan Boris Loesenbeck – Bielefeld
University of Applied Sciences and Arts

Open-Circuit Fault Detection and Localization in Modular Multilevel Converters Based on
Transformer Neural Networks

Navid Rajabi, Alireza Pourfaraj, Ahmad Kalhor, Hossein Imaneini – CAU Kiel/
University of Teheran

An Extendable High Step-up DC-DC Converter with Quasi-Parabolic Voltage Gain

**Kavian Kamalinejad, Seyed Hossein Aleyasin, Mehdi Abbasi Ghadi, Alireza
Pourfaraj, Hossein Imaneini** - CAU Kiel/ University of Teheran

Comparison of different grid modeling structures for fault ride through analysis

Darko Brankovic, Robert Schürhuber, Herwig Renner – TU Graz

15:00 – 15:15 Kaffeepause

Exkursion HIGHVOLT Prüftechnik GmbH

15:15 – 16:00 Anfahrt

16:00 – 18:00 Führung durch die Produktionshallen

18:00 – 18:45 Rückfahrt

20:00 – 23:00 Konferenzdinner

23:00 Ende des zweiten Tages



PESS 2024 Programm

Mittwoch, 23. Oktober

08:30 – 09:00 Registrierung und Kaffee

09:00 – 10:30 Session 4: Electricity Market
Martin Lieberwirth – TU Dresden

Session-Eröffnung

Impact of Locational Marginal Electricity Pricing on future Industrial Energy Systems in Germany

Felix Flatter, Lisa Reis, Stefan Goetz - University of Kaiserslautern-Landau

Optimized Sizing of Battery Energy Storage Systems in the Energy Arbitrage Business for Industrial Customers

Luis van Sandbergen, Diego Hidalgo Rodríguez, Michael Römmich - Ruhr West University of Applied Sciences

Analysis of the Spatial Distribution of Electricity Theft: Case Study for Delimiting the Inspection Area

Natalia Bastos de Sousa, Leonardo Silva, Vinicius J. Garcia, Kamila Stromm, Daniel P. Bernardon, Martin Wolter, Otacílio O. Carneiro Filho - OVGU Magdeburg

Smart Contracts and Transactive Energy in Microgrid Energy Management – A Review

Renata Rodrigues Lautert, Martin Wolter, Luciane Neves Canha, Daniel Pinheiro Bernardon, Mauro dos Santos Ortiz – OVGU Magdeburg

10:30 – 11:00 Kaffeepause

11:00 – 12:30 Session 5: DER Integration/ Smart Grid
David Riebesel – FAU Erlangen

Session-Eröffnung

Reassessing the real world simultaneity factors for solar and wind feed-in for a medium-voltage grid

Dennis Weispfennig, Pawel Lytaev - University Kassel

Analysis of low voltage grid state estimation with limited measurement devices

Jonas Giebeler, Thomas Engelmann, Jens Haubrock - Bielefeld University of Applied Sciences and Arts

Potential of battery energy storage systems to avoid grid expansion in the low-voltage grid

Julius Dresselhaus, Katrin Schulte, Katrin Handel Jan Arens - University Bielefeld

Scenario Modelling and Analysis of Burgwedel's Energy System for Sustainable Grid Infrastructure

Abhishek Verma, Devanand Yadav, Ines Hauer – TU Clausthal

12:30 – 13:30 Mittagspause

13:30 – 15:00 Session 6: Sector coupling, Protection and Diagnostic of grid components

Dr.-Ing. Thomas Werner – DNV GmbH

Session-Eröffnung

Design approach for a low carbon energy supply in buildings by combining green hydrogen with thermal and electrical components

Farhang Ebrahimnezhad, Ralf Bengler, Ines Hauer – TU Clausthal

Design and Planning Renewable Energy Based Hydrogen Refueling Station for Trains

Amine Drissi, Mohammed Ouassaid - Mohammed V University in Rabat, Morocco

Evaluation of Effect of Submarine Cable Models on Distance Protection Performance

Muhammad Zeeshan Khattak, Thanakorn Penthong, Mirko Ginocchi, Nisai Fuengwarodsakul, Ferdinanda Ponci, Antonello Monti - KMUTNB, Bangkok, Thailand/ RWTH Aachen

Employment of Thermal Cable Reserves for Curative Congestion Management

Carsten Thomas Gatermann, Franz Linke, Dirk Westermann – TU Ilmenau

15:00 – 15:30 Best Paper Award und Schlusswort

Prof. Dr.-Ing. Peter Schegner – TU Dresden

15:30 Ende des Events
