

DACH+ Energy Informatics 2025: Program Schedule

Wednesday 17th September:

RWTH Aachen (IAEW) / Fraunhofer Center Digital Energy, Hüttenstr 5, 52068 Aachen	8:30 – 9:00	Check-in
	9:00 – 12:00	Doctoral Workshop Energy Informatics PhD students discuss their research work (by invitation)
		Technical Workshop 1 <i>Unlocking Potential: Data Spaces in the Energy Sector</i> Fraunhofer IEE
		Technical Workshop 2 <i>OpenEnergyTwin: Advancing Research on Modular Control Systems</i> OFFIS Institute for Information Technology, Fraunhofer FIT, RWTH Aachen University
	12:00 – 13:30	Lunch break & Laboratory Tour
	13:30 – 16:30	Doctoral Workshop Energy Informatics PhD students discuss their research work (by invitation)
		Technical Workshop 3 <i>Exploring the Energy Research Process</i> Carl von Ossietzky University, FAU Erlangen Nürnberg, OFFIS Institute for Information Technology
		Technical Workshop 4 <i>SGAM Toolbox – Smart EV Charging</i> FH Salzburg – Josef Ressel Centre
La Fabrik, Bachstraße 20, 52066 Aachen	18:30	Welcome Reception

Thursday 18th September:

forum-M, Buchkremerstraße 1-7, 52062 Aachen	8:30 – 9:00	Check-in
	9:00 – 9:15	Welcome Speech
	9:15 – 10:00	Key Note <i>Use of AI by distribution network operators – an exception or common practice?</i> Dr. Roman Hahn Head of AI & Analytics Netze BW GmbH
	10:00 – 11:00	Session 1: Computation & Communication <i>Understanding the Diversity of Communication Scenarios in Cyber-Physical Energy Systems</i> Malin Radtke and Sebastian Lehnhoff Carl von Ossietzky Universität <i>Design and Simulation of LEO Satellite Communication Networks for Reliable Monitoring and Control in Power Systems</i> Anna Volkova, Julian Schmidhuber, Hermann de Meer, Robin Hess, Klaus Schilling, Anatoli Wellhoefer and Markus H. Zink University of Passau <i>Accelerating Power Flow Calculations via Constant Jacobian Structure</i> Mehmet Alper Kuyumcu, Catalin Gavriluta and Andrea Benigni

	Austrian Institute of Technology
11:00 – 11:30	Coffee break
11:30 – 12:30	Session 2: Data Science <i>Inferring the Hidden: Privacy Risks of Microaggregation in Smart Meter Data</i> Dejan Radovanovic, Joaquin Delgado Fernandez, Maximilian Schirl, Günther Eibl, Andreas Unterweger and Sergio Potenciano Menci Center for Secure Energy Informatics, Salzburg University of Applied Sciences <i>Large-Scale Processing and Validation of Grid Data for Assessing the Fair Spatial Distribution of PV Hosting Capacity</i> Ali Mohamed Ali, Yaser Raesi, Plouton Grammatikos, Davide Pavanello, Pierre Roduit and Fabrizio Sossan HES-SO VALAIS <i>Seasonal and weather influences in the outages of German thermal generators</i> Chiara Fusar Bassini Hertie School
12:30 – 13:30	Lunch Break
13:30 – 14:30	Session 3: Markets <i>Directional Price Forecasting in the Continuous Intraday Market under Consideration of Neighboring Products and Limit Order Books</i> Timothée Hornek, Sergio Potenciano Menci and Ivan Pavić University of Luxembourg <i>Electricity-Aware Bid Format for Coordinated Heat and Electricity Market Clearing</i> Lesia Mitridati, Jalal Kazempour and Pascal Van Hentenryck Technical University of Denmark <i>A Lightweight and Modular Simulation Framework for Prototyping and Evaluating Electricity Trading Strategies Under Different Market-Clearing Mechanisms</i> Talwinder Singh and Ehimare Okoyomon Technical University of Munich
14:30 – 15:00	Industry Presentation <i>Empowering simulation-based energy research: real-time, accelerated, and automated - How digital real-time simulators support engineers and researchers in tackling the energy transition</i> Diran Liu R&D Engineer OPAL-RT Germany GmbH
15:00 – 16:10	Poster Presentations & Coffee Break
16:10 – 17:30	Session 4: Planning & Optimization <i>Automated Greenfield Planning of optimized Low Voltage Distribution Networks with Street-Side Differentiation</i> Eric Schulze Berge, Wiebke Gerth, Marius Güths and Markus Zdrallek University of Wuppertal

	<i>Process Mining for Robust Heat Integration through Process- and Product-Centric Energy Demand Modeling</i> David Zapata Gonzalez, Katharia Brenning, Kay Benkert, Florian Schlosser and Oliver Müller Paderborn University <i>Regional Differences in the Determinants of Residential Photovoltaic Expansion: A Spatial Econometric Analysis of Germany and Italy</i> Max Beihofer and Lenard Rude Albert-Ludwigs-Universität Freiburg <i>Modeling and Impact of Flexible AC Distribution Systems in Medium-Voltage Grids</i> Maxim Müllender, Julian Saat, David Franck, Szymon Werminski and Andreas Ulbig IAEW at RWTH Aachen University
17:30 – 19:00	City Tour
19:00	Conference Dinner

Friday 19th September:

forum-M, Buchkremerstraße 1-7, 52062 Aachen	8:45 – 9:15	Check-in
	9:15 – 10:00	Key Note <i>Weakly-Supervised, Strongly Reliable: Machine Learning Challenges for Secure Energy Operations</i> Associate Prof. Dr. Jochen Cremer Delft University of Technology, Austrian Institute of Technology
	10:00 – 11:00	Session 5: AI in Energy Systems <i>Multi-Objective Reinforcement Learning with Shielding for Control and Safety in Power Grids</i> Gökhan Demirel, Simon Grafenhorst, Jakob Ohm, Benjamin Schäfer, Kevin Förderer and Veit Hagenmeyer Karlsruhe Institute of Technology <i>Reinforcement Learning for Optimized Multi-Use Operation of Battery Energy Storage Systems</i> Steffen Kortmann, Norman Zoller, Sarra Bouchkati, Luis Böttcher and Andreas Ulbig IAEW at RWTH Aachen University <i>Adaptive Self-Improvement for Smarter Energy Systems using Agentic Policy Search</i> Alexander Sommer, Peter Bazan, Behnam Babaeian, Jonathan Fellerer, Warren Powell and Reinhard German Friedrich-Alexander-Universität Erlangen-Nürnberg
	11:00 – 12:00	Session 6: Load Forecasting & Management <i>Retrofitting Energy IoT Devices in the Residential Sector: Efficient Machine Learning for Day-Ahead Forecasting</i> Dimitrios Papadopoulos and Anke Weidlich

	University of Freiburg, INATECH <i>Grid-Aware Space Then Time STGNNs for Multi-Horizon Electricity Load Forecasting</i> Ugochukwu Orji, Çiçek Güven and Dan Stowell Jheronimus Academy of Data Science (JADS), Tilburg University <i>Probabilistic Prediction of the Area Control Error Using Normalizing Flows</i> Pablo Mayer, Carsten Hartmann, Eike Cramer, Manuel Dahmen and Dirk Witthaut Institute of Climate and Energy Systems, Forschungszentrum Jülich; Institute for Theoretical Physics, University of Cologne
12:00 – 13:00	Lunch
13:00 – 14:00	Session 7: Heating & Cooling Technologies <i>Heterogeneity in Temperature Sensitivity of Building Energy Use for Space Heating</i> Nicolai-Alexander Löwenberg, Moritz Wussow, Simon Albrecht and Dirk Neumann University of Freiburg <i>Data Driven Modeling of the Ramp-Up of Electric Heating Systems</i> Paul Maximilian Röhrig, Julius Zocher, Oliver Banovic, Julian Bigalke and Andreas Ulbig IAEW at RWTH Aachen University <i>Evaluating the efficiency of fifth-generation district heating and cooling using sector-coupled co-simulation</i> Jonas Scherthaner, Dominik Vereno, Maximilian Lugmair, Markus Leeb and Christian Neureiter Josef Ressel Centre for Dependable System-of-Systems Engineering, Salzburg University of Applied Sciences
14:00 – 14:40	Session 8: Advanced Image Processing <i>Evaluation and Application of Transformer Architectures for Image-Based Detection and Localization of Damage to Wind Turbines</i> Moritz Hass and Ammar Memari Jade Hochschule Wilhelmshaven <i>Development of an Automated AI-Based Detection of Nesting Boxes in the Overhead Line Network of a Transmission System Operator: A YOLOv11 Application for Environmental and Operational Monitoring</i> Hanna Wintersperger, Lukas Hofmann, Tim Schüßler and Prof. Andreas Zeiselmaier Weihenstephan-Triesdorf University of Applied Sciences
14:40 – 15:00	Closing