INREC 2024 - Conference Program

Day 1, August 27, 2024

Time	Stream: **Price Forecasting**	Stream: **Energy Trading & Risk Management**	Stream: **Operations in Energy Markets**	Stream: **Future Energy Systems & Markets**
10:00	Registration in R12 S00 H12			
10:15	Welcome & Introduction in Room R12 S00 H12			
10:30	**Keynote 1 in Room R12 S00 H12**			
11:30	Lunch Break			
	Session **1.1 Electricity Price Forecasting I** Room: **R11 T03 C20**	Session **2.1 Modelling Challenges** Room: **R11 T03 C05**	Session **3.1 Storage Uncertainty** Room: **R11 T03 C82**	Session **4.1 Data and Uncertanty Modelling in Energy Systems** Room: **R11 T03 C75**
12:30	*Integrating Probabilistic Forecasts of Fundamental Variables for Enhanced Electricity Price Forecasting* *Bartosz, Uniejewski, Wroclaw Univerisity of Science and Technology*	*Enhancing reliability in prediction intervals using point forecasters: Heteroscedastic Quantile Regression and Width-Adaptive Conformal Inference* *Carlo Sebastián, Fortia Energía*	*A Two-Timescale Decision-Hazard-Decision Formulation for Storage Usage Values Calculation in Energy Systems Under Uncertainty* *Camila Martinez Parra, Réseau de Transport de l'Electricité*	*Transparency++: Improving data and forecast quality for the European transmission system* *Margarida Mascarenhas, KU Leuven*
13:00	*ROLCH: Regularized Online Learning for Conditional Heteroskedasticity* *Simon Hirsch, Statkraft Trading GmbH / University of Duisburg-Essen*	*Forecasting Volatility of Oil-based Commodities: The Model of Dynamic Persistence* *Lukas Vacha, Charles University in Prague, Czech Academy of Science*	*Simulation-optimization process to evaluate water values for a storage in a long-term energy system simulation tool* *Juliette Gerbaux, Réseau de Transport de l'Electricité*	*A Critical Analysis of the Data Requirements for Effective Uncertainty Modelling in Energy Systems* *Lena Rosin, Fraunhofer UMSICHT*
13:30	*Probabilistic forecasting of day-ahead electricity prices: Postprocessing of point predictions with Isotonic Distributional Regression.* *Arkadiusz Adam Lipiecki, Wrocław University of Science and Technology*	*Extending Least-Squares Monte Carlo to a System-Oriented Study on Storage Operation* *Maike Spilger, University of Duisburg-Essen*	*Profitability of Batteries in Day-ahead and Intraday Electricity Markets, Model Analysis with Endogenous Prices* *Arjen Veenstra, University of Groningen*	*A Modular Framework for Uncertainty Quantification and Risk Analysis in Active Distribution Grid Simulations* *Sarah Fayed, University of Applied Sciences Emden/Leer*
14:00	Coffee Break			
	Session **1.2 Electricity Price Forecasting II** Room: **R11 T03 C20**	Session **2.2 Uncertainties in Gas Markets** Room: **R11 T03 C05**	Session **3.2 Electric Vehicle Charging** Room: **R11 T03 C82**	Session **4.2 Energy Transition Risk** Room: **R11 T03 C75**
14:15	*Learning Probability Distributions of Day-Ahead Electricity Prices* *Lubos Hanus, Czech Academy of Sciences*	*Gas Prices in the EU and other Hubs: A Time Series Analysis Approach* *Carolina García-Martos, Universidad Politécnica de Madrid*	*On charging behavior at public charging stations in Germany - a discrete choice analysis of revealed-preference data* *Philipp Theile, University of Cologne*	*Financial scenario analysis model of Polish energy transition* *Bartosz Sobik, SGH Warsaw School of Economics*
14:45	*Multiple split approach – multidimensional probabilistic forecasting of electricity markets* *Katarzyna Maciejowska, Wroclaw University of Science and Technology*	*Transformations and Shocks in the US Natural Gas Market: An Analysis Using a Non-Gaussian SVAR Model* *Markos Farag, University of Cologne*	*Stochastic parameterization of future German low-voltage distribution grids for Monte Carlo simulations of controlled EV charging* *Arnd Hofmann, University of Duisburg-Essen*	*Energy transition risk under implementation of a carbon budget with CO2 pricing option* *Imke Rhoden, Jülich Systems Analysis, Forschungszentrum Jülich GmbH / Ruhr-Universität Bochum*
	Session **1.3 Electricity Price Forecasting III** Room: **R11 T03 C20**	Session **2.3 AI Applications in Energy Markets** Room: **R11 T03 C05**	Session **3.3 Renewable Energy Forecasting** Room: **R11 T03 C82**	Session **4.3 Cross-sector Coupling** Room: **R11 T03 C75**
15:15	*Improving the accuracy of day-ahead electricity price forecasts by extending the long-term seasonal component* *Katarzyna Chęć, Wrocław University of Science and Technology*	*Forecasting supply curves using monotonic autoencoders with orthogonal encodings* *Nabangshu Sinha, University of Camerino*	*How the resolution of wind data affects multi-decadal wind power forecasts* *Nina Effenberger, University of Tübingen*	*Integrating Power and Water Grids: Unlocking Flexibility and Economic Advantages* *Amjad Khashman, Oxford Institute for Energy Studies / Independent Commodity Intelligence Services*
15:45	*Temporal Graph Neural Networks for DAM time series.* *Carlo Lucheroni, University of Camerino*	*Towards personal Assistants for Energy Processes based on locally deployed LLMs* *Florian Marquardt, TH Brandenburg / regiocom SE*	*A comprehensive review of federated learning for renewable energy forecasting* *Viktor Walter, Karlsruhe University of Applied Sciences*	*Multi-Market Coupling Model: A Residual Demand Approach* *Tobias Kargus, Karlsruhe Insitute of Technology*
16:45	Social Event: Folkwang Museum resp. Gruga Park			
18:30	Conference Dinner @ edda			

INREC 2024 - Conference Program

Day 2, August 28, 2024

Time	Stream: **Energy Forecasting**	Stream: **Energy Systems & Policy**	Stream: **Energy Systems**	**Stream: Energy Trading & Risk Management**
	Session **1.4 Load Forecasting I** Room: **R11 T03 C20**	Session **2.4 Residential Energy Pricing** Room: **R11 T03 C05**	Session **3.4 Security of Supply** Room: **R11 T03 C82**	Session **4.4 Energy Trading under Uncertainty** Room: **R11 T03 C75**
09:15	*Efficient mid-term forecasting of hourly electricity load using generalized additive models* *Monika Zimmermann, University of Duisburg-Essen*	*Designing price guarantees for residential heat pump users* *Leo Semmelmann, Karlsruhe Institute of Technology*	*A stochastic optimization-based approach to investigate the security of supply* *Anais Liquier, Réseau de Transport de l'Electricité*	*Cost-benefit analysis of government backed credit enhancement schemes for offtaker counterparty risk under corporate Power Purchase Agreements* *Johann Schütt, TU Bergakademie Freiberg*
09:45	*Automated Spatio-Temporal Weather Modeling for Load Forecasting* *Julie Keisler, EDF R&D / INRIA*	*Assessing the role of electricity tariffs for the provision of flexibility by households - A stochastic MCP approach including the system perspective* *Marco Breder, University of Duisburg-Essen*	*Diversification for energy supply chains* *Silvian Radke, Brandenburg University of Technology*	*Accounting for Forecasting Uncertainty in Multi-Market Unit-Commitment Models Using Post-Modern Portfolio Theory* *Raik Becker, Vattenfall*
10:15	*Coffee Break*			
10:30	**Keynote 2 in Room R12 S00 H12**			
11:30	*Coffee Break*			
	Session **1.5 Load Forecasting II** Room: **R11 T03 C20**	Session **2.5 Assessment of Residential Energy Systems** Room: **R11 T03 C05**	Session **3.5 Industrial Power Management** Room: **R11 T03 C82**	Session **4.5 Risk Assessment in Commodity Markets** Room: **R11 T03 C75**
12:00	*Probabilistic Functional Forecasting of Residual Demand Curves in Electricity Markets* *Jose Portela, Universidad Pontificia Comillas*	*Economic Evaluation of Residential Energy Systems using Compound Real Options* *Sebastian Glombik, Fraunhofer UMSICHT*	*Modifying electricity price signals in Germany for supply-oriented electricity demand and economical hydrogen use in industry in the context of green hydrogen standards.* *Carsten Schütte, University of Applied Sciences Hamburg*	*Closed-form Option Formulas for Kou-like Processes* *Piergiacomo Sabino, E.ON Energy Market GmbH*
12:30	*oRakIE - Automated long-term demand forecasting in hourly resolution.* *Johannes Schwenzer, Europa Universität Viadrina*	*The solar rebound effect: Evidence from a German household panel* *Stefan Poier, FernUniversität in Hagen*	*Combining flexibility potential, asset operation and grid utilization strategies in industrial power management* *Cornelia Klüter, University of Duisburg-Essen*	*EU ETS Market Expectations and Rational Bubbles* *Christoph Wegener, Leuphana*
13:00	Lunch Break			
14:00	**Keynote 3 in Room R12 S00 H12**			
15:00	Coffee Break			
	Session **1.6 Intraday Forecasting** Room: **R11 T03 C20**	Session **2.6 Future Power Grids** Room: **R11 T03 C05**	Session **3.6 Scenarios in Energy Markets** Room: **R11 T03 C82**	Session **4.6 Energy Market Challenges** Room: **R11 T03 C75**
15:15	*A Novel Feature Selection Algorithm for Enhanced Intraday Price Prediction* *Runyao Yu, Delft University of Technology / Austrian Institute of Technology*	*Conceptualizing procurement of frequency stabilization in energy systems with high shares of renewable energies* *Fabian Hendrik Fäßer-Stock, University of Duisburg-Essen*	*Understanding the future biomethane market dynamics and development under the quota market influence: a two-step optimization approach* *Milad Rousta, University of Stuttgart*	*Finding Stable Price Zones in European Electricity Markets: Aiming to Square the Circle?* *Teodora Dobos, Technical University of Munich*
15:45	*Continuous Intraday Price Forecasting for Algorithmic Trading - Challenges and Solution Approaches* *Timothée Hornek, University of Luxembourg - SnT*	*Effects of Different Flexibility Use Cases on Grid Expansion Planning* *Florian Hirschmann, University of Kassel*	*Using MCDA to Investigate Energy Scenarios From The Stakeholders' Perspectives* *Matthias Grajewski, FH Aachen University of Applied Sciences*	*Identification of strategic withholding in European electricity markets* *Alice Lixuan Xu, Hertie School*
16:15	*Addressing Uncertainty in Energy Markets with Bayesian Inference* *Daniel Nickelsen, Augsburg University*	*Redistribution through interconnector expansion: How to achieve pareto efficiency?* *Pia Willers, University of Cologne*	*Extreme Event Experience – An accelerator for Germany's Heat Transition?* *Gerrit Stöckigt, Institute of Climate and Energy Systems - Jülich Systems Analysis*	*Uncertainty Premium in Energy Markets* *Imtiaz Sifat, Radboud University*
16:45	End of Conference			