EPSRC HubNet Risk Day 2018

Manchester Conference Centre, Manchester

Programme Overview

09:00	Registration and refreshments
09:30	Welcome and kick-off
09:35	Keynote 1 | **Prof Scott Ferson (University of Liverpool)** How do we Handle Extremely Rare Events in a Meaningful Way?
10:15	Oral session 1 | **Efficient methods for uncertainty analysis and quantification**
11:00	Poster Introduction Session (speed round)
11:15	Poster session and refreshments
12:00	Oral session 2 | **Market forces**
12:45	Lunch and posters
13:45	Keynote 2 | **Dr Bob Oates (Rolls-Royce)** Cyber Security Risks in the Energy Sector: A Case Study
14:25	Oral session 3 | **Risk and uncertainty in planning and operation**
15:25	Poster session and refreshments
16:10	Oral session 4 | **Risk and asset management**
16:55	Closing remarks
17:00	

09:30 – 09:35	Welcome and kick-off
09:35 – 10:15	Keynote 1 | Prof Scott Ferson (University of Liverpool)
	How do we Handle Extremely Rare Events in a Meaningful Way?
10:15 – 11:00	Oral session 1 | Efficient methods for uncertainty analysis and quantification
O1.1	**Efficient Identification of Transient Instability States of Uncertain Power Systems** *Panagiotis Papadopoulos, University of Strathclyde, UK, & Jovica Milanovic, The University of Manchester, UK*
O1.2	**Efficient Time-Sequential Simulations for Power System Adequacy Assessment using Extreme Value Theory** *Sarah Sheehy, Behzad Kazemtabrizi, Matthias Troffaes, Durham University UK, & Chris Dent, University of Edinburgh UK*
O1.3	**Uncertainty quantification for building energy systems** *Hailiang Du, Durham University UK, Mohammad Royapoor & Michael Goldstein, Newcastle University UK*
11:00 – 11:15	Poster Introduction Session (speed round)
P1	**Computational Method for Identification of Multi-Dimensional Transient Stability Boundaries for Power Systems with Uncertainties** *Amirhossein Sajadi, Robin Preece & Jovica Milanovic, The University of Manchester, UK*
P2	**Robust Frequency Control for Varying Inertia Power Systems** *Georgios Misyris, Tilman Weckesser & Spyros Chatzivasileiadis, Technical University of Denmark, Denmark*
P3	**How do distributed energy resources contribute to improving overall network reliability when an operational reliability technique is used in conjunction with intelligent control?** *Christopher Challen & Spyros Skarvelis-Kazakos, University of Sussex, UK*
P4	**Stochastic Unit Commitment: a case study on the IEEE Reliability Test System** *Fanlin Meng, Ken McKinnon & Chris Dent, University of Edinburgh, UK*
P5	**Statistical Analysis of the Effect of Wind Farms on Power System Voltage Stability** *Granitsas Ioannis-Marios, Souxes Theodoros & Vournas Costas, National Technical University of Athens, Greece*
P6	**Quantification and Mitigation of High Impact Low Probability Events** *M. Jamieson, Imperial College London UK, G. Strbac, Imperial College London UK, K. Bell, University of Strathclyde, UK & S. Tindemans, Imperial College London*
P7	**Offshore cable optimization by probabilistic thermal risk estimation** *Maria Angelica Hernandez-Colin & James A. Pilgrim, University of Southampton, UK*
P8	**Impact of the stochastic behaviour of intermittent renewable resources on power system reliability** *Mike Brian Ndawula & Ignacio Hernando Gil, University of Bath, UK*
P9	**The uncertainty of P2G value in UK considering inter-year weather variations** *Wei Sun, University of Edinburgh UK*
P10	**Framework for Assessing Power System Resilience to Extreme Weather and Climate Conditions: Application to the GB Electricity System** *Yutian Zhou, Mathaios Panteli, The University of Manchester UK, & Pierluigi Mancarella, The University of Manchester, UK & University of Melbourne, Australia*
P11	**Developing a FMEA Methodology to Assess Risk Indicators in Power Plants** *Sahar Mohammad AL Mashaqbeh, University of Bradford UK*
P12	**Mitigating the risks of conflicting goals in a multi-tier, mission critical, low voltage power distribution systems** *Mohamed Elgazzar, Federal Aviation Administration UK*
11:15 – 12:00	Poster session and refreshments
12:00 – 12:45	Oral session 2 | Market forces
O2.1	**Sequential modelling of variable generation for capacity adequacy assessment** *Amy Wilson, Chris Dent, University of Edinburgh UK, Stan Zachary, Heriot Watt University UK & Matthias Troffaes, Durham University UK*
O2.2	**Demand for Frequency Response in 2025/26** *Jethro Browell, Marcel Nedd, Ivana Kockar, Keith Bell & David McMillan, University of Strathclyde UK*
O2.3	**A Bayesian Inference Approach to Unveil Supply Curves in Electricity Markets** *Lesia Mitridati & Pierre Pinson, Technical University of Denmark, Denmark*
12:45 – 13:45	Lunch and posters
13:45 – 14:25	Keynote 2 | Dr Bob Oates (Rolls-Royce)
	Cyber Security Risks in the Energy Sector: A Case Study
14:25 – 15:25	Oral session 3 | Risk and uncertainty in planning and operation
O3.1	**Planning megagrids and microgrids under uncertainty** *Ioannis Konstantelos & Goran Strbac, Imperial College London, UK*
O3.2	**The Influence of System Loading on Risk-based Security Profile of a Power System** *Kazi N. Hasan, Robin Preece & Jovica V. Milanović, The University of Manchester, UK*
O3.3	**Improved management of risk in power system development: lessons from the GARPUR project** *Keith Bell & Waqquas Bukhsh, University of Strathclyde UK*
O3.4	**Energy management under uncertainty: application to the day-ahead planning and power reserve allocation of a microgrid with photovoltaic generators and storages** *Xingyu Yan, Dhaker Abbes & Bruno Francois, Laboratory of Electrical Engineering and Power electronics (L2EP), Lille, France*
15:25 – 16:10	Poster session and refreshments
16:10 – 16:55	Oral session 4 | Risk and asset management
O4.1	**Risk and Reliability in Offshore Wind – The HOME Offshore Project** *Mike Barnes, The University of Manchester, UK*
O4.2	**The role and value of energy storage in enhancing safety** *Nigel Brandon & Jacqueline Edge, Imperial College London UK*
O4.3	**Three-phase probabilistic power flow for secondary transformer design** *M. Deakin, C. Crozier, T. Morstyn, A. Ogier & M McCulloch, University of Oxford*
16:55 – 17:00	Closing remarks