

RISK DAY

4 MARCH 2020

Supergen Energy Networks Hub Risk Day 2020

Technology and Innovation Centre
The University of Strathclyde, Glasgow, UK

Programme Overview

09:00	Registration and refreshments
09:30	Welcome and kick-off
09:35	Keynote 1 Damian Jackman (SSE) Emerging risks in electricity network operation
10:20	Oral session 1 Weather and risk
11:05	Poster introduction session (speed round)
11:25	Poster session and refreshments
12:00	Oral session 2 Uncertainty vs flexibility
12:45	Lunch and posters
13:45	Keynote 2 Professor Ragnar Lofstedt (King's College London) Risk communication in the 21 st century
14:30	Oral session 3 Reliability and adequacy
15:15	Poster session and refreshments
15:40	Oral session 4 Integrated energy systems
16:25	Closing remarks
16:30	Drinks reception
17:30	

09:30 – 09:35	Welcome and kick-off
09:35 – 10:20	Keynote 1 Damian Jackman (SSE)
Emerging risks in electricity network operation	
10:20 – 11:05	Oral session 1 Weather and risk
O1.1	Boosting power network resilience to extreme weather events by preventive islanding <i>Matthias Noebels, Mathaios Panteli (The University of Manchester)</i>
O1.2	Weather year related risk aversion for VRE technologies <i>Behrang Shirizadeh (CIRED – TOTAL SA, France), Philippe Quiron (CIRED – CNRS, France)</i>
O1.3	Year-round probabilistic analysis and risk assessment <i>Mostafa Nick (National Grid ESO)</i>
11:05 – 11:25	Poster introduction session (speed round)
P1	The quantification of uncertainty propagation in interdependent gas and electricity networks <i>Ali Ehsan, Robin Preece (The University of Manchester), Seyed Hamid Reza Hosseini, Adib Allahham, Phil Taylor (Newcastle University)</i>
P2	Characterising heat pump demand impact on LV networks <i>Amy Anderson, Bruce Stephen, Stephen McArthur (University of Strathclyde)</i>
P3	A machine learning based framework for the design and evaluation of flexible, sustainable and resilient energy systems under uncertainty <i>Cesare Caputo, Michel-Alexandre Cardin (Imperial College London)</i>
P4	Statistical scenario forecasts of Scottish wind generation: the influence of atmospheric regimes <i>Ciaran Gilbert, Jethro Browell, David McMillan (University of Strathclyde)</i>
P5	Environmental factors in power system asset health – ice accretion on overhead lines <i>Ekua Osei, Bruce Stephen and Stephen McArthur (University of Strathclyde)</i>
P6	Characterisation of cascading events in power systems with renewable generation <i>Georgios Nakas, Panagiotis Papadopoulos (University of Strathclyde)</i>
P7	Contribution of battery energy storage system (BESS) to power systems resilience <i>Haiyang Liu, Mathaios Panteli (The University of Manchester)</i>
P8	Integrating non-Gaussian distributions in low voltage system state estimation <i>Marta Vanin (KU Leuven, Belgium), Reinhilde D'hulst (VITO, Belgium), Dirk Van Hertem (KU Leuven, Belgium)</i>
P9	CogniSense: sensing without sensors <i>Mohammad Heggo, Julie McCann (Imperial College London)</i>
P10	Missing data in forecasting <i>Rosemary Tawn (University of Strathclyde)</i>
P11	AMIES.jl: software tool enabling availability management of industrial energy systems <i>Tom Van Acker, Dirk Van Hertem (KU Leuven, Belgium)</i>
P12	Modelling and quantifying climate risk in power system operation and planning <i>Paula LM Gonzalez, David J Brayshaw, Hannah C Bloomfield (University of Reading)</i>
P13	Demand & weather uncertainty in power system modelling: the problem and some solutions <i>Adriaan Hilbers (Imperial College London), David Brayshaw (University of Reading), Axel Gandy (Imperial College London)</i>
11:25 – 12:00	Poster session and refreshments
12:00 – 12:45	Oral session 2 Uncertainty vs flexibility
O2.1	Three-phase low voltage flexibility dispatch forecasting for aggregators and DSOs <i>Calum Edmunds, Ian Elders, Stuart Galloway, Rory Telford, Bruce Stephen (University of Strathclyde)</i>
O2.2	Multi-period security constrained optimal power flow for AC/DC grids <i>Vaishally Bhardwaj, Hakan Ergun, Dirk Van Hertem (KU Leuven, Belgium)</i>
O2.3	Mitigating failures in power grids using battery energy storage systems: a dynamic approach <i>Maldon Goodridge (Queen Mary University of London), Andrea Pizzoferrato (The Alan Turing Institute), Mehdi Dozein (University of Melbourne, Australia)</i>
12:45 – 13:45	Lunch and posters
13:45 – 14:30	Keynote 2 Professor Ragnar Lofstedt (King's College London)
Risk communication in the 21st century	
14:30 – 15:15	Oral session 3 Reliability and adequacy
O3.1	Modelling net demand across two area systems for resource adequacy assessment using extreme value methods <i>Nestor Sanchez, Amy Wilson, Chris Dent (University of Edinburgh)</i>
O3.2	Reliability assessment for microgrids with islanding capability <i>Marcos Santos, David Greenwood, Da Huo, Neal Wade (Newcastle University)</i>
O3.3	The August 9th GB system incident: what happened and what lessons should we learn? <i>Keith Bell, Callum MacIver (University of Strathclyde)</i>
15:15 – 15:40	Poster session and refreshments
15:40 – 16:25	Oral session 4 Integrated energy systems
O4.1	A modelling framework for characterising the impacts of uncertainty on integrated energy systems <i>Yongning Zhao, Meysam Qarddan, Nick Jenkins (Cardiff University)</i>
O4.2	Would peer-to-peer energy trading be risky to grid infrastructure? <i>Jin Yang, Eduardo Vega-Fuentes, Chengwei Lou (University of Glasgow)</i>
O4.3	Calculations of System Adequacy considering Heat Transition Pathways <i>Matthew Deakin (Newcastle University), Sarah Sheehy (Durham University), David Greenwood, Sara Walker, Phil Taylor (Newcastle University)</i>
16:25 – 16:30	Closing remarks
16:30 – 17:30	Drinks reception