



2025: Our Year of Research, News and Events

“ This past year has been an exciting one for the Supergen Energy Networks Hub, marked by new events, new successes, new faces and new connections across our community. From our September conference in Bath to the launch of our Flex Fund which has brought in new researchers tackling emerging network issues, it has been a year of growth for the hub. We were also proud to host a special session at ISGT in Malta, sharing our work with an international audience as we move into the project’s next year.”

-Dr Robin Preece -Deputy Director



Conferences and Events

Supergen Energy Network Hub Annual Conference



Thanks to everyone who attended and contributed at our annual Conference 2025.

Research findings, and practical experiences across a wide range of topics were shared, keynote talks were delivered by **Dr Adama Gassama-Jallow** (University of Gambia) **Professor Anjan Bose** (Washington State University), **Cathy McClay** (National Grid Distribution System Operator) and **Phil Jones** (Northern Powergrid).

Trip to Malta to attend the IGSt Conference



The IEEE PES ISGT Europe conference is a world-leading event focused on power grid modernization and the application of ICT to enhance energy systems, with an emphasis on integrating renewable and distributed energy resources. This year’s conference theme was “Harnessing Innovation: Powering a Sustainable and Resilient Future”. The programme featured keynotes, plenary sessions, special panel sessions, influential industry representatives, industry exhibits and presentations, technical sessions, and a job fair on smart grid innovations.

Alicia Terrero Gonzalez: DINAME conference

Research Fellow at the National Decommissioning Centre Dr Alicia Terrero Gonzalez recently shared her work “Dynamics of a nonlinear shallow-draft floating offshore wind turbines and its towing operations” at the prestigious International Symposium on Dynamic Problems of Mechanics.

The DINAME conference is organized biennially by the Committee of Dynamics of ABCM, the Brazilian Society of Mechanical Sciences and Engineering.

Alicia was invited to present her industry-academia collaborative research at the 2025 conference, which took place in Águas de Lindoia, São Paulo, Brazil, in March.



Team News

Furong Li appointed Research Chair by the Royal Academy of Engineering



Supergen Energy Networks Co-Investigator, Professor Furong Li (University of Bath), has been appointed Research Chair by the Royal Academy of Engineering (RAE). Furong leads the Markets & Regulation work package and Large-scale mission for the SEN Hub. In the role as Research Chair.

DC Microgrids in Remote Communities

Dr Sam Williamson shares his experiences visiting colleagues at the Federal University of Pará in Belém.

The amazing team in GEDAE has been pioneering using off-the-shelf solar home system equipment to build resilient direct current microgrids for off-grid, remote communities in the Amazon rainforest.



System of Systems Architecture



Supergen Energy Network Impact Hub is taking a mission approach to solving energy network challenges. Dr Daniel Carr arranged an internal workshop to further develop research questions and work that can be completed in this area. Daniel is working in conjunction with Prof. Jianzhong Wu, Dr Muditha Abeysekera, Dr Shuai Yao, Dr Xun Jiang and Elliot O'Malley on the mission.



Funding and Awards

Flexible Funding Awarded

We are pleased to share that funding has been awarded to two new research projects through our Flexible Fund: New Entrants to the Energy Networks Community.

The awardees are:

Xue Yong (University of Liverpool)

Smart Electrolysers, Smarter Grids: AI-Powered Catalyst Design for Dual Grid and Hydrogen Gain

The UK is rapidly shifting to renewable electricity, with wind and solar providing nearly half its power. But these variable sources don't always match demand, causing wasted energy. This project will focus on optimising the grid's dynamic performance by developing AI-driven tools that link catalyst atomic properties to real-time grid conditions.

Víctor Gutiérrez-Basulto (Cardiff University)

AI-Guided Infrastructure Planning: Graph Neural Network-Based Modelling of Commuter Patterns for EV Charger Allocation in Railway Networks

South Wales faces a critical "charging divide" hindering EV adoption. The aim of this research is to ensure equitable access to charging, maximising coverage and supporting wider socio-economic benefits. The project will deliver data-informed recommendations for efficient and fair deployment, accelerating e-mobility in South Wales.



Paper Prizes and Publications

Team members of the Supergen Energy Networks Hub have recently been awarded prizes for their publications:



Dragan Cetenovic & Victor Levi (University of Manchester)

IEEE PES Technical Committee Prize Paper: State Estimation for Integrated Energy Systems: Motivations, Advances and Future Work

DOI: [10.1109/TPWRS.2024.3524323](https://doi.org/10.1109/TPWRS.2024.3524323)

Victor Levi (University of Manchester)

IEEE PES Prize Paper: “Methods for Analysis and Quantification of Power System Resilience”



[DOI: 10.1109/TPWRS.2022.3212688](https://doi.org/10.1109/TPWRS.2022.3212688)



Sridhar Adep" (Swansea University)

ASIACCS2024: "WaXAI: Explainable Anomaly Detection in Industrial Control Systems and Water Systems."

<https://www.imeche.org/news/news-article/explainable-ai-could-protect-critical-infrastructure-from-cyber-attacks>



Missions

Collaboration began on the three missions in November and the focus is to continue this in 2026. Each mission will be underpinned by our four work packages Digitalisation, Policy, Society and Place, Markets and Regulations and Risk and Resilience.

The three missions focus on low carbon solutions for:

**Mission 1
Net Zero Whole
Systems Futures**

Leads: Jianzhong Wu and Muditha Abeysekera

The project aims to create energy network roadmaps for 2028, 2035, and 2050 to support a just, whole-system transition to Net Zero by integrating cross-sector awareness, investment, and operations.

**Mission 2
Large- Scale Net
Zero Energy
Systems**

Leads: Furong Li and Chenghong Gu

The aim is to fast track the integration and utilisation of large-scale renewable and low-carbon energy conversion and its use. The day will include lightning talks to showcase research areas and sprint ideas for moving forward.

**Mission 3
Regional and Low
Carbon Energy
Systems**

Leads: Grant Wilson and David Greenwood

The aim is to transform regional and local energy networks into active drivers of the Net Zero transition .



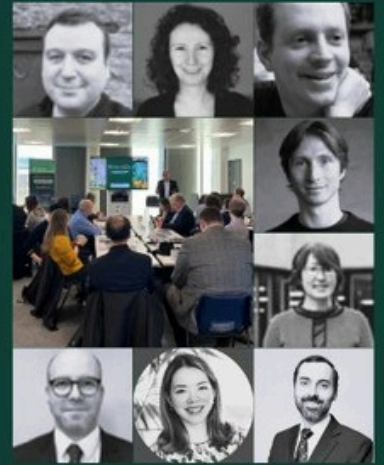
2026 Begins with Momentum



EDI: THEORY INTO PRACTISE
Birmingham



PROJECT TEAM MEETING
University of Bath



AI & ENERGY NETWORKS
University of Bath

We're delighted to share that Natalia Zografou-Barredo has been named a finalist in the Engineering category at STEM for Britain 2026, a prestigious annual competition hosted in the Houses of Parliament that highlights outstanding research from early-career scientists, engineers and mathematicians across the UK.

Supported by the EPSRC Supergen Energy Networks Hub, Natalia will present a poster showcasing the research she conducted during her HI-ACT secondment. She will exhibit her work in the House of Commons on 17 March 2026, representing our community on a national stage.



Upcoming Events

ECR Net Zero Conference

9 - 10 March 2026

BCEC, Birmingham

Brought to you by

RISK and Resilience Day
19 March 2026

EPSRC Supergen Energy Networks Hub
Risk and Resilience Day 2026

Edinburgh Climate Change Institute
University of Edinburgh
Edinburgh, UK

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