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☎️ Available on request

Profile

Electrical Engineer with a PhD in Power Systems and extensive experience across the UK energy sector, ranging from distribution network modelling to grid compliance and feasibility studies for utility-scale solar PV, BESS and offshore wind farms. Experience also includes delivering specialised software solutions for flexible connections and for the procurement of flexibility services.

Professional Experience

👤 Senior Grid Engineer (Development and Construction)

Sept 2025 – Present

📁 Pathfinder Clean Energy (PACE)

RESPONSIBILITIES

- Lead grid capacity assessments to inform project origination and identify viable connection opportunities.
- Coordinate technical requirements with DNOs, ICPs, consultants and internal teams to deliver compliant grid connections from design through commissioning and energisation, including G99 compliance.
- Support ICP tendering and contractor management, from defining scope and reviewing bids through to final delivery.

👤 Power Systems Development Engineer (DSO Network Access)

June 2023 – Sept 2025

📁 UK Power Networks

RESPONSIBILITIES

- Developed new products for Flexible/Curtailable Connections schemes (managed by UKPN Distributed Energy Resource Management platform), which allow customers to connect faster, ahead of reinforcements.
- Developed a web application tool to simplify curtailment calculations for new connection applications that trigger distribution and/or transmission constraints. The tool generates detailed reports that break down estimated curtailment by constraint and identify the times of year with the highest curtailment.
 - Connections Lab: <https://lab.ukpowernetworks.co.uk/>
- Analysed the operational behaviour of battery storage systems connected within UKPN's license areas to identify patterns and trends, in order to improve the assumptions used during network planning processes.

👤 Distribution System Planning Engineer (DSO and Future Networks)

Jan 2021 – June 2023

📁 Scottish and Southern Electricity Networks (SSEN)

RESPONSIBILITIES

- Leading the development and maintenance of network models (132/33/11kV) in DIgSILENT PowerFactory, which are suitable for power flow and optimal power flow analysis to inform flexibility requirements.
- Assessing the impact and benefits of DSO flexibility services, as part of the [LEO](#) and [TRANSITION](#) projects.
- Leading the development of a software tool for the procurement and dispatch of flexibility services.
- Developing Python scripts for the pre- and post-processing of network data (PI historian, network asset databases, network connectivity) and for the automation of power system studies in DIgSILENT PowerFactory.

👤 Power System Consultant

Feb 2020 – Dec 2020

📁 ABB Power Grids UK

RESPONSIBILITIES

- Delivered grid connection studies (reactive power requirements, energy losses, short-circuit, harmonics, flicker) for several offshore wind park projects to ensure compliance with the Grid Code under different scenarios.

- Developed Python scripts for the automation of large-scale simulations in DigSILENT PowerFactory and PSCAD and for subsequent analysis and data processing.
- Contributed to the preparation of reports for clients based on grid compliance studies.

 **Technical Officer**
 **Repowering London**

July 2017 – July 2018

RESPONSIBILITIES

- Completed a range of solar feasibility studies for various community energy projects in London.
- Developed 3D CAD models of buildings to estimate solar resource availability and onsite energy consumption.

Education

 **PhD in Electrical Power Systems with a focus on distribution networks**
Thesis: [Active network management for improved flexibility in distribution networks](#)
 **Imperial College London**

Oct 2016 – Sept 2020

RESEARCH

Investigated the main factors affecting the hosting capacity in distribution networks and proposed active network management (ANM) schemes, coupled with power electronic devices, to optimise the overall utilisation of the network. Proposed high-level control schemes based on optimisation and machine learning.

PUBLICATIONS

- [Self-learning Control for Active Network Management](#), IEEE Madrid PowerTech 2021
- [Active network management in LV networks: a case study in the UK](#), IEEE PES GM 2020
- [Using Multi-Terminal DC Networks to Improve the Hosting Capacity of Distribution Networks](#), IEEE ISGT 2018

SUPERVISION AND TEACHING

Supervised two MSc students on their final project focused on using data analytics for distribution networks.

 **MSc in Electrical Power Systems (Distinction)**
 **University of Birmingham**

Sept 2014 – Sept 2015

FINAL PROJECT

Stochastic modelling of a microgrid for reliability assessment in a distribution network.

NOTABLE MODULES

Power systems operation and control; Power systems economics; HVDC and FACTS; Intelligent systems.

 **Bachelor's Degree in Mechanical and Electrical Engineering**
 **Tecnologico de Monterrey (ITESM), Mexico**

Sept 2009 – May 2014

NOTABLE MODULES

Transformers and electric machinery; Power electronics and converters; Renewable energy.

Technical Competencies

- Advanced user of DigSILENT Power Factory, PSCAD and OpenDSS (EPRI) for modelling realistic transmission and distribution networks to assess the impact of low-carbon technologies and renewable generation.
- Advanced user of Python, Git and data analysis libraries (e.g., Pandas, NumPy, Geopandas, Matplotlib) for scripting, optimisation, large-scale data analysis, and for the development of tools and applications.
- Intermediate user of MATLAB/SimPowerSystems libraries to analyse dynamics of power network components and to perform optimal power flow analysis.
- Competent user of Microsoft Visio to produce diagrams for new processes and dataflows.

Professional Memberships

- IET Member working towards chartership (CEng)
- CIGRE UK Member
- IEEE Graduate Student Member and Member of the Power and Energy Society (PES)

Languages

English – Proficient Level

Spanish – Native

German – Intermediate Level