



3rd International Conference on Smart Grid and Renewable Energy

www.sgre-qa.org

20-22 March 2022
Doha, Qatar

Special Session on **Data Analytics and Computation for Electrical Power Networks** **organized and co-chaired by:**

Dr. I Safak Bayram
Prof. Stuart Galloway

safak.bayram@strath.ac.uk
stuart.galloway@strath.ac.uk

Call for Papers

Outline of the Session:

In recent years, decarbonization of power and transportation sectors has accelerated in line with net zero goals. To address variety of issues related to reliability and efficient operation of power grids, data-driven analytical and computational approaches are needed. This special session will discuss how data can be collected, processed, and analyzed for smart power grids, electric vehicle (EV) networks, and the energy internet. Primary data sources include phasor-measurement units, smart meters, EV driving patterns, and substation data. Data-driven analytical and computational frameworks enhancing the state-of-the-art modelling, optimisation, and control methods for efficient power network operations are particularly of interest. Organisers welcome studies with well-elaborated realistic case studies and real-world datasets.

Topics of the session include, but are not limited to:

- Analysis techniques for control and operation of sustainable energy systems
- Electric vehicle integration in distribution systems and micro-grids
- Data mining, machine learning, and deep-learning for smart energy grids
- P2P energy trading and energy internet
- Forecasting and uncertainty management for demand and renewables
- Demand response, dynamic pricing, and energy efficient buildings
- Data-driven monitoring, protection, and control of electricity networks

Author's schedule:

Deadline for submission of special session papers

December 15, 2021

Notification of acceptance

January 1, 2022

Deadline for submission of final manuscripts

1 February 2022

All the instructions for paper submission are included in the conference website:

<http://www.sgre-qa.org/>