Special Issue

Advanced Solutions for Renewable Energy Integration and Distribution in Modern Power Systems

Message from the Guest Editors

The increasing penetration of distributed energy resources (DERs) into the grid comes with a raft of benefits and opportunities for the power system and its participants. However, the benefits of DERs may not be equitably distributed. Fortunately, modern artificial intelligence (AI) techniques such as deep learning and genetic approaches have been developed for addressing these issues in power systems with high renewable energy penetration. This Special Issue aims to present a collection of original, novel contributions focused on advancement in renewable energy integration and distribution technologies in modern power system. Potential topics of interest include, but are not limited to:

- Distributed energy resource management and optimization
- Sharing of energy storage
- Providing demand flexibility to the grid
- Trading of renewable energy in smart grid
- Deterministic/probabilistic renewable energy forecasting
- Modelling flexibility of distributed energy resources
- DER participation in future electricity markets under uncertainty
- Transactive energy for DER management
- Peer to peer and community-based trading in local market
- Aggregation of DER in virtual power plants

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I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

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