Special Issue

Artificial Neural Networks in Smart Grids

Message from the Guest Editor

Nowadays, large amounts of data pertaining to the generation, transmission, and consumption of electricity are collected. Leveraging these data streams to produce advanced analytics can facilitate the transition towards more intelligent grids. To this end, artificial neural networks (ANNs) are able to learn complex relationships based on recorded data and generalize what they have learned. ANNs have already been applied in Smart Grids related research, such as in asset management, forecasting methods, reliability assessment, state estimation, and data-driven decision-making systems. However, significant challenges concerning information management, privacy, as well as the vulnerability and robustness of such techniques to malicious data still remain. This Special Issue of *Applied Sciences* will focus on state-of-the-art research on the use of ANNs in Smart Grids, addressing existing challenges and bringing forward new problems.

- artificial neural networks
- deep learning
- machine learning
- reinforcement learning
- Smart Grids

GUest Editor

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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