Special Issue

Forecasting Techniques for Power Systems with Machine Learning

Message from the Guest Editor

The transition to environmentally friendly power systems is prompting an increase in the portion of the energy produced from clean sources. Upon this background, the stochastic nature of supply and demand requires more effective scheduling and control of power systems, for which forecasting is a crucial procedure applied in many fields. Many approaches have been developed for forecasting. These approaches can be commonly divided into two categories, i.e., physical-based approaches and machine learning approaches. Among these, the use of machine learning technologies to forecast power supply and demand is considered to be effective since this approach does not require high-fidelity physical models. This has contributed to advances in the theory, algorithms, and computational techniques related to machine learning. This Special Issue aims to present a collection of state-of-the-art forecasting techniques and studies mainly based on machine learning and artificial intelligence and assess their implementation in forecasting of power systems. In addition to machine learning techniques, other methodologies based on statistical analysis and hybrid techniques are also welcomed.

Guest Editor

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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