Special Issue

State of the Art in Computational Intelligence Approaches for Energy Load Forecasting in Smart Energy Management Grids

Message from the Guest Editors

Load forecasting is an important tool in smart energy management systems, smart grids and micro-grids. Forecasting energy demand is still a challenge, requiring information such as the behavior of inidividual users, weather forecasting, and econometric variables, all to provide accurate predictions of residential, commercial and industrial consumption patterns. The ultimate goal is that energy providers can improve their operations, reduce costs and provide better and more reliable services. To this end, many researchers are developing artificial intelligence (AI)-based solutions that offer load forecasting to optimize operation and planning of energy systems. There are several statistical models for modeling and forecasting time series and many computational intelligence (CI) approaches, such as machine learning techniques, deep learning and hybrid models combining these with fuzzy systems and genetic algorithms. In this Special Issue, we intend to gather the latest contributions in CI-based approaches for energy load forecasting in smart energy management grids.

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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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