Special Issue

Machine Learning Applications in Predictive Monitoring of Power Grid Stability and Resiliency Enhancement

Message from the Guest Editors

The Special Issue aims to collect contributions targeted towards, but not limited to, the following main topics:

- Machine Learning and Artificial Intelligence algorithms for Power Systems Monitoring and Predictive Monitoring purposes;
- Power Systems Sub-Synchronous and Low-Frequency Oscillation (LFO) phenomena identification and mitigation using Machine Learning-based techniques and inter-area and local modes;
- Machine Learning methods enhancing the Transmission and Distribution Network infrastructure resilience, also with respect to cyber attacks;
- Renewable Energy Sources (RES) integration enhancement using Artificial Intelligence methods;
- Renewable energy system's performances prediction using ML and AI;
- Short-Term Load Forecast (STLF) and renewable generation prediction by using Deep Learning (DL), Transfer Learning, and Reinforcement Learning (RL) methods;
- Machine Learning algorithms for power systems analysis and control;
- Severe weather conditions forecast using Artificial Intelligence;

Guest Editors

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Dr. Yassine Chaibi

Deadline for manuscript submissions

closed (15 July 2025)

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Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

Editor-in-Chief

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