Special Issue

Modeling, Stability Mechanism and Control in Grid-Forming (GFM) Power Systems

Message from the Guest Editors

The scope of this Special Issue includes, but is not limited to, the following topics:

- Emerging control techniques on power quality improvement of grid-forming power systems;
- Monitoring of power quality and modeling as well as mechanism analysis of harmonic stability;
- Digital twins techniques on harmonics stability model and online estimation of power quality;
- Model and mechanism analysis on electromechanical and electromagnetic transients stability of grid-forming power systems;
- Emerging modeling approaches on harmonics stability mechanism analysis of grid-forming converter systems;
- Offline model methods on stability mechanism of grid-forming power systems;
- Online stability estimation of grid-forming converter systems based on data-driven methods;
- Artificial neural networks-based optimization of agricultural park microgrids;
- Demand-side response of agricultural park microgrids with GFM control;
- Online inertia estimation approach of GFM power systems;
- Multi-timescales modeling on multi-Microgrids with virtual synchronous machines;
- Modeling on interaction between electric vehicle and power grid with virtual synchronous machines techniques.

Guest Editors

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Deadline for manuscript submissions

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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.

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