Special Issue

Power Quality Conditioning and Stability Enhancement of More-Electronics Power Systems

Message from the Guest Editor

Along with the large-scale employment of power converters, power quality issues and stability problems are emerging and evolving. Despite being major trouble sources, grid-tied power converters are promising solutions to such problems mostly due to their flexible and strong control. This Special Issue focuses on the enhancement of power quality and stability of modern power systems through power-electronic-based solutions. The topics of presentations and research papers include, but are not limited to, the following:

- Modeling, control, and design of grid-forming power conversion systems;
- Inertia emulation and fast frequency control via power converters and energy storage;
- Synchronization of multiple grid-tied converters;
- Smart converters with stability enhancement and power quality conditioning;
- Virtual synchronous machines (VSMs) and virtual oscillators;
- Real-time control and optimization of 100% power-electronic-coupled power systems;
- Next-generation grid codes and standards.

Guest Editor

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Deadline for manuscript submissions

closed (28 February 2022)

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About the Journal

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 guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).