Special Issue

Impedance Modelling and Analysis of Grid-Connected Systems

Message from the Guest Editor

Impedance-based stability analysis has become a popular method for characterizing grid-connected systems. The method states that under certain conditions, the system operation remains stable if the ratio of grid impedance to inverter output impedance satisfies the Nyquist criterion. The method can be applied in various grid-connected-system applications including real-time stability analysis and adaptive control of grid-connected inverters. This Special Issue aims to gather novel methods and application possibilities of the impedance-based stability criterion. Efficient measurement techniques are needed for the inverter output impedance and grid impedance, especially when high-power devices are used. Feasible adaptive control solutions for grid-connected inverters/converters are also required.

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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