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Control of Renewable Energy Sources in Power Systems and Smart Grids

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Message from the Guest Editor

To get the low-carbon energy infrastructure, tremendous renewable energy sources are integrated into the modern power grid while reducing conventional fossil power plants. In this transition, the power electronics-based renewable energy system acts as one of the most important role players, which can convert renewable energies to electrical energy. Due to the recent development of power electronics technology and its control, renewable energy supports more efficient, economical, and reliable power than ever before.

Recently, various loads (e.g., electrical vehicle, data center, and motor) have been connected to the grid based on power electronics. With the high-penetration level of power electronics-based renewable energy in the power grid, more and more issues are to be challenged, such as performance deterioration, efficiency decrease, and power quality reduction, as well as instability phenomena. Herein, this Special Issue focuses on recent advances and challenges in power electronics-based renewable energy sources integrated into the power grid.



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Special Issue



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Message from the Editor-in-Chief

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