



Sliding Mode Control of Power Converters in Renewable Energy Systems

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Sliding-mode control (SMC) is increasingly used in power electronics due to its accurate dynamic analysis, fast resulting response, and inherent robustness in front of parametric changes. Its applications in renewable energies range from the control of micro-inverters in solar systems to the regulation of bidirectional battery chargers in electric vehicles (EVs). It is also used in wind energy conversion systems (WECS), fuel-cell internal regulation, distributed maximum power point trackers in photovoltaic systems (PVS), and power supplies for efficient lighting.

The Special Issue will focus on new results and applications of sliding-mode control of power converters inserted in renewable energy systems (RES). Topics of interest for publication include, but are not limited to, SMC of/for:

- Micro-inverters for RES
- Power converters for constant power loads
- Bidirectional converters for EVs
- Modular nanogrids for RES
- Unity power factor rectifiers
- Differential power processing in PVS
- Power supplies for efficient lighting
- High performance motor drives for EVs
- Synchronous and induction generators for WECS
- Fuel cells for EVs





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Message from the Editor-in-Chief

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