



Journal of Control Science and Engineering

Special Issue on
**Control of Power Converters for Emerging
Applications of Power Electronics**

CALL FOR PAPERS

With the skyrocketed development in semiconductor devices, power electronics converters are receiving special attention in different applications as renewable energy sources, drive systems, power quality applications, high voltage DC (HVDC) transmission, and flexible AC transmission systems (FACTS). Control of power converters plays a significant role in meeting the requirements and standards of the relevant application. For instance, in the grid integration of renewable energy sources, the quality of the injected power is of paramount importance where the control is the key player. In drive system applications, the robustness and high dynamic performance are a typical demand. Moreover, control of power converters is the workhorse for energy management in other applications (e.g., energy storage systems, solid state transformers, and electric vehicles). The requirements of the control form a sort of consortium with power electronics meshing towards the compliance with the application main needs.

The main purpose of this special issue is to publish high-quality research papers as well as review articles addressing recent advances on control for emerging topics in power electronics. Original, high-quality contributions that are not yet published or that are not currently under review by other journals or peer-reviewed conferences are sought.

Potential topics include, but are not limited to:

- ▶ Control of DC-AC converters for different applications (e.g., grid integration, power quality enhancement, FACTS devices, and HVDC systems)
- ▶ Control of DC-DC converters for different applications (e.g., electric vehicles and DC-DC transformers)
- ▶ Control of AC-DC converters for different applications (e.g., renewable energy sources, drive systems, FACTS devices, and HVDC systems)
- ▶ Control of AC-AC converters for different applications (e.g., drive systems and solid state transformer)
- ▶ Control and management of energy storage systems (e.g., batteries, super capacitors, and flywheels)
- ▶ Control of AC drive systems (e.g., induction machines, permanent magnet machines, and multiphase machines)

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