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Special Session on

"EMERGING POWER CONVERTERS IN SOLAR ENERGY APPLICATIONS: TOPOLOGIES AND CONTROL METHODS"

Organized by

Ersan Kabalci (Nevsehir Hacı Bektas Veli University, Turkey),
Stanimir (Stan) Valtchev (Universidade NOVA de Lisboa, Portugal),
Farhad Shahnia (Murdoch University, Perth, Australia)

Call for Papers

In recent years, resonant and non-resonant power converters/inverters have become more popular and are widely applied in various applications like renewable energy system, smart grid applications, electric vehicles, and consumer electronics. The grid-connected solar inverters play crucial role as key devices interfacing photovoltaic (PV) power plant with utility grid. Although the three-phase inverters were industry standard in large PV power plant applications for many years, single-phase inverters brought an increasing attention in microgrid concept with their application in residential plants and grid interconnection. The single and multi-stage solar inverters are proposed in terms of emerging dc-dc converter and unfolding inverter topologies while the novel control methods of both stages have been emerged. This special session (SS) aims to provide further scientific research with technical papers on the field of single-stage and multi-stage power converters. Researchers from both academia and industry are invited to present technological trends original solutions and in-progress researches on issues such on emerging power electronic converter topologies in particular the resonant, soft-switching and non-resonant ones applied in various fields.

Topics of interest include, but are not limited, to the following:

- Novel resonant power converter topologies
- Emerging power converter topologies
- Advanced control and deployment methods in dc-dc and dc-ac power converters
- Multi-level and multi-phase converter topologies
- Modular and multi-modular converter topologies
- Modelling, simulation and control researches on emerging power converters
- Applications of power converters in renewable energy and grid integration

- Applications of converters in electric vehicles and drive systems
- Applications of converters in energy storage systems and power supplies

- **IES Technical Committee Sponsoring the Special Session (if any):**

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