Special Session on
“Future power electronics for resilient high-power-quality grid-connected renewable energy systems: design, modeling and control”

Organized by
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Call for Papers

Electrical energy is today omnipresent and its distribution is undergoing a major revolution from a centralized production to a distributed generation. Thus a large number of active sources (wind farms, solar farms, small resources distributed energy, storage systems, flexible charges…) are connected to the power grid through static power converters systems. This imposes new challenges to the stability, quality and resilience of the future power systems. Therefore, it is important to develop new methods and tools for advanced control technologies so that all stakeholders can contribute to the power system regulation in an autonomous and responsible way. This is also true for other energy systems, as in the case of the more electric aircraft, all-electric ships and autonomous vehicles. Control of power electronic converters lies in the heart of these applications for efficient and optimized energy management. This special session aims to connect the forces of all communities working in the areas of control and power electronics, in academia or industry, to address emerging issues in modelling, control, and power electronic conversion systems.

Topics of interest include, but are not limited to:
- Control of Power Electronic Converters
- Power Quality Control
- Power Factor Control
- Emerging Control Strategies
- Integration of Wind, Solar Energy, Energy Storage
- Control of Multi-converter Systems

IES Technical Committee Sponsoring the Special Session:
TCPE (Control in Power Electronics subcommittee)