Call for Papers

Multilevel converters including DC/AC and AC/DC are nowadays used in various industrial, commercial, and domestic applications such as grid-connected systems, rectifiers, active power filter, UPS, electrical drives, etc. This converter makes use of abundant number of power semiconductor devices that should be properly controlled to have maximum efficiency. The primary challenge is to find appropriate topology, design the suitable PWM switching techniques, and apply the appropriate controller. Moreover, since the multilevel converters have nonlinear character, closed loop based system using advanced controllers such as sliding mode, model predictive, adaptive, intelligent methods to meet the targeted application. Therefore, this special session concentrates on the lasts development of multilevel converters topologies, control and device switching techniques but not limited to.

- PWM modulation technique for multilevel inverters
- Innovative and intelligent closed loop control strategies
- Novel current based control design for renewable energy generation using grid-connected converters
- Recent development techniques for common mode voltage control and drives application
- Industrial applications in the area of power quality, electrification and transportation, UPS, etc.

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