

Special Session on
“DC Grid: Protection & Control”
Organized by

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Call for Papers

DC power networks are gaining popularity owing to better efficiency, easier integration of renewable energy sources as compared to the AC grids. Owing to such advantages, DC grids are used in the high-voltage power transmission systems (HVDC), as well as being considered for microgrids, more-electric aircraft, shipboard power systems, etc. in the medium- and low-voltage power distribution systems. One of the most important and critical challenges is the fault analysis and design of the protection system to safeguard such a DC grid against network faults. The associated control challenges before and after the transients in the DC grid are of great importance as well. For the AC grid, the circuit-breakers (CB), protective relays, and the protection standards are well established, which are not quite mature for the DC grid. This special session aims to cover these topics, bridging the research gap on DC grid protection and control challenges to enable wide-scale implementation of energy-efficient DC grids.

Topics of interest include, but are not limited to:

- DC grid- HVDC, MVDC, LVDC
- Protection of DC grid
- DC fault detection
- DC grid control
- DC circuit-breaker
- DC protection relays
- DC grid standard
- Multi-terminal DC grid
- Fault simulation
- Hardware-in-loop (HIL)