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Special Session on Advanced Multilevel Converters with DC Capacitors: Modulation, Voltage Balancing, and their Control Strategies

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TOPIC OF THE SPECIAL SESSION

Multilevel converters have received significant attention for improved power quality. Moreover, replacing isolated DC sources with voltage-controlled capacitors makes this technology much more appealing for the industries due to reduced cost and size. Designing auxiliary circuit to make necessary paths for capacitors' currents has been investigated. However, advanced balancing techniques with interesting feature of redundant switching states are preferred to generate same voltage level, using different current paths, and balance the capacitors voltages without requiring external controllers. Thus, the voltage balancing of the DC capacitors in Multilevel Converters is a matter of importance especially in rectifiers and grid-connected applications such as battery chargers, active filters, STATCOM, DVR, etc.

Topics of the Session

- Innovative capacitors based Multilevel Inverters and Rectifiers
- Modulation and voltage balancing techniques
- Advanced controllers
- Voltage/Current decoupling techniques
- Auxiliary circuits for voltage balancing
- New Applications of capacitors based Multilevel Converters

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Author's schedule:

- Deadline for submission of special session papers
May 1, 2018
- Notification of acceptance
July 15, 2018
- Deadline for submission of final manuscripts
August 1, 2018