

Special Section on:

Modular Multilevel Converters

MODULAR multilevel converters have received wide acceptance in industry, particularly in high voltage DC transmission systems. There exist at least four commercial products already in the market, one installed converter working since November 2010 and several underway projects, mainly off-shore wind energy, at different development stages. The rapid development of this converter topology, which was invented by Prof. R. Marquardt in 2001, shows the importance of power electronics in the development of new technologies and its impact on the society. These converters have several interesting features such as a modular structure, the capability of transformer-less operation, easy scalability in terms of voltage and current, low expense for redundancy and fault tolerant operation, high availability, utilization of standard components and excellent quality of the output waveforms. These features have increased the interest of industry and academy researching and developing new circuit configurations, converter models, control schemes and modulation strategies. The use of a modular topology, where all the submodules have the same structure, greatly reduces the manufacturing costs but increases the controller requirements in terms of management of inputs/outputs and processing. Although several advances in the mentioned aspects have been reported during the last years, there is still a large number of unresolved issues in terms of configurations, models, modulation, control and applications of these converters. In fact, several research groups worldwide are actively working in these topics. In this scenario, a special section on modular multilevel converters in the IEEE transaction on Industrial Electronics, will be timely and of great interest for all those researchers and, of course, for industry.

Editors invite original manuscripts presenting recent advances in these fields with special reference to the following topics:

- ✓ MMC topologies for adjustable speed drives, renewable energy, grid connected utilities, etc
- ✓ Models for simulation and control of MMC
- ✓ Modulation techniques and balancing strategies for MMC
- ✓ Control strategies for MMC
- ✓ Fault tolerant analysis and design of MMC
- ✓ Integration of MMC to the electrical grid
- ✓ MMC issues in HVDC applications

Manuscript Preparation and Submission

Check carefully the style of the journal described in the guidelines “Information for Authors” in the IEEE- IES web site: <http://www.ieee-ies.org/pubs/transactions-on-industrial-electronics> .

Please submit your manuscript in electronic form through: <https://mc.manuscriptcentral.com/tie-ieee/> .

On the submitting page, in pop-up menu of manuscript type, select: “**SS on Modular Multilevel Converters**”, then upload all your manuscript files following the instructions given on the screen.

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Timetable

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July 15, Sep. 15, 2017	Winter, 2017	Summer, 2018