Special Issue

Challenges and Research Trends in Modular Multilevel Converters

Message from the Guest Editor

Modular multilevel converters (MMC) is being studied a lot in industry and academia for the application of STATCOM, HVDC, and MV motor drive. Recently, there has been an active movement to change existing fossil fuel engines to electric propulsion methods to cope with climate change, and it is expected that the application of medium-voltage large-capacity motor driving systems for electric propulsion. In the field of renewable energy, ultra-large-capacity wind turbine power systems are being promoted, and the application of variable-speed control. Therefore, MMCs are expected to be widely used in electric propulsion, renewable energy, and industrial fields in the near future. Topics of interest include, but are not limited to:

- Application of HVDC, FACTS, motor drives, and renewable energies, etc.
- Optimal design and selection of components for the selected application
- Control, dynamics and performance of MMC in the selected application
- Advances in control and modulation techniques
- Voltage ripple of sub-module reduction at low-frequency operation
- Overview of research trends of MMC
- All aspects of theory, design, modeling, and applications related to MMCs

Guest Editor

Prof. Dr. Ji-Won Kim

Electric Machines and Drives Research Center, Korea Electrotechnology Research Institute, 12 Bulmosan-ro 10 beon-gil, Seongsan-gu, Changwon-si 51543, Republic of Korea

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Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

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