Special Issue

Multi-Level Inverter Motor Drive Technology

Message from the Guest Editor

The growing demand for high-efficiency, high-performance motor drives in industrial automation, electric vehicles (EVs), hybrid electric vehicles (HEVs), and renewable energy systems has driven significant advancements in multi-level inverter (MLI) technologies. These systems cater to the need for superior voltage synthesis, reduced harmonic distortion, and enhanced fault tolerance, making them indispensable for modern energy-efficient motor control applications. This Special Issue of Machines focuses on cutting-edge developments in multi-level inverter motor drive technology, including novel topologies, advanced modulation strategies, and intelligent control techniques. We welcome rigorous debate and contributions on topics including but not limited to hybrid MLI architectures, wide-bandgap semiconductor (e.g., silicon carbide and gallium nitride)-based electronics and device designs, model predictive control, and AI-optimized drive systems. Studies addressing reliability, thermal management, and real-time implementation for industrial applications are particularly encouraged.

Guest Editor

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Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.
Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.
There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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