

Special Issue

AI-Driven Innovations in Power Electronics Research and Development

Message from the Guest Editors

This Special Issue aims to highlight recent advances in algorithms, architectures, and applications, offering insights into both the theoretical foundations and the practical impact of AI-driven innovations in power electronics. Possible topics include, but are not restricted to, those represented below:

- Novel Algorithms, Models, and Architectures for AI-driven in Power Electronics.
- AI-Driven Discovery of Novel Power Converter Topologies.
- Neural Network-Assisted Optimization of Magnetic Components.
- Multi-Objective Optimization of Si/SiC/GaN Devices Using Machine Learning.
- Generative AI for Automated Converter Design and Schematic Synthesis.
- AI-Driven Automated Testing and Verification of Power Modules.
- Machine Learning Approaches for Predicting Semiconductor Device Lifetime.
- Deep Learning-Based Fault Diagnosis in Inverters and Motor Drives.
- AI-Based Model Predictive Control for Multilevel Inverters.
- Neural Network Estimators for Sensorless Control in Power Electronics.

Guest Editors

Prof. Dr. Moshe Averbukh

The Department of Electrical Engineering and Electronics, Ariel University, Ariel 40700, Israel

Dr. Shailendra Rajput

College of Engineering, Xi'an International University, Xi'an 710077, China

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

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About the Journal

Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

Editor-in-Chief

Prof. Dr. Flavio Canavero

Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

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