

## Special Issue

# High-Performance Electric Drives for Transport Applications (High-Speed Machines, High Pole Number Machines, High Frequency Machines)

### Message from the Guest Editors

With the ever-growing development of electric-drive-based transport, high-performance electric drives are being driven to unprecedented performance metrics, including the achievement of high torque (power) density and high efficiencies over a wide speed range, together with ensuring reliable operation over their lifetime.

Numerous novel electrical machines and control strategies are emerging to address these challenges. In this Special Issue, contributions on high-performance electric drives for transport applications are welcome, including machine topologies (such as high-speed machines, high pole number machines, high frequency machines), control strategies, power converter topologies, performance analysis, multidomain design optimisation, thermal improvement techniques, component light-weighting, reliability, etc. **Keywords:**

- High speed
- High pole number
- High frequency
- Additive manufacturing
- Cooling techniques
- Materials
- Reliability
- Transport

Welcome to contribute!

---

### Guest Editors

Prof. Dr. Wei Hua

Dr. David Gerada

Prof. Dr. Yacine Amara

---

### Deadline for manuscript submissions

closed (20 June 2022)



## Electronics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 6.1



[mdpi.com/si/60034](https://mdpi.com/si/60034)

*Electronics*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[electronics@mdpi.com](mailto:electronics@mdpi.com)

[mdpi.com/journal/  
electronics](https://mdpi.com/journal/electronics)





# Electronics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 6.1



[mdpi.com/journal/  
electronics](https://mdpi.com/journal/electronics)



## 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

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), CAPlus /  
SciFinder, Inspec, Ei Compendex and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Electrical and Electronic) /  
CiteScore - Q1 (Electrical and Electronic Engineering)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is  
provided to authors approximately 16.8 days after  
submission; acceptance to publication is undertaken in 2.4  
days (median values for papers published in this journal in  
the first half of 2025).