

# Special Issue

## Multiphase Machines: Converter Control and Innovative Exploitation

### Message from the Guest Editor

Multiphase electrical motors are increasingly applied in industry as high-power drives. The central theme of this Special Issue focuses on novel types and constructions of multiphase electrical machines; novel topologies and structures of multiphase converters; advanced control methods of multiphase machines; and modern applications of multiphase machines in electrical vehicles, industrial drives and renewable energy systems. Topics of interest may include but are not limited to:

- Modelling and design of multiphase machines;
- Novel topologies and structures of multiphase converters;
- Vector control, sliding mode control, fuzzy and neural control and other advanced control methods of multiphase machines;
- Fault diagnosis and fault-tolerant control of multiphase drive systems;
- Artificial intelligence applications in multiphase machine systems;
- Parameter estimation and efficiency optimization of multiphase machines;
- Applications of multiphase machines in electrical vehicle drives;
- Wind energy conversion systems with multiphase machines and multiphase converters;
- Ship propulsion motor drives with multiphase machines and multiphase converters;

### Guest Editor

Dr. Krzysztof Pienkowski

Department of Electrical Machines, Drives and Measurements,  
Wrocław University of Science and Technology, Wrocław, Poland

### Deadline for manuscript submissions

closed (20 February 2024)



# Machines

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 4.7



[mdpi.com/si/129392](https://mdpi.com/si/129392)

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

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





# Machines

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 4.7



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



## About the Journal

### 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.

---

### Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso  
CISE - Electromechatronic Systems Research Centre, University of  
Beira Interior, Calçada Fonte do Lameiro, P-6201-001 Covilhã, Portugal

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Mechanical) / CiteScore - Q1  
(Control and Optimization)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.9 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).