



***machines***



an Open Access Journal by MDPI

## **Innovative Applications of Multiphase Machines**

Guest Editors:

**Dr. Alejandro Gómez Yepes**

Applied Power Electronics  
Technology Research Group,  
University of Vigo, 36310 Vigo,  
Spain

**Dr. Ignacio Gonzalez Prieto**

Electrical Engineering  
Department, Industrial  
Engineering School, University of  
Malaga, 29010 Malaga, Spain

**Prof. Dr. Ayman Abdel-Khalik**

Department of Electric  
Engineering, Alexandria  
Univeristy, Alexandria, Egypt

Deadline for manuscript  
submissions:

**closed (31 October 2022)**

### **Message from the Guest Editors**

Dear Colleagues,

Machines with more than three phases provide multiple advantages in comparison to conventional three-phase ones. The fact that the power is split among a higher number of phases makes it possible to decrease the rating of the power semiconductors. On the other hand, the greater number of degrees of freedom enables enhanced potential regarding applications such as fault-tolerant drives, integrated battery chargers, bearingless machines, multimotor drives, increased power density by harmonic injection, or parameter estimation. Accordingly, the attention devoted to multiphase drives has not ceased to increase in recent years in different contexts, including electric transportation and wind or marine generation.

This Special Issue calls for papers that explore innovative applications of multiphase drives, in terms of novel control and modulation techniques, design and modeling approaches, drive topologies, or fault diagnosis algorithms.



[mdpi.com/si/98084](https://mdpi.com/si/98084)

# **Special Issue**



an Open Access Journal by MDPI

## **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

## **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.

## **Author Benefits**

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within *Scopus*, *SCIE (Web of Science)*, *Inspec*, and other databases.

**Journal Rank:** JCR - Q2 (Engineering, Mechanical) / CiteScore - Q1 (Control and Optimization)

## **Contact Us**

---

*Machines* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/machines](http://mdpi.com/journal/machines)  
[machines@mdpi.com](mailto:machines@mdpi.com)  
[X@Machines\\_MDPI](https://twitter.com/Machines_MDPI)