



## **Machines Predictive Control**

Guest Editors:

**Prof. Dr. Antonio J. Marques  
Cardoso**

CISE—Electromechatronic  
Systems Research Centre,  
University of Beira Interior,  
Calçada Fonte do Lameiro, P-  
6201-001 Covilhã, Portugal

**Dr. Imed Jlassi**

CISE - Electromechatronic  
Systems Research Centre,  
University of Beira Interior,  
Calçada Fonte do Lameiro, P-  
6201-001 Covilhã, Portugal

Deadline for manuscript  
submissions:

**closed (28 February 2022)**

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

In recent years, Model Predictive Control (MPC) has been a powerful advanced control technology in industrial machine drives, due to its superior control performance, excellent dynamic response and the ability to easily include multiple-objective control into the cost function. At each sampling time, MPC defines the control action by minimizing a cost function that describes the desired machine behavior. This cost function compares the predicted variables to be controlled with their references. The predicted variables are calculated from the machine model and duplicated according to the possible voltage vectors of the power converter.

Topics include, but are not limited to, the following research areas:

- New MPC of electrical machines
- Stability and robustness of MPC
- Model-free predictive control approaches
- MPC algorithms with reduced computational complexity
- Implementation issues of MPC
- Artificial intelligence and data-driven in predictive control





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://www.x.com/Machines_MDPI)