

# Special Issue

## Design and Experimental Activity of Testing Machines and Mechanical Test Rigs

### Message from the Guest Editors

Many mechanical applications require very specific testing of components and materials, such as turbomachinery, which undergoes fretting fatigue or dynamic vibrations, full-scale testing of large components, or gears of any size and other mechanical power transmission components, etc. Each of these applications usually require a dedicated test rig or at least the development of a piece of equipment to be combined with an already-existing testing machine. Most of the time, these testing facilities need to be both conceived and then designed and commissioned. This activity is usually quite demanding, not only in terms of budget, but also quite challenging from a design point of view. Moreover, these testing machines usually require a significant electronic and control part which needs to be interfaced and properly tuned with the mechanical devices. This Special Issue aims to comprehensively showcase all the steps of the design of any of these testing devices. Both the mechanical design and/or the control systems are interesting topics of this Special Issue.

---

### Guest Editors

Prof. Dr. **Ciro Santus**

Department of Civil and Industrial Engineering—DICI, University of Pisa, Largo Lucio Lazzarino 1, 56122 Pisa, Italy

Dr. **Massimiliano De Agostinis**

Department of Industrial Engineering, University of Bologna, Viale del Risorgimento, 2, 40136 Bologna, Italy

---

### Deadline for manuscript submissions

20 February 2025



## Machines

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.1  
CiteScore 3.0



[mdpi.com/si/171044](https://mdpi.com/si/171044)

*Machines*

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 2.1  
CiteScore 3.0



[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 - Q2 (Control and Optimization)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2024).