

Special Issue

Dynamic Analysis of Multibody Mechanical Systems

Message from the Guest Editor

The central goal of this Special Issue is to offer an overview of the state-of-the-art research in the kinematic, static, and dynamic analysis of multibody mechanical systems, on the development of effective and efficient algorithms to address these issues, and on the engineering applications that lie in this context.

Consequently, the subjects covered in this Special Issue belong to a broad framework and encompass a wide range of fundamental aspects and engineering problems. The topics of interest for this Special Issue include, but are not limited to, mathematical modelling of articulated mechanical systems, dynamic and vibration analysis approaches, experimental model validation techniques, finite rotation and large deformation problems concerning rigid-flexible multibody systems, methodologies for formulating and solving the differential-algebraic equations of motion, nonlinear control techniques for controlling the dynamic behavior of multibody systems, developments in the finite element technologies, and advances in the kinematic and geometric description of the motion in general.

Guest Editor

Dr. Carmine Maria Pappalardo

Department of Industrial Engineering, University of Salerno, Via Giovanni Paolo II 132, 84084 Fisciano, Italy

Deadline for manuscript submissions

closed (30 November 2023)



Machines

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 4.7



mdpi.com/si/64463

Machines
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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 17.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).