

## Special Issue

# Innovations in the Design, Simulation, and Manufacturing of Production Systems

### Message from the Guest Editors

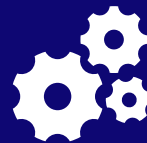
Design, simulation, and manufacturing are integral stages of a machine's production. Design engineering focuses on the creative process of developing innovative systems and units, ensuring process intensification, productivity, flexibility, and efficiency. The importance of this stage implies modern approaches in the CAx technologies, ensuring digitalization of the design process, which is an integral part of Industry 4.0. This Special Issue welcomes articles on innovative solutions in designing machine tools, mechatronic devices, robotic systems, flexible manufacturing systems, transport machines and systems, reconfigurable machines, fixture and tooling design, rotary machines and drive units, etc. Verification of the created products is mandatory before the manufacturing stage. The developed design should be checked in a virtual environment based on the operating conditions. For this purpose, numerical simulation and experimental studies can be applied. The reliability of the virtual and experimental studies should be justified in terms of quality requirements. The above-mentioned processes make it possible to proceed to the manufacturing stage.

### Guest Editors

Prof. Dr. Vitalii Ivanov  
Prof. Dr. Ivan Pavlenko  
Prof. Dr. Katarzyna Antosz

### Deadline for manuscript submissions

closed (28 February 2026)



## Machines

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## 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.

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### 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

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