

# Special Issue

## Smart Manufacturing Systems and Processes

### Message from the Guest Editors

In the era of Industry 4.0, driven by digitalization developments and ever-increasing global competitiveness, the manufacturing industry needs smart and agile machining systems and processes. Over the last few years, and taking advantage of the development of new communication technologies (Internet of Things—IoT, Communication Protocols), non-invasive sensors, big data analytics and cloud computing, several research works have been carried out on the development of cyber-physical systems, including CPSs and Digital Twins (DTs), for monitoring and controlling CNC Machine Tools (CNMTs) and optimizing machining conditions. Nevertheless, a significant amount of work is still needed to validate these technologies under an industrial environment. Topics within the scope of this Special Issue include, but are not limited to:

- Machine diagnostics and prognostics (condition monitoring);
- Systems and control engineering;
- Applications of automation;
- Mechanical engineering;
- Computer engineering;
- Mechatronics;
- Mechanical systems, machines and related components;
- Machine vision.

### Guest Editors

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### Deadline for manuscript submissions

closed (31 December 2024)



## 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  
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