

Special Issue

Smart Tools in Advanced Machining

Message from the Guest Editors

In order to provide a comprehensive overview of the research progress in this field, disseminate excellent research results, and promote the development and application of smart tools, this Special Issue focuses on presenting measures for the design and optimization of smart tools, techniques for process condition monitoring, and predictive tool maintenance, etc. The scope of this Special Issue includes, but is not limited to, the following:

- Smart tools with multi-sensor perception, e.g., force, temperature, vibration, acoustic emissions;
- Machining performance control based on smart tools;
- Design optimization for smart tools;
- Sensing and data processing for smart tools;
- Digital twin for smart tools;
- Tool coating;
- Integration and optimization of smart tools with CNC machining systems;
- Tool condition monitoring and predictive maintenance;
- Smart tool lifecycle management and sustainable development.

Guest Editors

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Deadline for manuscript submissions

closed (31 August 2025)



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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.

Editor-in-Chief

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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).