

# Special Issue

## Artificial Intelligence Techniques for Tool Wear Analysis in Material Processing Technologies

### Message from the Guest Editor

Tool wear analysis is a critical aspect of material processing technologies, impacting productivity, quality, and cost efficiency across various industrial applications. With the advent of artificial intelligence (AI), there has been a significant advancement in monitoring, predicting, and managing tool wear, enhancing the overall efficiency and lifespan of tools used in manufacturing processes. This Special Issue aims to explore the latest and most significant developments in the application of AI techniques for tool wear analysis in material processing technologies. We invite original research articles that contribute to the numerical, theoretical, and experimental understanding of tool wear mechanisms and AI-based predictive models. Review articles that offer comprehensive insights into the state-of-the-art in this domain are also highly welcomed.

### Guest Editor

Prof. Dr. Jaroslaw Kurek

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### Deadline for manuscript submissions

closed (31 March 2025)



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### 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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