Special Issue

Advanced Design, Manufacturing, and Applications of Precision Machine Tools

Message from the Guest Editor

The pursuit of ultra-high precision and efficiency in modern manufacturing demands continuous innovation in machine tool design, fabrication, and application. This Special Issue focuses on cutting-edge technologies in precision machine tool development, including high-stiffness structural design, thermal error compensation, vibration suppression, advanced control systems, and smart monitoring. Additionally, it explores their applications in critical sectors such as aerospace, automotives, microelectronics, and medical device manufacturing. We invite original research and reviews addressing challenges in machining accuracy, dynamic performance optimization, energy-efficient machining, and digital twin integration. Contributions may cover theoretical advances, experimental validations, or industrial case studies.

Guest Editor

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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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