



New Processes and Machine Tools for Advanced Metal Alloys

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Message from the Guest Editors

Dear Colleagues,

Advanced materials are crucial for the development of many industrial sectors such as aerospace, automotive, energy, etc. These materials show superior mechanical characteristics of strength, hardness, toughness, and durability in relation to conventional materials. However, these materials are also characterized by their complicated casting or forge and low machinability. In addition, the development of new advanced materials requires the use of advanced manufacturing technologies and rigid machine tools. New processes, new cooling systems, tools, and coatings must be investigated to enable the machining of these advanced materials. Machines that apply the processes can be also improved by introducing new components, control approaches, and monitoring and recording systems.

The aim of this Special Issue is to highlight recent advancements related to new processes and machine tools for machining advanced alloys. Machines, processes, assisted processes, and new tools are now in a rapid evolution.





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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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