Special Issue

Tool Wear and Surface Roughness in Machining of Metallic Materials

Message from the Guest Editors

Tool wear is a major, well-known issue in metal cutting since process parameters are selected to provide the optimal productivity or economy. The way an object interacts with its surroundings is largely determined by its surface roughness, which is a part of its surface texture. To gauge a mechanical part's prospective performance, roughness is a useful metric to examine. So, in machining, the surface roughness of a machined part plays a vital role and depends on various factors. Thus, the study of surface roughness at both macroscopic and microscopic levels is important, particularly in machining. Moreover, characteristics such as fatigue strength, wear rate, corrosion resistance, residual stress inclusion, dimensional deviations, white layer, dark layer formation, microhardness of the machined surface, morphological aspects of the machined surface, etc., can all be affected by the surface quality. This Special Issue aims to encourage the scientists and researchers to present their results in papers related to both experimental and theoretical studies.

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Message from the Editor-in-Chief

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.

Editor-in-Chief

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