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Metals Machining – Recent Advances in Experimental and Modeling of the Cutting Process

Guest Editor:

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Deadline for manuscript submissions:
closed (31 May 2018)

Message from the Guest Editor

Dear Colleagues,

Metals machining involves severe loading at the cutting zone. Work-material behavior, cutting tool characteristics, cutting conditions and configuration, all have effects on cutting process performance, machined part quality, and cutting cost. In the last few years, several research works have been conducted to understand the physical phenomena occurring when machining metal-based materials. However, a great deal remains to be studied, because new high-performance metals are being developed and their machinability is not well controlled. Thus, the study of cutting phenomena in metals machining remains open.

This Special Issue invites the submission of high quality research articles related to the machining of metal-based materials. It covers a large topic and may include these main aspects:

- Metal machinability
- Work-material behavior
- Tribological behavior
- Microstructure evolution
- Chip formation mechanisms
- Surface integrity
- Tools wear, related to the machined metal and tool characteristics

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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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