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Monitoring of Cutting Process and Tool Condition of Metal and Metal Composite

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Message from the Guest Editors

Machining is used widely in various industries, and machine parts with high precision must be obtained and employed. This is an important process in machine industry.

The most common construction materials used in machining are steel and cast iron. But these materials are shrinking because of advanced, difficult-to-cut materials such as composites.

Tool life is significantly smaller with composite materials than with conventional materials, whereas the machining of composite materials can affect surface roughness and technological effects. During surface layer formation of composite materials, the random factor is relevant, and so are monitoring systems which can assess the machining process and tool life, as well as the technological effects in real-time machining. Such systems are based on acoustic emission, cutting forces, vibrations, noise, or temperature signals. And these signals, extraction of appropriate features and identification of the process and tool state is possible. Therefore, monitoring systems should significantly improve the technological effects, process efficiency and reduce costs.

We kindly invite you to submit a manuscript(s) to this Special Issue.

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Message from the Editor-in-Chief

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