



materials



Special Issue Reprint

## Machining—Recent Advances, Applications and Challenges

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The Special Issue *Machining—Recent Advances, Applications and Challenges* is intended as a humble collection of some of the hottest topics in machining. The manufacturing industry is a varying and challenging environment where new advances emerge from one day to another. In recent years, new manufacturing procedures have retained increasing attention from the industrial and scientific community. However, machining still remains the key operation to achieve high productivity and precision for high-added value parts. Continuous research is performed, and new ideas are constantly considered. This Special Issue summarizes selected high-quality papers which were submitted, peer-reviewed, and recommended by experts. It covers some (but not only) of the following topics:

- High performance operations for difficult-to-cut alloys, wrought and cast materials, light alloys, ceramics, etc.;
- Cutting tools, grades, substrates and coatings. Wear damage;
- Advanced cooling in machining: Minimum quantity of lubricant, dry or cryogenics;
- Modelling, focused on the reduction of risks, the process outcome, and to maintain surface integrity;
- Vibration problems in machines: Active and passive/predictive methods, sources, diagnosis and avoidance;



ce of machining in new concepts of machine–tool, and machine static and dynamic behaviors;  
ability of new composites, brittle and emerging materials;

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- Assisted machining processes by high-pressure, laser, US, and others;
- Introduction of new analytics and decision making into machining programming.

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