Machining—Recent Advances, Applications and Challenges

Message from the Guest Editors

- High performance operations for difficult-to-cut alloys, wrought and cast materials, light alloys, ceramics.
- Cutting tools, grades, substrates and coatings.
- New applications of machining in high-added value components, for aeronautics, automotive, windmill, energy, and other key sectors.
- Heat in metal cutting: Heat sources, accuracy in machining, prediction and measurements of temperatures in the cutting zone.
- 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.
- Influence of machining in new concepts of machine–tool, and machine static and dynamic behaviors.
- Machinability of new composites, brittle and emerging materials.
- Sensor-assisted machining: Sensors and system architecture, intelligent/smart tools.
- Assisted machining processes by high-pressure, laser, US and others.
- Micromachining, challenges and applications.
- Introduction of new analytics and decision making into machining programming.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers fourteen comprehensive topics: Biomaterials; Energy Materials; Composites; Structure Analysis; Porous Materials; Manufacturing Processes; Advanced Nanomaterials; Smart Materials; Thin Films; Catalytic Materials; Carbon Materials; Materials Chemistry; Materials Physics; Optics and Photonics; Corrosion; Building Materials. The distinguished and dedicated editorial board and our strict peer-review process ensure the highest degree of scientific rigor and review of all published articles.

Materials provides an unique opportunity to contribute high quality articles and to take advantage of its large readership.

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