

## Special Issue

# 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.

### Guest Editors

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### Deadline for manuscript submissions

closed (31 May 2019)



## Materials

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## About the Journal

### Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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### Editor-in-Chief

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