Call for papers: *Journal of Micromanufacturing*

**Guest Editors**

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**Special Issue on Diamond Turn Machining**

*Journal of Micromanufacturing* invites original research papers/review papers for a forthcoming special issue on Diamond Turn Machining.

Topics of interest are listed below, but not limited to:

- **Tool, Part and Process Design**
  - Machine aspects: Structural design of the machine tool, methods of vibration isolation, ultra-fast controllers, air bearing design, etc.
  - Fabrication and accuracy of DTM-specific tools.
  - Specialized coolants for DTM.
  - Design considerations for complex DTM-processed geometries.

- **Process Quality Assurance**
  - Process optimization including tool, coolant, cutting parameters effects.
  - In-process monitoring.
  - Advanced sensors and sensing for DTM.
  - Advances in imaging and characterization of DTM parts.
  - Surface morphology and integrity.
  - Tool accuracy and tool wear compensation.
  - Metrology and certification of DTM parts.
  - Artificial intelligence and machine learning.
  - Fault detection, control, and compensation.

- **Measurement and Predictive Modeling of DTM Process Mechanics**
  - Multi-scale analytical and computational modeling of the process mechanics, especially the thermo-mechanics, and process-machine interaction dynamics.
  - Machining forces, vibrations and acoustic emission.
  - Measurement of thermal distribution.
  - Chip formation, contact and surface modification mechanisms.
  - Material phase transformations, micro structural variations.
  - Measurement and understanding of tool wear mechanisms.
  - *Work material considerations*: Microstructural evolution, heat affected zone, surface and sub-surface integrity, machining of reactive alloys, complex geometries across scales, processing of composite materials.

- **Applications and Implementation**
  - Aerospace and defense.
  - Biomedical implants.
  - Machining of nuclear materials.
  - Sustainability aspects, such as chip and coolant disposal and safety considerations.
  - Case studies and practical implementation in industry.

The manuscripts should be submitted before 31st December 2019.

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