International Journal of Automation Technology (IJAT)

Call for Papers:

Special Issue on On-Machine and In-Process Measurement for Smart and Precision Manufacturing

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Smart and precision manufacturing, which creates new innovations and technologies, has powerful ripple effects on other industries. In order to establish such manufacturing, not only conventional ultra-precision machining techniques have been improved but also novel, high-performance machining techniques have been developed for the manufacturing of diversified and complicated products. On-machine and in-process measurement is gaining in importance for emerging machining technologies as well as for conventional ones. Advanced techniques for machining and metrology as well as feedback systems for compensation manufacturing are required for the plasticity of on-machine and in-process conditions.

For smart solutions in precision manufacturing, the Internet of Things (IoT), which organizes all things that use data and connects them to the Internet, is playing an important role. It has been actualized through rapid progress in smart and real-time measurement technologies, through the miniaturization and speeding up of sensor technologies as well as intelligent data processors, and through the spreading of cloud technology, which accumulates huge amounts of data. As precision products with complex geometrical features and nanometer accuracies are realized, quality control must develop measurement and evaluation technologies. Nowadays, on-machine and in-process measurement are indispensable for quality control in smart and precision manufacturing systems.

This special issue focuses on manufacturing metrology, measurement and instrumentation for the progress of the state-of-the-art on-machine and in-process measurement systems, and sensor technologies in smart and precision manufacturing systems. It will collect contributions related but are not limited to the following topics:

* On-machine, in-process measurement and process monitoring
* Practical application of on-machine, in-process measurement
* Machine tool metrology
* Intelligent micro- and nano-metrology
* Multi-sensor fusion and multi-sensor cooperation
* Form and dimensional measurement and instrumentation
* 3D-surface textures and their micro-characteristics
* Machine learning and AI-aided measurement

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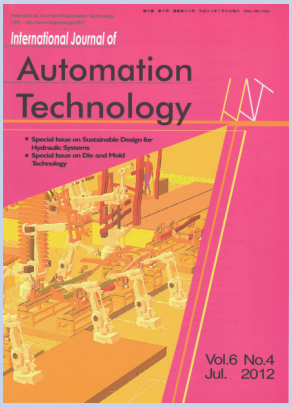

Pages and important deadlines:

Number of pages: Average 8 printed pages
Manuscripts should be in IJAT formats of Microsoft Word, TeX.

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