Special Issue

Open Challenges of On-Machine and In-Process Metrology for Precision Manufacturing

Message from the Guest Editors

This Special Issue will cover the current and most-pressing open challenges in the application of on-machine and in-process metrology for precision manufacturing. Submissions are particularly welcomed in the following subject areas: **1. Measurement for applications in process monitoring and control** - Innovative measuring technologies for on-machine and in-process metrology of fundamental quantities; - On-Machine and in-process measurement for monitoring components of manufacturing systems or entire manufacturing machines - On-Machine and in-process measurement of roundness/cylindricity/straightness/flatness; - On-Machine and in-process measurement of surface topography; **2. Measurement uncertainty estimation and calibration** - Estimation of measurement uncertainty and assessment of measurement error sources; - Calibration and self-calibration of measuring systems for on-machine and in-process metrology. **3. Data processing** - Novel computational solutions for fast and lightweight measurement data processing - AI and machine learning for on-machine and in-process metrology - Digital twins to support on-machine and in-process metrology.

Guest Editors

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Message from the Editor-in-Chief

Metrology draws together researchers from diverse areas of metrology or measurement technology in a wide variety of applications. I encourage you to submit your manuscripts for consideration or publication in the area of measurement engineering, according to the scope of the journal. *Metrology* is supported by our authors and their institutes through low article processing charges (APC) for accepted papers. We hope you will support the journal by becoming one of our authors.

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