Special Issue

Estimation and Control for Micro-Scale Cyber-Physical Systems with Applications

Message from the Guest Editors

This Special Issue will compile recent efforts contributing to smart sensing, perception, actuation, estimation and control techniques in the context of automation for micro-scale cyber-physical systems (MCPS) composed of micro/nanoscale components in micromachines. Contributions addressing state-of-the-art developments and methodologies, and perspectives on future developments and applications are also welcomed. The topics of interest include but not limited to:

- Smart sensing and actuation methods for MCPS
- Sensing network and data fusion optimization for MCPS
- Enabling technologies including multi agent systems and the internet of things (IoT) in MCPS
- Artificial-intelligent based on estimation and control for MCPS
- Robust, adaptive, resilient and intelligent-supported control method for MCPS
- Fault detection and fault-tolerant control/reliable control for MCPS
- Supervisory control and big data acquisition technologies for MCPS
- Software architectures to enable evolving MCPS
- Experimental and numerical validation of MCPS, especially in the areas of MEMS, micro/nanorobotics, biological micro-CPS, micromachines, micro-forming, micro-cutting process, Industry 4.0

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