Special Issue

AI-Enhanced Measurement and Control for Robotic Systems

Message from the Guest Editor

The integration of artificial intelligence (AI) into robotic systems is transforming traditional approaches to measurement, control, and decision-making. This Special Issue aims to highlight recent advances in AI-enhanced methodologies that improve the precision, adaptability, and autonomy of robotic platforms across diverse domains, including industry, healthcare, agriculture, and services. This Special Issue seeks to bridge the gap between theoretical developments and practical implementations, showcasing innovations that push the boundaries of perception, feedback control, sensor fusion, and adaptive behavior. Topics include, but are not limited to:

- AI-based sensor calibration and fusion;
- Learning-based motion and force control;
- Intelligent feedback and adaptive control systems;
- Deep learning for robotic perception and state estimation;
- Bio-inspired and evolutionary control techniques;
- Real-time decision-making and trajectory optimization;
- AI-driven predictive maintenance and fault detection;
- Applications in collaborative, mobile, aerial, and agricultural robotics.

Guest Editor

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Message from the Editor-in-Chief

Automation (ISSN 2673-4052) is an international peer-reviewed open access journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of automation and control system. Both experimental and theoretical papers are published, including all aspects of manufacturing systems, energy management systems, aerospace control systems, learning systems, intelligent control systems and so on. *Automation* organizes Special Issues devoted to specific automation and controlling areas and applications each year.

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