

Special Issue

Advances in Smart Manufacturing Process and Real-Time Control

Message from the Guest Editors

This Special Issue seeks high-quality studies focusing on cutting-edge advances at the intersection of manufacturing process engineering and intelligent real-time control systems. Topics include, but are not limited to, the following:

- Real-time monitoring and adaptive control strategies for smart manufacturing systems.
- Machine learning and AI-driven process optimization and fault diagnosis.
- Digital twin development and virtual commissioning for manufacturing processes.
- IoT-enabled sensor networks and data fusion for process intelligence.
- Edge computing and cloud-based architectures for industrial real-time control.
- Cyber-physical production systems (CPPS) and Industry 4.0/5.0 integration.
- Advanced process control (APC) with model predictive control (MPC) in smart factories.
- Human-robot collaboration and human-in-the-loop control systems.
- Intelligent quality control and real-time defect detection using computer vision.
- Energy-efficient manufacturing process scheduling and optimization.
- Robustness and resilience of real-time control systems under uncertainty.
- Case studies on smart manufacturing implementation in aerospace, automotive, electronics, and chemical industries.

Guest Editors

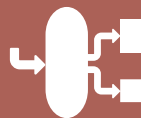
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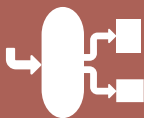


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