### Message from the Guest Editors

As the industrial sector progresses toward Industry 5.0, intelligent manufacturing systems' modeling, design, optimization, and maintenance have garnered increasing scholarly attention. This evolution emphasizes the integration of advanced cyber–physical systems, artificial intelligence, and human-centric technologies to foster sustainability, efficiency, and resilience in production processes. Central to this paradigm shift are the principles of process modeling, multi-objective optimization, and predictive maintenance, which are applied across various scales—from individual unit operations to entire manufacturing ecosystems. These methodologies aim to enhance resource utilization, minimize energy consumption, and improve system adaptability.  Topics include, but are not limited to, methods and/or application in the following areas:

- Smart manufacturing;
- Industrial fault diagnostics and prognosis;
- Predictive maintenance;
- Industrial reliability assessment;
- AI-driven optimization;
- Digital twins;
- Human–AI collaboration;
- Industrial IoT;
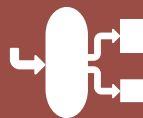- Data-driven decision-making.

### Guest Editors

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Dr. Cunsong Wang

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Prof. Dr. Li Jia

### Deadline for manuscript submissions

31 October 2025

# Processes

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### Message from the Editor-in-Chief

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### Editor-in-Chief

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