CALL FOR PAPERS - SPECIAL SESSION

"Data-Driven Approaches for Smart Manufacturing"

for CODIT 2025

July 15-18, 2025 • Split, Croatia

Session Co-Chairs:

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Session description:

The digital transformation of manufacturing is accelerating with the rise of AI-driven and data-driven approaches. Modern smart manufacturing systems must integrate real-time data analysis, machine learning models, and optimization techniques to improve efficiency, resilience, and sustainability. The complexity of today's manufacturing processes requires innovative modeling, decision-support, and predictive analytics to handle uncertainty, stochastic variations, and large-scale data streams.

The goal is to focus on advanced methodologies for designing, optimizing, and evaluating next-generation manufacturing systems, incorporating AI, digital twins, reinforcement learning, and hybrid analytical-simulation approaches. We aim to highlight novel strategies that leverage big data, IoT, and intelligent decision-making to enhance production planning, scheduling, and supply chain robustness.

The topics of interest include, but are not limited to:

- Al and machine learning for manufacturing optimization
- Digital twins and cyber-physical systems for smart factories
- Stochastic and uncertainty-aware production line design
- Markov decision processes and reinforcement learning for manufacturing
- Hybrid modeling: combining simulation, deep learning, and operations research
- Real-time data analytics and edge computing for industrial decision-making
- Autonomous systems and human-in-the-loop optimization
- Energy-efficient manufacturing and green production models

SUBMISSION

IMPORTANT: All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

DEADLINES

February 07, 2025: deadline for paper submission April 27, 2025: notification of acceptance/reject May 17, 2025: deadline for final paper and registration