

Manufacturing Data Science (Code: sjw5b)

Goal:

- Manufacturing is characterized by capital/labor-intensive, the short product life cycle, rapid technology migration, long production lead-time, and complex production networks. These characteristics bring more challenges and difficulties to the manufacturing management. This session focuses on how the data science or machine learning techniques support problem-solving and enhance the core competence in manufacturing industry. The special session focuses on data science in manufacturing. Theoretical research or empirical study are all welcome. The topics in this session include defect classification, maintenance scheduling, predictive maintenance, and process parameter optimization, etc.
- This session would like to provide a platform that offers opportunities to discuss, debate, and exchange ideas, in particular, in a world-side view of manufacturing system. We invite all the researchers, scholars, and graduates when they would like to develop the mathematical/empirical models and benefit the automation and data science field.
- The topics include but are not limited to:

Topics:

- Smart manufacturing and factory automation
- Agent-based collaborative automation systems
- Automated fault detection, diagnostics, and prognostics
- Big data, data mining, and machine learning
- Cyber physical production systems and industry 4.0
- Modeling, simulation, and optimization of automation systems
- Smart logistics and supply chains
- Sustainability and green

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