



IFIP IoT 2022 Special Session

IoT in Manufacturing

Scope

Sustainability (see UN's Sustainable Development Agenda), increased customer expectations and shorter product life cycles are challenging the manufacturing industry and companies that want to stay competitive. Trends like mass-customization and global supply chains have emerged which puts pressure for increasing flexibility and resilience in operations, which in turn are leading to Smart Factories made possible by the digital transformation and enabled by Internet-of-Things (IoT).

IoT systems in manufacturing may span the scope of a production cell or a plant but may also orchestrate global supply chains. In some cases, the product itself is even an active IoT entity, possibly linked to the factory's digital twin. Therefore the challenges for IoT in manufacturing are broad, ranging from predictive real-time behavior in below 1 one milli second accuracy to adaptability, safety, security, resilience, scalability, and trustworthiness just to name a few. Information security and cyber-security also takes center stage, as connected systems may be open to attacks. However, the value of IoT in manufacturing cannot be underestimated from the perspective of increased resource utilization and cost-efficiency.

The topics for this special session of interests include, but are not limited to the following:

1. Examples of IoT implementations in manufacturing
2. Examples of value creation utilizing IoT in manufacturing
3. Engineering and operation of Manufacturing IoT systems
4. Products enabled by or designed for Manufacturing IoT systems
5. Flexible production systems enabled by IoT
6. Security in the scope of Manufacturing IoT
7. Inclusion of legacy components and systems, obsolescence.
8. Manufacturing Execution Systems (MES)
9. Standards for IoT in manufacturing
10. Cyber-Physical Production Systems (CPPS)
11. Predictability of IoT Manufacturing systems
12. Usability and interaction with human operators

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Topics/ Keywords

- Manufacturing Systems
- Smart Factory
- Industry 4.0
- Artificial Intelligence
- Machine Learning
- Cyber-security

Submission procedure

Special sessions are included in the main Conference and follow the same reviewing process.

Short abstracts submission (100-150 words): Now

Full papers submission: May 6th, 2022

Acceptance Notice: Jun 17th, 2022

Final version Submission: Jul 1st, 2022

Acceptance of papers is based on the full paper (up to 18 pages). Each paper will be evaluated by three members of the International Program Committee.

When submitting on the web site, you have to indicate the name of the special session.

Submission procedure via EasyChair available on: <http://ifip-iotconference.org>, with copy by email to the chairs of the special session.