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Technological Challenges and Trends in Sensor-Based Smart Production Ecosystems

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Deadline for manuscript
submissions:
closed (30 April 2024)

Message from the Guest Editor

The demands that have originally triggered the initiative Industrie 4.0 in Germany, such as higher flexibility, smaller lot sizes, or manufacturing on demand, are not only relevant for production plants within enterprise but also for the cooperation between enterprises. One example are networks of suppliers and supply chain management where overarching objectives, such as sustainability and resilience, are becoming increasingly important. This Special Issue asks for papers that describe the technological challenges and trends in this transition.

The following topics shall be addressed:

- business models, use cases, and application scenarios;
- open manufacturing as a service (Smart Factory Web);
- role of and compliance with international IT standards;
- usage of Industrie 4.0 concepts, e.g., asset administration shell;
- cybersecurity risks and measures in production ecosystems;
- AI systems engineering;
- data sovereignty (needs, concepts, and technologies);
- role of international initiatives (such as GAIA-X, International Data Spaces (IDS), and Catena-X).



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Special Issue



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Message from the Editor-in-Chief

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