



Open Invited Track on *Industrial Data Spaces & Data Architectures*

Organised by:

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In the last years, an ongoing digitization of industry and the drive for collaboration along supply chain networks have highlighted the need for coordinated data collection, access and exchange. While digital twins can connect cyber-physical systems in production facilities, information exchange between various entities of a supply chain network faces significantly greater requirements and challenges regarding automated, secure, safe and trustworthy sharing of data. Information exchange, especially between different legal entities, is constrained by question regarding data ownership, secure transfer and storage as well as interoperability.

Industrial data spaces can provide a framework in which a multitude of participants can share information and benefit through coordination and cooperation. The fundamental concept allows information exchange based on clear and automated processes in which data safety, security and trust are ensured. Multiple concepts of data spaces are discussed in the literature, exhibiting different emphases in their respective data architectures. The relevance of such concepts for standardized and secure data exchange is evident by multiple European initiatives such as GAIA X, Factory X and Manufacturing X aiming to establish common data spaces for specific industries and showcase their respective application.

This session aims to explore recent advances in conceptualization, modeling and implementation of industrial data spaces and digital twins. Moreover, business models build upon such data spaces are a key interest. Thus, topics may include, but are not limited to:

- Architectures, functionalities, standards, use cases, applications scenarios and services of industrial data spaces, e.g., CATENA X or Manufacturing X;
- Management as well as the role of trust and power of industrial data spaces;
- Implementation technologies for digital twins and digital representations (e.g., asset administration shells);
- Standardized data architectures;
- Implementation of contractual frameworks and data ownership

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The corresponding authors need to submit their paper online (pdf format) as Open Invited Track Paper using the following code:

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Important dates:

- Draft paper submission: 30st November 2024
- Notification of acceptance: 30th January 2025
- Final paper submission: 28th February 2025