

Track: Industry 4.0 and Smart Manufacturing

The Industry 4.0 track aims to provide a platform for researchers to showcase findings and explore emerging technologies in the design and implementation of smart factories. Specific topics include, but are not limited to, the following:

- Intelligent IoT-based solutions for smart manufacturing
- Innovative sensing strategies for process monitoring and tracking of product history.
- Digital twin in product design and smart manufacturing
- · Smart interconnection and interoperation for digital twin
- · Machine learning techniques to improve process control and part quality
- · Real-time IoT data analytics, data aggregation, data abstraction and event detection
- · Integration of additive manufacturing in smart factories
- · Smart modeling of factory floors and manufacturing processes integrated with sensor data
- Manufacturing data analysis and diagnostics for real-time reporting using intranet capabilities and/or the cloud
- Human machine interface and communication technologies
- Augmented reality (AR), virtual reality (VR) and mixed reality (MR) immersive technologies
- Security, safety and privacy in Industry 4.0
- Edge-fog-cloud computing in smart factories
- · Privacy-preserving machine learning techniques
- Data Sharing/Exchanging for smart manufacturing
- The application of Distributed Ledger Technologies (DLTs) and blockchain for smart manufacturing
- Advanced robotics (collaborative and adaptive robots)
- Semantic Web of Things for Industry 4.0
- Blockchain, Al/ML, big data and IoT business model in smart energy
- · Industry 4.0 implementation and real-world case studies