21th IEEE International Conference on Factory Communication Systems (WFCS)

11-13 June 2025, Rostock, Germany

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DESCRIPTION

Research on **factory communications** has gained increasing relevance in recent years, with communication playing a fundamental role in automation systems. Advanced communication/ networking technologies and paradigms such as 5G/6G, WiFi7/WiFi8, Ethernet TSN, OPC UA, network softwarization, IIoT, have opened up a multitude of application possibilities in the industrial scenario. However, the availability of a variety of communication solutions, often employed in combination to meet the needs of different applications, have led to highly complex and heterogeneous factory communication systems. This complexity gives rise to new challenges that must be addressed to fully exploit the potential of these advancements towards a new generation of smart, autonomous, flexible and efficient automation systems.

The 21st edition of the WFCS conference aims to focus on all forms of communication solutions to support automation within factories and other contexts, with special consideration given to recent developments, new trends and research insights and future perspectives. As the single IEEE conference exclusively dedicated to communication for automation, WFCS is the elected forum for researchers, developers, and practitioners to review and discuss the latest advances in the field.

The conference, sponsored by **IEEE** is supported by the **IEEE Industrial Electronics Society** (IEEE-IES) and led by the IEEE-IES **Technical Committee on Factory Automation** (IEEE-IES TCFA), will be hosted by the University of Rostock (Germany)/Institute of Applied Microelectronics and Computer Engineering (**IMD**) and organized in collaboration with Institute of Electronics, Computer and Telecommunication Engineering CNR-IEIIT (Italy).

FOCUS

The conference primarily focuses on (but is not limited to) the following areas:

- Wired and Wireless Industrial Communication Systems and Technologies
- Industrial Internet of Things (IIoT)
- Cloud/Fog/Edge Computing Architectures and Applications in Industrial Automation
- Machine Learning and Data Analytics for Communication in Industry 4.0
- Security and Safety of Industrial Communication Systems
- Communication Protocols and Standards for Real-Time and Networked Embedded Systems (TSN, IEC 61850, IEC 62439, etc.)
- Communication in Cyber-Physical Systems and Distributed Control Systems
- Communication Challenges in Collaborative Robotics and Automation
- Sustainability in Smart Factories
- Case Studies, Industry Practices and Lesson Learned in Factory Communication
- Recent advances in communications in research domains with similar requirements/ characteristics (smart cities/transportation/living/grids/health, etc.)

PAPER SUBMISSION

Regular/Special Session Papers: up to 8 double-column pages, following the IEEE conferences template.

Work-in-Progress (WiP) Papers: up to 4 double-column pages, following the IEEE conferences template. Accepted WiP papers will be published in the conference proceedings.

Website: https://wfcs25.uni-rostock.de

WFCS 2025

IMPORTANT DATES

SS proposals:
Deadline: **December 06**, 2024
Notifications: **December 13**, 2024

Regular/SS submissions:
Deadline: **February 07**, 2025
Notifications: **March 14**, 2025
Final versions: **March 21**, 2025

WiP submissions:
Deadline: **March 25**, 2025
Notifications: **April 08**, 2025
Final versions: **April 15**, 2025

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