

20-23 APRIL 2027 Bilbao, Spain



CALL FOR DEMOS

Demo Session on Industrial Communication Systems

Demonstrations complement the conference through practical showcases of industrial best practices and cutting-edge advances from research and academia. The WFCS 2027 Demo Session is a high-profile forum for researchers, engineers, and industry practitioners working on factory communication systems. It offers a unique opportunity to engage directly with attendees, demonstrate working solutions, stimulate discussion on emerging research directions, and promote the adoption of innovative technologies and common frameworks. Demonstrations should showcase working prototypes, experimental platforms, industrial deployments, testbeds, or novel tools for factory communication systems. Participation from industry, research institutes, and academia is equally encouraged.

Prospective contributors are expected to submit a demo proposal in the form of a 2-3-page paper, including an architecture description and an illustration of the elements to be demonstrated. In addition, authors are encouraged to include a link to a short 5-10-minute video showcasing the proposed demonstration. All submissions must be written in English and use the standard IEEE two-column conference template. An accompanying separate document should also describe the demo setup details and requirements, e.g., regarding electricity, Internet access, etc. The demo proposals will be reviewed by the IEEE WFCS 2027 Program Committee and will be approved based on the availability of demo space as well as on the following criteria: (i) significance and originality of the contribution or demonstrated best practice; (ii) expected impact and interest for conference attendees; and (iii) quality, maturity, and technical depth of the implementation. Accepted demo papers will be included in the conference proceedings. At least one author of each accepted demo must register for the conference at the full rate, deliver a short introductory presentation, and present the demonstration during the conference. Demonstrations may include live presentations, remote connections to laboratory setups, pre-recorded video segments, posters, or combinations thereof.

TOPICS

Topics of interest and within the scope of IEEE WFCS 2027 include, but are not limited to, the following:

- Industrial Internet of Things (IIoT)
- Wired and Wireless Industrial Communication Systems and Technologies
- Cloud/Fog/Edge Computing Architectures and Applications in Industrial Automation
- Security and Safety of Industrial Communication Systems (IEC 738)
- Fault Tolerance for Reliability and Availability of Industrial Communication Systems
- Communication Protocols, Standards, and Emerging Technologies for Real-Time and Networked Embedded Systems (5G/B5G/6G, WiFi7/WiFi8, TSN, IEC 61850, IEC 62439, etc.)
- Communication in Cyber-Physical Systems and Distributed Control Systems
- Communication Challenges in Collaborative Robotics and Automation
- Traffic Scheduling and Application-Network Integration
- Case Studies, Industry Practices, and Lessons Learned in Factory Communication
- Recent Advances in Communications in Research Domains with Similar Requirements/Characteristics (Smart Cities, Smart Grid, Smart Transportation, Smart Health, Ambient Assisted Living, Smart Building/Home, Smart Agriculture, etc.)
- Management Aspects related to Heterogeneous Industrial Networks
- Industrial Localization, Positioning, and Wireless Sensing Technologies (Joint Communication and Localization, RTLS, Asset Tracking, and Digital Factory Applications, etc.)
- AI-enabled Industrial Wireless Networks (AI-assisted Radio Resource Management, ML for Industrial Communications, Autonomous Network Operation and Optimization, AI-driven Resilience and Fault Recovery, etc.)

Demo paper submission deadline: **February 22, 2027**

Demo acceptance notification: **March 18, 2027**

Final version of demo paper: **April 2, 2027**

DEMO CO-CHAIRS

Idoia De la Iglesia, *IKERLAN*, Spain

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WFCS 2027



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