

ETFA 2025

Porto

9-12 September

30th IEEE International Conference on Emerging Technologies and Factory Automation

Call for Papers - Track 1

Information Technology in Automation

Track chairs

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FOCUS. This track invites research on IT innovations driving automation and mechatronic systems. It emphasises advanced modelling methods, IT architectures, and software approaches for adaptability, resilience, and integration with enterprise systems. Topics include energy optimisation, support for the circular economy, and AI-driven solutions, with a strong focus on case studies demonstrating transformative applications.

TOPICS

- ❖ IT Modelling Techniques for Automation Systems
- ❖ Model-Driven Development and, Model-Based Engineering in Automation and Mechatronic Systems
- ❖ Data Modelling and Management along the Plant Life Cycle
- ❖ Domain-Specific Modelling and Programming Languages for Automation
- ❖ Knowledge-Based Systems, Ontologies, and Semantic Web
- ❖ Advanced IT Architectures for Automation, Including cyber-physical system (CPS), Distributed and Scalable Systems
- ❖ Vertical Integration and IT/OT Convergence with MES and ERP Systems
- ❖ Reusable Software Architectures, Product Lines, and Managing Variability in Automation Software
- ❖ Adaptive and Dynamically Reconfigurable Software for Automation Systems
- ❖ Engineering Methods for Distributed and Modular Automation Systems
- ❖ IT-Driven Energy Optimization and Management in Automated Systems
- ❖ Automation Systems Supporting Circular Economy (e.g., Product Passports and Lifecycle Integration)
- ❖ Safety, Security and Resilience Frameworks for IT in Automation Systems
- ❖ Case Studies and Application Reports Demonstrating IT Innovations in Automation
- ❖ AI enhanced Automation

- ❖ **AIM.** The aim of the conference is to bring together the international community to present the latest research results, share new ideas and engineering breakthroughs, and discuss state-of-the-art challenges and future directions in technology and innovation in the broad domain of Automation with a focus on Industrial and Factory Automation.
- ❖ **CONFERENCE FORMAT.** The conference will comprise multi-track sessions for regular papers, to present significant and novel research results with a prospect for a tangible impact on the research area and potential implementations, as well as work-in-progress (WiP) and industry practice sessions.
- ❖ **AUTHOR'S SCHEDULE (2025)**

❖ Regular and special sessions papers

Submission deadline April 18
 Acceptance notification May 23
 Deadline for final manuscripts July 4

❖ Work-in-progress/Industry practice papers

Submission deadline May 30
 Acceptance notification June 20
 Deadline for final manuscripts July 4

Track Program Committee

- ❖ Reza Abrishambaf, Miami University
- ❖ Virendra Ashwal, ABB Corporate Research Center Germany
- ❖ Robert Brennan, University of Calgary
- ❖ Friederike Bruns, Universität Oldenburg
- ❖ Kirill Dorofeev, Siemens AG
- ❖ Dieter Etz, TU Wien
- ❖ Alexander Fay, Helmut Schmidt Universität
- ❖ Andreas Fernbach, Siemens AG
- ❖ Georg Frey, Universität des Saarlands
- ❖ Roman Froschauer, University of Applied Sciences Upper Austria, Wels, Austria
- ❖ Thomas Frühwirth, TU Wien
- ❖ Grüner Sten, ABB Corporate Research Center Germany
- ❖ Georg Hackenberg, University of Applied Sciences Upper Austria
- ❖ Guolin Lyu, University of Calgary
- ❖ Alberto Morato, National Research Council of Italy, CNR-IEIIT
- ❖ Roman Obermaisser, Universität Siegen
- ❖ Federico Pérez, University of the Basque Country
- ❖ Alexander Perzylo, fortiss GmbH
- ❖ Shubham Sharma, Johannes Kepler University, Linz, Austria
- ❖ Thanikesavan Sivanthi, ABB Corporate Research Switzerland
- ❖ Gernot Steindl, TU Wien
- ❖ Thomas Strasser, AIT
- ❖ Tarik Terzimehić, fortiss GmbH
- ❖ Stefano Vitturi, National Research Council of Italy, CNR-IEIIT
- ❖ Jörg Walter, OFFS -- Insitute for Information Technology, Oldenburg, Germany
- ❖ Bianca Wiesmayr, JKU Linz
- ❖ Manuel Wimmer, JKU Linz
- ❖ Martin Wollschlaeger, TU Dresden