ETFA 2026 Västerås Sweden 8-11 September

31st IEEE International Conference on Emerging Technologies and Factory Automation

Call for Papers - Track 11
Vehicular Embedded Systems

Track chairs

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FOCUS. Vehicular embedded systems in modern vehicles, including the next generation of automated and connected vehicles, require precise time synchronization, deterministic communication, high-bandwidth, ultra-low latency, zero congestion loss, reliability, and fault tolerance, among others. Managing the complexity involved in their modelling and development, ensuring reusability, supporting timing analysis and certification, verifying safety, security, and predictability requirements, and establishing deployment and execution mechanisms pose significant challenges. This track is dedicated to meeting these requirements and addressing these challenges.

TOPICS

- Model- and component-based development of vehicular embedded systems
- Models and languages for vehicle software development, e.g., EAST-ADL and AUTOSAR
- Vehicular E/E architectures, e.g., distributed, domain, centralized, zonal, etc.
- In-vehicle communication protocols, e.g., CAN, CAN/FD, CAN-XL, Automotive Ethernet, TSN,
- Advanced computing platforms for vehicular systems, e.g., multi-core
- Support for timing predictability in vehicular embedded systems
- Safety, security and certification (e.g., ISO 26262) aspects in vehicular embedded systems
- Performance assessment, fault-tolerance and reliability issues in vehicular embedded systems
- Autonomous vehicles, advanced driver assistance systems, V2X communications, 5G
- Blended wired and wireless predictable communication in vehicular embedded systems, e.g., TSN and 5G
- Tool support, benchmarking, industrial case studies, and experience reports for vehicular embedded systems

Track Program Committee

- Petru Eles, *Linköping University, Sweden*
- Mikael Sjödin, *Mälardalen University, Sweden*
- Julio Medina, *Universidad de Cantabria, Spain*
- Sara Afshar, *Volvo Construction Equipment, Sweden*
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- Gaetano Patti, *University of Catania, Italy*
- Paul Pop, *DTU, Denmark*
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- Mehrdad Saadatmand, *RISE SICS, Sweden*
- Peter Ulbrich, *Technische Universität Dortmund, Germany*
- Gehad Alkady, *American University in Cairo, Egypt*
- Hassanein Amer, *American University in Cairo, Egypt*
- Nandinbaatar Tsog, NESTRA, Japan
- Fady Abouelgheit, *American University in Cairo, Egypt*
- Ihab Adly, *British University in Egypt, Egypt*
- Luxi Zhao, *Technical University of Munich, Germany*
- Zenepe Satka, *Mälardalen University, Sweden*
- *Daniel Bujosa, Technical University of Denmark*

AIM. The aim of the conference is to bring together researchers and practitioners from the industry and academia and provide them with a platform to report on recent advances and developments in the newly emerging areas of technology, as well as actual and potential applications to 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 (2026)

Regular and special sessions papers
- Submission deadline ..... April 19
- Acceptance notification ..... May 25
- Deadline for final manuscripts ..... July 4

Work-in-progress/Industry practice papers
- Submission deadline ..... May 31
- Acceptance notification ..... June 19
- Deadline for final manuscripts ..... July 4