



Call for Papers

Track 11 – Vehicular Embedded Systems

Track co-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

AIM

The ETFA 2024 conference brings together professionals from industry and academia to share cutting-edge concepts, recent developments, research results, and practical achievements in industrial and factory automation. The key goal is to foster the enhancement and application of scientific techniques, models, and tools that support the efficient design and operation of industrial and factory automation systems.

SOLICITED PAPERS

- ◆ Original Research (Regular) ◆ Surveys ◆ Industry practice ◆ Work-in-progress

The working language of the conference is English, For submission rules, please refer to the Author's Instruction on the conference website.

PAPER ACCEPTANCE

Accepted, registered, and presented papers will be copyrighted by IEEE and published in the conference proceedings. The proceedings will be available in the IEEE Xplore® Digital Library. The final manuscript must be accompanied by a registration form and a registration fee payment proof and it is mandatory that at least one author attends and presents the paper at the conference. Failure to adhere to these guidelines may result in paper exclusion from post-conference distribution via IEEE Xplore by the ETFA 2024 Organizing Committee. All conference attendees must pay the conference registration fee and cover their own personal expenses for travel and accommodations.

AUTHOR'S SCHEDULE 2024

◆ Regular and special sessions papers

Submission deadline April 28th
Acceptance notification May 31st
Deadline for final manuscripts July 1st

◆ Work-in-progress/ Industry practice papers

Submission deadline May 26th
Acceptance notification June 17th
Deadline for final manuscripts July 1st

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