ETFA 2026 Västerås Sweden 8-11 September

31st IEEE International Conference on Emerging Technologies and Factory Automation

Call for Papers - SS 08
Emerging Intelligent Technologies for Automated Logistics Systems: Agents, Perception, and Planning in Practice

Organized and Chaired by

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FOCUS This special session focuses on emerging intelligent technologies for automated logistics systems with a strong emphasis on vertical integration across system layers, from multimodal perception and embodied agents to decision-making, system configuration and autonomous planning. Rather than addressing these technologies in isolation, the session highlights architectures and approaches that connect sensing, interpretation, reasoning, and execution within unified logistics solutions. The goal is to examine how tightly integrated methods enable robust and adaptive logistics automation in real-world environments. The session is explicitly designed to foster technical dialogue across traditionally separated research areas.

TOPICS of interest include, but are not limited to:

- Vertically integrated architectures for intelligent logistics systems
- Agent-based control and coordination across system layers
- Coupling perception, reasoning, and planning in logistics
- Multimodal perception and sensor fusion for logistics tasks
- Embodied agents in mobile logistics platforms
- Integrated task and motion planning in logistics environments
- Multi-agent planning and execution in robot fleets
- Cross-layer system design for autonomous logistics
- Data-to-decision pipelines for logistics automation
- Distributed intelligence from edge perception to system planning
- System-level validation of integrated logistics solutions

- **AIM.** The aim of this special session is to bring together researchers and practitioners working on different technical layers of intelligent logistics systems and to promote integrated, system-level perspectives. The session encourages contributions that demonstrate how perception, agent-based methods, and planning can be combined into coherent operational solutions rather than treated as isolated components. By fostering cross-layer dialogue and presenting vertically integrated approaches, the session seeks to accelerate the development of scalable, adaptive, and practically deployable logistics automation systems. Emphasis is placed on architectural coherence, experimental validation, and application-driven system integration.

- **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.

- **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