ERTS 2026

EMBEDDED REAL TIME SYSTEMS

5–6 th February 2026 - Pierre Baudis Convention Center

CALL FOR PAPERS

The ERTS conference is a unique biennial European cross-sector event on Embedded Real-Time Systems, a forum for top-level scientists with representatives from universities, research centres, industrial key players, and agencies addressing critical systems and applications. Usually, this event includes more than 70 talks, up to 400 participants and 50 exhibitors.

ERTS is:
- a conference with high-level scientific and technical presentations
- an exhibition forum covering a wide range of innovative products and services, for improving direct relationship between providers and users
- a unique forum involving industry and academia to share knowledge and extend your personal network.

The conference targets all the domains where embedded systems are crucial, such as transportation (aeronautics, automotive, railways, marine, unmanned vehicles...), space exploration and satellite applications, healthcare, industry 4.0, IoT, robotics, defence, energy, telecoms. The conference welcomes submissions reporting academic and industrial research, practical experiments and use cases, feedback on new technologies, and position papers on open challenges or major trends.

This edition welcomes contributions that present new and inspiring ideas for the development, deployment, and operation of safe, secure, autonomous, and sustainable systems. Submissions are encouraged to explore innovative methods for the dependable integration of Artificial Intelligence algorithms, as well as the application of these techniques in the design and optimization of critical embedded systems. We also invite work addressing state-of-the-art software and hardware engineering practices aimed at achieving the high-performance computation and communication capabilities demanded by next-generation embedded systems.

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IMPORTANT DATES :

Regular abstract & short paper submission (4 pages)	**Jun. 8th, 2025**
Acceptance Notification	**Sep. 26th, 2025**
Call for nominations: ERTS 2026 PhD Dissertation Award on Embedded critical computing system	**Oct. 2nd, 2025**
Regular paper for review (10 pages)	**Nov. 30th, 2025**
Final paper (short & regular)	**Jan. 11th, 2026**

Submission guidelines are on www.conference-erts.org

Where?

Pierre Baudis Convention Center
11 Esplanade Compans Caffarelli
31000 Toulouse

Contact

ERTS 2026/SEE Office
congres@see.asso.fr
Organizing & Scientific Committee

Visit Conference ERTS website

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CONFERENCE TOPICS

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Original and unpublished submissions are solicited, which may be under two forms: Regular and Short papers. ***You will find the template papers on our website.***

• **Regular papers** presenting achieved results. The selection will be based firstly on the review of extended abstract (4 pages) followed by the review of the full paper (10 pages) for final acceptance. Accepted regular papers will be published in the proceedings and presented in an oral session at the conference (registration and presentation by one author are mandatory).

• **Short papers** reporting on work in progress. The selection will be based on the review of the full short paper (4 pages). Each accepted short paper will be published in the proceedings and presented both as a poster and in a five-minute oral presentation at the conference (registration and presentation by one author are mandatory).

Submissions are invited across all aspects of critical embedded real-time systems, with a particular focus on the following technological domains and topics:

Embedded Computing Platforms

- High-performance embedded computing
- Multi-core and many-core processors
- Hardware accelerators (FPGAs, GPUs, NPUs…)
- Networks-on-chip
- Real-time operating systems
- Middleware and hardware abstraction layers
- Virtualization
- Service-oriented platforms

Models of Computation and Computing Paradigms

- Synchronous execution models
- Logical execution time
- In-memory computing
- Quantum computing

Networked and Distributed Systems

- Deterministic networks
- Field buses
- Wireless systems (5G, WiFi 6)
- Software-defined networks
- Communication paradigms (e.g., DDS)
- Resource scheduling
- Distributed architectures
- Edge computing

System Engineering

- Model-based system and safety engineering
- Agile techniques
- Requirement engineering
- Product line engineering
- AI-supported system engineering

Software and Hardware Engineering

- Programming languages for embedded systems
- High-level Synthesis
- Software development frameworks and IDEs
- Domain-specific languages
- Rapid prototyping techniques
- AI-supported software and hardware engineering

Simulation and Emulation

- Virtual engineering and simulation
- Digital twins
- Rapid prototyping
- AI-based surrogate models

Embedded Artificial Intelligence

- AI algorithms
- AI deployment
- AI evaluation

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For each of these domains, emphasis is placed on the following key properties and considerations:

• **Performance Optimization:** Execution and communication latency optimization, energy optimization, etc.
• **Engineering Efficiency:** Agile methods, model-based engineering, AI-driven development, rapid prototyping, low-code platforms, and AI-supported engineering.
• **Resilience:** Fault tolerance, radiation hardening, health monitoring, safety analysis techniques, etc.
• **Cybersecurity:** Security analysis, trusted execution, data protection, secure communications, blockchain, etc.
• **Development Assurance and Certification**: Compliance with certification standards and regulations, timing analysis, trustworthy and explainable AI.
• **Scalability:** Distribution, modularity, etc.
• **Autonomy:** Real-time decision-making, smart systems, and autonomous verification.
• **Sustainability:** Energy management, life cycle design, green computing, recycling and upcycling electronics, frugal AI, etc.
• **Sovereignty:** Open-source software and hardware, secure and independent supply chains, etc.
• **Efficient Human-System Collaboration:** User-centred design, behaviour monitoring, human-system task sharing, remote operation interface, and societal impacts of AI.

ERTS is an excellent platform for sharing field experiences, particularly in the following areas:

• **Automotive Systems**: In-vehicle high-performance computing platforms, vehicle connectivity and cloud computing, intelligent vehicle-Cloud services, new concept for cybersecurity, computing and communication for Software Defined Vehicle, smart sensors and actuators, service oriented architecture, digital twins platform from road to cloud, autonomous and AI-based systems, safety and trustworthiness, generative IA for software engineering, formal approaches for verification and validation, ethical and legal issues in autonomous vehicles, user experience for autonomous control, improved safety with driver monitoring and vulnerable interaction electronic eco-design and recycling.

• **Aeronautical and Space Systems:** Fault-tolerant and radiation-hardened hardware, distributed architectures for satellite and UAV systems, energy optimization for long-duration missions, middleware and virtualization in aerospace systems, space-qualified networks and protocols, integrated modular avionics, model-based systems engineering (MBSE) for aerospace applications, simulation and digital twins for mission planning, verification, validation, and certification for space systems, software development frameworks for real-time aerospace applications, dependability and fault tolerance in space systems, cybersecurity for satellite communication and UAVs, and health monitoring and predictive maintenance for aerospace systems.

• **Industrial IoT (IIoT) and Smart Manufacturing:** Embedded computing platforms and architectures, distributed architectures for industrial systems, software-defined networks (SDN) for industrial IoT, energy management for smart manufacturing, AI-driven development for industrial IoT applications, virtual engineering and digital twins for manufacturing systems, rapid prototyping and simulation for industrial applications, fault tolerance and predictive maintenance for IIoT systems, cybersecurity in industrial real-time networks, and diagnosis and health monitoring for smart factory equipment.

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