Call for Papers

Connected and Automated Vehicles (CAVs): Intelligent Communications, Network, and Service Management—Hybrid

The 22nd International Conference on Wireless Communications and Mobile Computing

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Scope

Connected and Automated Vehicles (CAVs) represent a transformative paradigm in intelligent transportation, enabling vehicles to communicate, perceive, and make autonomous decisions within dynamic Cyber-Physical Systems (CPS). The intelligent CAVs ecosystem strives to optimize mobility, safety, and energy efficiency while reducing environmental and infrastructural strain. CAVs combine the strengths of Vehicle-to-Everything (V2X) communications, networked sensing, and Artificial Intelligence (AI)-driven decision intelligence to create adaptive, cooperative, and resilient transportation systems. Intelligent communication frameworks form the foundation of this ecosystem, providing ultra-reliable, low-latency, and context-aware connectivity through next-generation wireless technologies such as 5G/6G, edge-assisted networking, and software-defined vehicular infrastructure. Complementing this, intelligent network architectures enable real-time coordination among vehicles, Roadside Units (RSUs), and cloud-edge servers, ensuring robust information exchange for safety-critical applications, traffic optimization, and cooperative perception. At the service layer, autonomous service management and orchestration techniques leverage machine learning, digital twins and distributed analytics to predict network conditions, manage dynamic workloads, and guarantee Quality of Experience (QoE) across heterogeneous mobility services.

The aim of this workshop is to explore how the convergence of communication, networking, and service management can jointly empower next-generation vehicular ecosystems that are safe, sustainable, and self-managing. The workshop invites high-quality papers that address the urgent need for intelligent, reliable, and adaptive vehicular ecosystems. The workshop will cover topics ranging from AI-driven vehicular communication protocols, multi-access edge collaboration, and cooperative perception, to predictive resource allocation, service management, and secure, low-latency orchestration of autonomous driving services.

Topics

Accepted papers will be published in the IEEE IWCMC 2026 proceedings and will be submitted to the IEEE digital library (IEEE Xplore). Authors are welcome to submit original papers (not published before and/or simultaneously to another venue) with topics that include but are not limited to:

- AI-driven communication and networking for connected and automated vehicles
- 5G/6-enabled Vehicle-to-Everything (V2X) and Ultra-Reliable Low-Latency Communication (URLLC)
- Cloud, edge, and fog computing architectures for cooperative vehicular intelligence
- Federated, distributed, and multi-agent learning for CAV perception and control
- Digital-twin modeling and simulation for intelligent mobility and traffic management
- Resource allocation, scheduling, and orchestration for vehicular networks
- Security, privacy, and trust management in CAV communication and control
- Data-driven predictive maintenance and fault-tolerant vehicular operations
- Cooperative perception, sensor fusion, and networked sensing for safety-critical applications
- Cross-layer design and adaptive protocol stacks for vehicular CPS integration
- Human-in-the-loop and explainable AI approaches for safe autonomous driving
- Energy-efficient communication and sustainable vehicular networking
- Testbeds, simulations, and real-world deployments of CAV networking systems

Submitted papers are encouraged to address novel technical challenges or industrial and standard aspects of the key technologies for sustainable and secure cognitive buildings/cities.

Important Dates

Same deadlines as the main conference dates.

Note: Within this workshop, there will be one Best Paper Award.