

Special Issue

Innovation of CAV: Advanced Technology and Sustainable Applications

Message from the Guest Editors

With the rise of smart cities, building a safe, efficient, low-carbon, and sustainable transportation system has become a global priority. Connected and Autonomous Vehicles (CAVs), as a core component of future mobility, are key to transforming modern transportation. Their capabilities in perception, decision-making, and control under complex traffic conditions are vital to advancing autonomous driving. This Special Issue focuses on recent advances in core CAV technologies, including intelligent perception, data- or model-driven decision-making and control algorithms, aiming to improve CAV safety and stability and support greener urban transport. The integration of AI and large language models (LLMs) is accelerating CAV deployment in shared and multimodal systems, enhancing traffic efficiency and reducing emissions. We welcome high-quality research on AI- and LLM-enabled CAVs, CAV integration into transport systems, and innovations supporting sustainable mobility. Topics include perception, planning, control, platooning, mixed traffic, infrastructure optimization, AI/LLM applications, and shared CAV operations.

Guest Editors

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Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

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