

Special Issue

Control and Path Planning for Autonomous Vehicles

Message from the Guest Editor

The fusion of autonomous driving and smart mobility demands innovative advances in decision-making, control, path planning, and validation, ensuring smooth integration with intelligent transportation systems. As key Industry 4.0 elements, autonomous vehicles require embodied intelligence linking perception, action, and environment-aligning with this journal's focus on intelligent mechanical and cyber-physical systems. This Special Issue promotes certifiable autonomous driving technologies via AI-enhanced decision-control, adaptive navigation, and rigorous testing. We invite original research, reviews, and case studies combining theory and industrial relevance, especially on embodied intelligence (e.g., sensorimotor integration) and human-centric smart mobility. Contributions should present reproducible methods validated through simulations, hardware-in-the-loop, or real-world deployment. Interdisciplinary studies bridging robotics, transport engineering, and intelligent mechatronics are encouraged to advance industrial-ready intelligent machinery. Join us in shaping autonomous driving as a foundation for smart, safe, and sustainable mobility.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided. There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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