



Journal of Autonomous Vehicles and Systems

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The *Journal of Autonomous Vehicles and Systems* will debut its Inaugural Issue at the 2020 International Mechanical Engineering Congress and Exposition (IMECE 2020). To be reviewed for inclusion in this Inaugural Issue, papers should be submitted by July 1, 2020.

The purpose of *Journal of Autonomous Vehicles and Systems* is to provide an international platform for the communication and discussion of technical knowledge and solutions in the transformative areas of the research and engineering design of autonomous vehicles and systems that operate in all media and inter-medium environments: ground, air, space, and water. The focus of this journal is on an autonomous vehicle system-of-systems approach to modeling, simulation, design, and physical and virtual testing. The vehicle applications include, but are not limited to, personal and cargo transportation, construction and forestry, farming, scientific research, investigation of the underground, air and water, exploration of other planets, infrastructure monitoring, surveillance, military, and beyond.

Topic areas include, but are not limited to: autonomous vehicle and multi-domain system dynamics in interaction with multi-physics environment in different media; transdisciplinary-inspired design concepts for safe and secure performance, energy efficiency, and survivability of autonomous vehicles and systems; intelligent morphing and dynamics of autonomous vehicles and systems; intelligent exteroceptive and proprioceptive sensing, actuation, decision-making and controls for agile dynamics and mission/task fulfillment; localization problems, landscape, air and aquatic environment sampling; fault-tolerance in severe, uncertain, and adversarial environments; human-in-the-loop and autonomous intelligent decision making related to dynamics and mission/task learning and fulfillment; integration of autonomous vehicles into the manned and unmanned traffic of their respective media; artificial intelligence and social behavior factors and challenges for communication, decision making, and dynamic interaction between (i) autonomous vehicle systems, (ii) autonomous vehicles, and (iii) autonomous vehicles and infrastructure in a particular medium and inter-medium environments; integration of modeling and simulation with gaming technologies for autonomous vehicle design and training purposes; and transformative conceptual and engineering design for life cycle management of autonomous vehicles and autonomous systems.

Scope

- Artificial intelligence
- Intelligent decision making, controls, and observation
- System models
- Modeling, simulation, and designing autonomous vehicle systems for their autonomy
- Payload models
- Proprioceptive sensors in autonomous vehicle systems and exteroceptive sensors for autonomous vehicle and environment interactions
- Outdoor and cyber-physical indoor proving grounds and research facilities
- Inputs/outputs and environmental models in autonomous vehicle simulation and design
- Gaming environments

Submission Guidelines

All submissions should be prepared in accordance with the ASME [Author Guidelines](#) and be submitted through the ASME [Journals Connect webpage](#) (journaltool.asme.org). Select *Journal of Autonomous Vehicles and Systems*.

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