

Special Issue on
**Infrastructure Adaptability in Connected
and Autonomous Vehicle-Enabled Traffic
Flow Dynamics**

WILEY



CALL FOR PAPERS

Advancements in information and communication technology, coupled with smart infrastructure systems, mean that extensive development of connected and autonomous vehicles (CAVs) is anticipated over the next few decades. CAV systems not only bring many opportunities to improve transportation, but also pose challenges for infrastructure adaptation.

More specifically, the transition from human-driven to computer-driven vehicles might require changes to road markings, signage and signalization, traffic management measures, service stations, and access management. New research is emerging from developing CAV systems which aims to tackle the question of how CAVs can function efficiently, reliably, and safely on existing infrastructures, and how infrastructures can be improved to speed up the deployment of CAV systems.

This special issue aims to compile recent studies related to infrastructure adaptability in relation to CAV-enabled traffic flow dynamics. Original research and review articles related to infrastructure design, operation, maintenance, improvement, and investment for CAV systems will be considered. All aspects of theory, simulation, mathematical, and real experimentation are of interest. The focus is also on the use of big data generated from multiple sources to better understand the interactions between CAV-enabled traffic flows and various infrastructures, with respect to network capacity and traffic safety.

Potential topics include but are not limited to the following:

- ▶ Value, role, and impact of various infrastructures on CAV-enabled traffic flow dynamics
- ▶ Demonstration and simulation of communication technologies in CAV systems
- ▶ Unconventional design of infrastructure adapted to CAV systems
- ▶ Existing infrastructure maintenance and improvement to support CAVs
- ▶ CAV impacts on design, operation, and management of different infrastructures
- ▶ Big data analytics in interactions between CAV-enabled traffic flow and infrastructures
- ▶ Simulation, evaluation, and optimization of new infrastructure deployment
- ▶ Human factors and safety performance in infrastructure
- ▶ Financial analysis of infrastructure investments to maximize the benefits of CAVs
- ▶ Policy analysis on alternative CAV-related infrastructure and other related topics

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jat/caavv/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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