

## Call for Papers

### Feature Topic on Autonomous Driving Technologies in Challenging Environments

The intelligent and connected and autonomous vehicle (ICV) technology is one of the most promising directions, attracting attention from a number of technology providers as well as automotive manufacturers. Although there have been remarkable achievements all over the world, connected and autonomous vehicles still face many challenges. For now, most of high-level autonomous driving system is developed under relatively simple and ideal scenarios, such as highway, industrial park or traffic jam conditions. However, the dynamically varying and challenging environments, e.g., urban canyon, subterranean or unstructured scenes, and even the areas without priori knowledge, will cause uncertainties and disturbances, possibly making the positioning, perception as well as planning system divergent and interruptive, and significantly limiting the reliability of ICV system.

To address the above issues, the special section aims to gather the innovative and diverse contributions and share the latest technologies on ICVs in diverse and challenging environments. The topics of interest include, but are not confined to:

- Positioning, localization and mapping based on multi-sensor fusion in cross-country or urban canyon scenes
- Sensing, sensor fusion, and autonomous perception with anti-degeneration capability
- Cooperative decision making and control for multi-ICVs in different missions, including delivery, logistics, rescue and so on
- Global and local path/trajectory planning in unstructured or unknown environments
- Path tracking and chassis control under extreme conditions
- Virtual testing method and scenario construction technologies

#### Important Dates

**2021.11.15:** Deadline for Initial Paper Submission

**2022.02.01:** Notification of First Round Decision

**2022.03.15:** Deadline for Revised Paper Submission

**2022.04.15:** Final Decision Due

**2022.05.01:** Final Manuscript Due

#### Guest Editors

**Xudong Zhang**, Associate Research Fellow, Beijing Institute of Technology, China

**Dietmar Göhlich**, Professor, Technical University of Berlin, Germany

**Yechen Qin**, Associate Professor, Beijing Institute of Technology, China

**Basilio Lenzo**, Senior Lecturer, Sheffield Hallam University, United Kingdom

#### Submission Guidelines

1. Please submit online via [www.springer.com/42154](http://www.springer.com/42154), be sure to select Topical Collection: Autonomous Driving Technologies in Challenging Environments
2. Papers should be submitted in two separate .doc files: 1) Blinded Manuscript (paper title, abstract, key words, and full text); 2) Title Page (paper title, author affiliation, acknowledgement, and any other information related with the authors' identification).
3. If any problems, please feel free to contact the journal editorial office via email: [jai-editor@sae-china.org](mailto:jai-editor@sae-china.org).

## About Automotive Innovation

*Automotive Innovation* is the leading peer-reviewed international journal and China SAE's flagship publication. The journal reflects the innovative findings and changing needs of the automotive industry, supported by an international Editorial Board. It fosters the exchange of ideas among researchers in industry, government, and universities worldwide.

The journal provides a forum for the research of principles, methodologies, designs, theoretical background, and cutting-edge technologies in connection with the development of vehicle and mobility. The main topics cover: energy-saving, electrification, intelligent and connected, safety and emerging vehicle technologies.

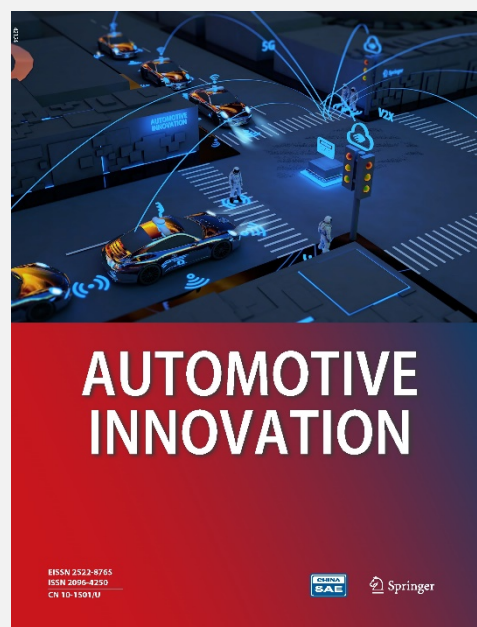
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## Welcome your submissions !

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