

## Special Issue

# Emerging Research in Autonomous Vehicle Technology: Innovations in On-Road and Off-Road Driving Challenges

### Message from the Guest Editors

The increasingly widespread diffusion of autonomous driving has revolutionized the transportation landscape, promising safer, more efficient, and sustainable mobility solutions. As the technology continues to advance rapidly, an increasing attention is rising for on-road deployment as well as for off-road applications, posing unique challenges and opportunities for researchers and engineers of both academia and industry. This Special Issue aims to bring together the latest advancements, research findings, and practical insights related to the design, modelling and control of autonomous vehicles, with a particular emphasis on the last discoveries for on-road implementation to the more challenging requirements and analysis required by off-road mobility. The scope of this issue encompasses various aspects, including but not limited to:

- autonomous vehicles
- dynamics modeling
- off-road driving
- advance control strategies
- cooperative and coordinated control
- human-machine interaction

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### Guest Editors

Dr. Antonio Tota

Dr. Luca Dimauro

Prof. Mauro Velardocchia

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### Deadline for manuscript submissions

closed (31 March 2026)



## Machines

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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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### Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso  
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