

Special Issue

Autonomous Vehicles: Latest Advances and Prospects

Message from the Guest Editors

Current trends in the automotive industry are heading into the era of artificial intelligence, where various scientific challenges await us. Therefore, this special edition focuses on autonomous vehicles and related contexts. The complexity of such systems makes it possible to find new approaches or extensions of existing ones such as Deep learning, ECU with GPU, use of sensor fusion, use of digital twins, creation of control algorithms, use of sophisticated sensors and their data processing, use of vehicle simulators and virtual reality for autonomous vehicle testing and a number of other industries. Together, these trends represent important elements of autonomous vehicles and bring challenges to the competitiveness of autonomous vehicle manufacturers, new opportunities for customers, but also the creation of requirements for state authorities to prepare legislation for autonomous vehicles worldwide. Autonomous vehicles can bring a number of safety benefits, and when using the V2X, this can lead to a significant reduction in energy consumption and time savings. **Keywords:** Autonomous vehicle; DNN, Sensor; Algorithm; Vehicle simulator; Virtual testing; Hardware

Guest Editors

Dr. Pavel Kučera

Institute of Automotive Engineering, Brno University of Technology,
Technická 2896/2, 616 69 Brno, Czech Republic

Dr. Martin Jonák

Department of Telecommunications, Brno University of Technology,
Technická 3082/12, 616 00 Brno, Czech Republic

Deadline for manuscript submissions

closed (20 June 2023)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/128107

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/

[applsci](https://doi.org/10.3390/applsci)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, Embase, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)