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

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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.

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