Special Issue

Sensors and Sensor Fusion Technology in Autonomous Vehicles

Message from the Guest Editor

Autonomous (self-driving) vehicles are one of the most significant trends in research and development, with several major automotive companies, research centers, and academic institutions regularly contributing to this field. Sensors (such as cameras, radars, lidars, sonars, global positioning systems or GPSs, inertial measurement units or IMUs, and wheel odometry) collect data that are analyzed by an on-board processor and used to control the speed, steering, and brakes of vehicles. Vehicle control systems may also use information collected by other cars and from environmental maps to make decisions.

As sensors are critical components, the fusion of the information from them and their proper interpretation, followed by the control of the vehicle, are paramount in autonomous driving. Researchers also understand that including more sensors in the sensor fusion system allows for the generation of more performing and robust solutions, but higher costs and reliability problems are the disadvantages of this approach.

The main target of this Special Issue is to collect papers reviewing the state of the art and all significant breakthroughs occurring in these areas.

Guest Editor

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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