Call for Papers
IEEE Sensors Journal Special Issue on

Sensor Technologies for Connected Cars: Devices, Systems and Modelling

Vehicular accidents are a major global problem, leading to human injury or death, damages to property, with financial and other impact on the general public. In most cases, vehicular accidents are caused by avoidable human error and improper driving practices. With recent advances in sensing technologies, self-driving, connected cars and autonomous vehicles are becoming more and more practicable. The sensor data contribution to the peer to peer (P2P) vehicle sharing system reduces occurrences of road accidents by the use of vehicle to vehicle (V2V) interaction, along with use of sensors for maintaining safe driving distances and pre-empting accidents. Sensor technology in connected cars also improves the overall driving experience by using vehicle to infrastructure (V2I) interaction. This enables warnings and precautions from a network of roadside units, functioning as stationary waypoints and relay warnings, precautions and information regarding availability of crucial services. Such information is particularly beneficial to users in remote areas where it cannot be obtained reliably through conventional communication channels.

This Special Issue is focused on sensors and sensor systems for connected vehicles with emphasis on the whole range between modelling and applications. The topics of interest include, but are not limited to:

- Sensors for connected cars and autonomous vehicles
- Emerging sensor technology for driverless cars
- Sensors for Wireless On-Board Diagnostic (OBD) fleet management
- Accurate Vehicle Location System Using Wireless Sensor Networks
- Intra-Car Wireless Sensor Networks
- Sensor interfaces for Peer to Peer (P2P) vehicle sensor data sharing
- Sensor Interfaces for Vehicle to Vehicle (V2V) and Vehicle to Infrastructure (V2I) information exchange

- Sensor interface compliance to communications protocols and standards, authentication and security requirements
- Testing, evaluation and verification of sensor systems for connected cars
- Safe, Secure and Infotainment Connected Cars
- Anti-collision and alarming sensors,
- Traffic regulation and transaction sensors
- Sensor Data Processing
- On-road video contents streaming delivery and traffic sensor management

Submission Guidelines

The main criteria for publication in the IEEE Sensors Journal are the quality of the manuscript and whether the reported novelty is in the area of sensors and sensor systems. Solicited and invited papers shall undergo the standard IEEE Sensors Journal peer review process. All manuscripts must be submitted on-line, via the IEEE Manuscript Central™, see http://mc.manuscriptcentral.com/sensors. When submitting, please indicate in the "Manuscript Type" roll-down menu, and also by e-mail to Ms. Lauren Young (l.young@ieee.org), that the paper is intended for the "Sensor Technologies for Connected Cars: Devices, Systems and Modelling" Special Issue. Authors are particularly encouraged to suggest names of qualified potential reviewers for their manuscripts in the space provided for these recommendations in Manuscript Central. For manuscript preparation and submission, please follow the guidelines at: http://ieee-sensors.org/sensors-journal/

Schedule

- Submission deadline: July 15, 2017
- Author notifications: October 20, 2017
- Final manuscripts due: December 15, 2017
- Publication: February 28, 2018

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