IEEE Internet Computing:

Call for Papers

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Connected and Autonomous Vehicles
(May/June 2018)

Final submissions due: 7 August 2017

Please email the guest editors a brief description of the article you plan to submit by 7 July 2017.
Guest Editors: Bo Yu, Falko Dressler, and Fan Bai (ic3-2018@computer.org)

With the recent advances in wireless communication technologies, connected and autonomous vehicles are becoming a cornerstone of the increasingly connected world. Although Internet technologies brought intelligent vehicles innovative services and applications that change the way how people live, work, and entertain, supporting the real-time, safety, stability, reliability, and security requirements of connected vehicular applications is difficult because of the nature of vehicle mobility. As connected and autonomous vehicles become one of the largest mobile cyber-physical systems, extraordinary research challenges are emerging in many areas, including environment perception, edge data analytics, computing platforms, architecture design, cybersecurity, and privacy protection.

The connected and autonomous vehicle research field has been a highly active area of research, development, standardization, and field trials. Throughout the world, many national and international projects in government, industry, and academia are devoted to connected vehicles or autonomous driving vehicles. Multiple relevant industry standards and consortia are being created to prepare for the maturity of these emerging technologies.

This special issue intends to disseminate the latest research results in this exciting research area of connected and autonomous vehicles, providing a snapshot of the current state of the art in such advanced systems. Submitted papers should focus on the general theme of Internet computing. Areas of interest include (but are not limited to) the following:

- (semi-)automated vehicles;
- autonomous/intelligent robotic vehicles;
- vehicle environment perception;
- cooperative driving and cooperative vehicle-infrastructure systems;
- vehicle-to-infrastructure and vehicle-to-vehicle (V2I/V2V) communication;
- wireless in-car networks;
- vehicle system architecture and design;
- vehicular Internet of Things (IoT) infrastructure;
- intelligent vehicle software and computing infrastructure;
- edge data analytics for vehicular systems;
- cloud computing applications for vehicular systems;
- geographic information systems (GIS) or intelligent transportation systems (ITS) applications for intelligent vehicles;
- security and privacy issues and protection mechanisms;
- cyber-physical system modeling; and
- early experience and field trials of connected and autonomous vehicles.

All submissions must be original manuscripts of fewer than 5,000 words, focused on Internet technologies and implementations. Please note that each figure counts as 250 words, as part of the word count. All manuscripts are subject to peer review on both technical merit and relevance to *IC*'s international readership – primarily practicing engineers and academics who are looking for material that introduces new technology and broadens familiarity with current topics. We do not accept white papers, and we discourage strictly theoretical or mathematical papers. To submit a manuscript, please log on to ScholarOne (https://mc.manuscriptcentral.com:443/ic-cs) to create or access an account, which you can use to log on to *IC*'s Author Center and upload your submission.