INTERNET TECHNOLOGY LETTERS

Internet Technology Letters

"Leveraging Advanced Technologies and Tools for Connected Vehicles: Challenges and Future Trends"

Aims & Scope: The digital revolution is making a huge impact on the automotive industry, offering a more reliable driving experience through self-driving, vehicle decision making, and connected autonomous vehicles technologies. Connected autonomous-driving vehicles come with high communication capabilities and various degrees of autonomy to resolve unlimited number of transportation issues (e.g., traffic congestion, accidents and safety), cope with the evolution of Intelligent Transportation System (ITS), and offer a new concept of service on-demand delivery. As most vehicle drivers see these technologies unsafe and unreliable, around 1.2 million people are killed every year due to drivers' errors in car accidents. Therefore, these technologies are envisioned to make these smart vehicles dominate the roads by 2030 creating substantial economic benefits manifested in the form of safer roads, significantly reduced congestions, improved equity and accessibility to transportation, offer a new service delivery concept (driverless and self-driving vehicle or on-demand service vehicle). Employing advanced technologies and tools, such as, 5G, blockchain, Artificial Intelligence (i.e. Machine Learning (ML), Reinforcement Learning, and Deep Learning (DL)), crowd sensing, crowd management, to name a few, in delay sensitive data-processing applications (e.g., autonomous vehicles) deems imperative for making informed and instant decisions without human interference. Thus, only those who adopt these machinery advancements can successfully compete in this changing ecosystem.

The aim of this special issue is motivating researchers from academia, industry, and individuals to investigate the future of connected and autonomous vehicles leveraging the use of advanced technologies and submit their novel contributions to this special issue.

The special issue covers topics that include, but not limited to, the below:

- The future of connected and autonomous vehicles.
- AI/ML/DL models and capabilities for connected and autonomous vehicles.
- Big data analysis in connected and autonomous vehicles.
- Analytics platforms using AI methodologies for on-board vehicle sensing.
- IoT-driven sensing-solutions for connected and autonomous vehicles.
- Security and privacy of connected and autonomous vehicles.
- Cyber-physical system of connected and autonomous vehicles.
- Exploring computation at the edge of connected and autonomous vehicles.
- Development and deployment of architectures for connected and autonomous vehicles.
- Performance design, modeling and evaluation of connected and autonomous vehicles.
- Blockchain for connected and autonomous vehicles.
- 5G technologies enabling connected and autonomous vehicles.
- Congestion Mitigation in vehicular dense crowded environment.

Keywords:

- Connected and Autonomous Vehicles
- Internet of Things
- Artificial Intelligence: Machine learning, Reinforcement Learning, Deep Learning
- Big data analysis
- Security and privacy
- Blockchain

Coherent list of topics:

Papers must be tailored to the emerging fields of connected and autonomous vehicles employing and explicitly consider recent advancements in machine learning and artificial intelligence novel tools and techniques. The length of the articles should not exceed 4 pages in total. The guest editors maintain the right to reject papers they deem to be out of scope of this special issue. Only originally unpublished contributions and invited articles will be considered for this special issue. The papers should be formatted according to the ETT guidelines (http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1541-8251/homepage/ForAuthors.html). Authors should submit a PDF version of their complete manuscript via ETT submission site at (http://mc.manuscriptcentral.com/ett) according to the timetable below.

Important Dates (Tentative):

- Submission deadline: 01/03/2019
- Author Notification: 01/5/2019
- Final Manuscript: 1/7/2019
- Publication: Q4-2019

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Part III – Additional Material

Today, the research fields of connected and autonomous vehicles is considered the future of modern transportation systems. It is receiving a lot of interest from the research community, governments, and especially industry. Moreover, these fields are driven by various multi-national companies in the field of ITS, smart learning and automation, as well as ICT. The guest editors are full of confident that this SI will attract lots of attentions and excellent articles of quality will be submitted. Another important point about this SI is that this one is a unique one and never been proposed among the SIs published in this transaction; which makes it an attractive venue for the authors who want to publish their papers in this domain. The ETT journal will receive well attention from well-known researchers because of this SI which will eventually result in receiving large number of citations for the SI papers. The editorial team represents a group of researchers from different Geographical locations across the globe who are active in the field of the proposed SI with an extensive experience in organizing workshops, conferences, and SIs. Moreover, they have a large network of colleagues and collaborators.