

IEEE Transactions on Consumer Electronics

Call for Papers

Special Section on “Customers Centric Communication and Networked Control for Intelligent Cyber-Physical Transportation Systems”

Theme:

Transportation accidents and traffic congestion issues are among the biggest today challenges due to presence of a large number of vehicles manufactured worldwide. The following problems faced by the road transport like inadequate road networks, highly congested cities roads, difficulties of pedestrians, unmetalled roads, poor bridges conditions, parking difficulties, atmospheric pollutions, environmental impact, and violation of traffic rules respectfully. Efforts across the world for Intelligent Cyber-Physical Transportation Systems (ICTS) are focused on addressing a range of problems including minimizing traffic accidents and fuel consumption, less congestion, reducing time spent on traffic jams, and enhances transportation safety. ICTS systems cover the whole transportation-based information through an advance Customer centric communication and networked control methods, such as intervehicle, vehicle-to-roadside (V2R), vehicle-to-vehicle (V2V) via vehicular ad hoc network (VANET) communications.

Cutting-edge technologies like the Customer centric communication, control, embedded systems, Internet of things, wireless sensors networks, data analytics, computer vision, cyber-physical systems (CPS), blockchain, learning analytics, and artificial intelligence, etc., have paved the way for an intelligent transportation system (ITS). The special issue will focus on the role of advance Customer centric communication and networked control systems in the Intelligent transportation systems to provide holistic information about the real-time conditions of the subjects (users, vehicles, roads, traffic, etc.) and its surroundings so that informed decision may be taken based on the data captured by these sensors via CPS. It aims to present the most important and relevant advances to overcome the challenges related to CNC-ICTS analytics, and processing through IoT-CPS. Particularly, authors are encouraged to submit their original research and review articles in theoretical, methodological, or practical focuses, such as simulation models, algorithms, experiments, and applications for big complex transportation systems.

Topics of interest in this Special Section include (but are not limited to):

- Context-aware security and privacy for CNC-ICTS
- Large-scale transportation data analytics tools and technologies for CNC-ICTS
- Computational intelligence applicability for IoT analysis in online and on-ground control
- Edge/fog computing for CNC-ICTS
- Network-enabled devices for CNC-ICTS
- Cooperative networked control of connected vehicles
- Artificial intelligence for traffic prediction and estimation
- Advanced deep learning and machine learning for CNC-ICTS
- Connected and automated vehicle for smart cities
- Artificial intelligent systems applications in computers and customer centric communications for CNC-ICTS
- Economic paradigms and performance scaling for CNC-ICTS
- Machine and deep learning for CNC-ICTS
- Blockchain in cyber-physical systems for ITS
- Intelligent manufacturing: Industrial Internet of Things for CNC-ICTS
- Blockchain and secure critical infrastructure with Industry 4.0 for CNC-ICTS Blockchain-based Data Science and Data Engineering for CNC-ICTS
- Emergency medical transportation systems using CNC-ICTS

Important dates:

- End of submission of Manuscripts: **June 30, 2023**
- Expected publication date (tentative): April 2024

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Instructions for authors:

Manuscripts should be prepared following guidelines at: <https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html> and must be submitted online following the IEEE Transactions on Consumer Electronics instructions: <https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html>. During submission, the Special Section on "**Customers Centric Communication and Networked Control for Intelligent Cyber-Physical Transportation Systems**" should be selected.