Internet of Things and Sensors Technologies for Intelligent Transportation Systems

The modernization level of transport is currently an important criterion to take the measure of urban development. Progress in communication techniques and networking, together with vehicle location methods have become the key enablers of innovative transport systems. Triangulation, scene analysis, and proximity are the three principal techniques for automatic location-sensing which are widely used for road transport of dangerous goods, logistics, armored car and other particular fields.

The Internet of Things connects objects, equipped with a communication unit and several sensors, to the Internet, to achieve information-exchange, intellectualized identifying, positioning, monitoring and managing. The Internet of Things can logically be divided into a perception layer, a network layer, a service layer and an application layer. The perception layer senses, gathers information, and the network layer enables the connectivity between the different items making use of Internet technology, while the service layer offers services to the application or to the end-user for further intelligent processing. Undoubtedly, this strong vision of Internet of Things could add new dimensions to Intelligent Transportation Systems and it will have a high impact on applications and services. However, there are many challenges such as real-time traffic management, seamless connectivity, vehicle location prediction, security and privacy, interoperability, communications, associated with Internet of Things that needs to be addressed.

This Special Session on “Internet of Things and Sensor Technologies for Intelligent Transportation Systems” is focused on applications, architectures, and advanced technologies used for Intelligent Transportation Systems. Topics include, but are not limited to the following:

- Next generation transportation systems based Internet of Things and sensors technologies
- The intelligent transportation, connected vehicles and Internet of Things
- Intelligent vehicle monitoring system based on Internet of Things
- Distributed intelligent transportation system based Internet of Things architecture
- Internet of Things applications and services for real-time traffic management
- Embedded systems and sensors for intelligent transportation systems
- Wireless sensor devices in intelligent transportation systems
- Vehicle location prediction based advanced sensor technologies
- Peer-to-Peer data sharing for fleet management and safety purposes
- Integrated transportation networks based Internet of Things and sensors for location based services
- Connected vehicles, Internet of Things reliability and security
- Traffic sensor management for routing and computing, and traffic control
- Communication protocols for seamless and optimized connectivity

Papers discussing new application areas and resulting in new developments at the interface of intelligent transportation systems are especially welcome. All contributions must focus on new
approaches based on Internet of Things and Sensor networks and should be directly and strongly related to transportation. Papers which are unrelated or peripherally related to transportation will not be accepted.

**Manuscript Submission & Publication Important Dates**
Prospective authors are invited to submit contributions reporting on their current research on the above topics. Each paper will be analyzed by at least three reviewers of IEEE T-ITS in order to assess its technical quality, relevance, results and contributions. Manuscripts must be submitted electronically at [http://mc.manuscriptcentral.com/t-its](http://mc.manuscriptcentral.com/t-its) by selecting "Special Issue on Internet of the Things and Sensors Technologies for Intelligent Transportation Systems".

**Important Dates:**
Tentative schedule for the Special Issue is as follows:
- First submission deadline: September 30th, 2016.
- Notification of first decision: December 31st 2016.
- First revision submission deadline: March 15th 2017.
- Final manuscript (camera ready) submission deadline: May 31st 2017.

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