

CALL FOR PAPERS – IEEE Transactions on Intelligent Transportation Systems

Models and Technologies for Intelligent Transportation Systems

Connectivity is changing the world as well as the way people travel. Peer-to-peer exchange of information is enabling real-time matching of transport demand and supply as ever in the past. New mobility services thus have been rapidly moving from a conceptual stage to real-world applications. Soon, connected and automated vehicles will radically improve road safety and enable new road mobility. The impact on passenger travel behavior and on the handling of goods of such technology-driven revolution in transport is still unknown to good extent. New trends in transportation are therefore setting unprecedented challenges to researchers.

On the one hand, models and methods adopted so far are often inappropriate to simulate new mobility scenarios. For instance, current traffic micro-simulation models, which are based on simplified microscopic logics and have been developed with the aim of reproducing traffic dynamics on a network – but not conceived to describe accurate vehicle dynamics – can be barely applied to study the impact of e.g. in-vehicle active safety technologies. Similarly, travel behavioral models assuming perfect knowledge of mobility alternatives, for instance, are unsuitable to evaluate the impact of technologies that act on the user's perception of transport alternatives, by providing amazingly novel travel information. Incapacity of capturing actual travel behaviors prevents also the development and evaluation of business models suitable for the new transport services and products.

On the other hand, massive data on transport systems, increasingly available for analyses though often scarcely spread in the academic community demand for novel techniques for data analytics.

These challenges will be discussed at the 5th IEEE International Conference on Models and Technologies for Intelligent Transport Systems (IEEE MT-ITS 2017), in June 2017. Building also on such discussion this call aims at gathering papers on case studies proposing novel methods, models, and data analytics techniques able to face with the complexity and the uncertainty of emerging and future mobility scenarios. Specific topics include, but are not limited to:

- ITS-oriented traffic planning, operations and management
- Demand modelling and travel behaviour under ITS
- Model calibration, simulation and tools for ITS
- Case studies and assessment of ITS applications
- Future mobility data collection for passenger and freight
- Real-time traffic control, management and short-term predictions
- ITS, multimodal transportation and freight systems
- ITS and big data
- Plug-in Electric Vehicles and impacts on mobility
- Vehicle-to-X: Vehicle (V2V), Infrastructure (V2I) and Grids (V2G)
- Current Issues in Transportation Energy and Climate Change
- Automated and intelligent Vehicles
- Communication in ITS
- Infrastructure design, safety and ITS
- Rail Operations and Management
- ITS and Smart Cities

Manuscript Submission & Publication

Prospective authors are invited to submit contributions reporting on their current research on the above topics. Each paper will be analysed by at least three reviewers of IEEE T-ITS according to their technical quality, relevance, results and contributions. Manuscripts must be submitted electronically at

Important Dates

Tentative schedule for the Special Issue is as follows:

First submission deadline: September 15th, 2017
Notification of first decision: January 15th, 2018.
Revision submission deadline: March 15th, 2018.
Notification of final decision: July 1st, 2018.
Final manuscript deadline: July 15th, 2018.

Guest Editors (in alphabetical order)

Dr. Vittorio Marzano (vmarzano@unina.it). *Assistant Professor at University of Naples Federico II, Italy.*

Dr. Vincenzo Punzo (vinpunzo@unina.it). *IEEE T-ITS Associate Editor, Associate Professor at University of Naples Federico II, Italy.*

Dr. Fulvio Simonelli (fulvio.simonelli@unisannio.it). *Assistant Professor at University of Sannio, Italy.*