

Call for Papers

Special Session on Urban Mobility – Communication Technologies and Safety for Autonomous Vehicles

(part of the 14th International Conference on Telecommunications, Zagreb, Croatia, June 2017)

Background and scope:

There is a growing importance of ICT in profiling the competitiveness of cities. The next step for the smart city is the *automated city* – one that is predictive and responsive without human intervention. Such a city could avoid traffic congestion before it occurs and distribute resources, such as emergency services and maintenance, without time-consuming human decision-making. Communicating vehicles form an essential part of this vision. The success of the first generation large-scale V2X testbeds and the planned followers, manufacturers/policy maker activities, and the maturing standards of cooperative intelligent transport systems (C-ITS) predict the inevitable and quick proliferation of vehicular networks in urban environments. Urban mobility applications will also rely on collecting available information from sensor networks in and around the city and make the operation of public services (like lighting, heating, garbage collection, etc.) intelligent. This will be based partially on crowdsensing, especially in densely populated areas where insuring the appropriate number of sensing users is easier. Public safety is another category of applications where the power of the crowd is used to indicate unusual/abnormal behaviour of people, extreme situations like riots, demonstrations and similar. In this Special Session we will catch up with the latest research and product developments, measurement methods, application scenarios and concept studies related to urban mobility supporting technologies.

Topics of interest include:

Novel protocols and techniques for V2X communication (radio resource management, mobility management, data dissemination, etc.); Heterogeneous Vehicular Networking approaches; Connected vehicle technologies in 4G and beyond; V2X applications and services for enhanced driver experience, increased transportation efficiency, decreased emission, enhanced road safety, etc.; Network management, deployment support and QoS provisioning for V2X architectures; Sensor fusion in vehicular networks; Cross-layer design and optimization for V2X communication infrastructures; Mobile crowdsourcing for urban analytics; Mobile crowdsourcing applications; ICT in road vehicles: on-board and connected car services; New proof-of-concept cyber attacks against modern vehicles; Attack surfaces and risk analysis for autonomous vehicles; Security testing methods and testbeds for autonomous vehicles; Security countermeasures against cyber attacks for autonomous vehicles; Software vulnerability management and security patching for autonomous vehicles; Security of sensor data collection and processing in autonomous vehicles; Digital forensic requirements and solutions for autonomous vehicles; Privacy issues induced and solutions required by autonomous vehicles; Cryptographic algorithms and protocols for protecting vehicle communications

Publication of accepted papers:

Prospective authors are invited to submit novel, previously unpublished full papers (up to 8 pages), addressing the topics of interest, for consideration for the special session. Accepted and presented papers will be published in the conference proceedings and submitted to IEEE Xplore. Authors of best papers will be invited to submit a sufficiently extended version of their conference paper for potential publication in the Infocommunications Journal (www.infocommunications.hu) Special Issue on Smart Cities.

More information is available at <http://www.contel.hr/2017/special-session-urban-mobility/>