

The Fifth IEEE Workshop on Smart Vehicles: Connectivity Technologies and ITS Applications (SmartVehicles'18)

Message from the Workshop Chairs

It is indeed our great pleasure to welcome you to the 5th IEEE Workshop on Smart Vehicles: Connectivity Technologies and ITS Applications (SmartVehicles'18), held in conjunction with the 15th IEEE International Symposium on a World of Wireless Mobile and Multimedia Networks (WoWMoM'18).

New wave of urbanization, ever more stringent emission standards, and high pressure on improving efficiency of private and public transport have made the development of more sustainable transportation systems one of the fundamental societal challenges of the next decade. Connected and increasingly automated vehicles are seen as one of the key enabling technologies for more efficient and sustainable transportation systems. To enable connected automated vehicles, it is of paramount importance to: i) design vehicular communication systems that enable road users and other actors to exchange information in real time and with high reliability; ii) enable pervasive sensing to monitor the status of vehicles and the surroundings; iii) develop data analytics tools for processing large amounts of data generated by the transportation infrastructure; iv) develop middleware platforms for information management and sharing; and v) define appropriate interaction interfaces between drivers and vehicles. The seamless integration and convergence of vehicular communication networks, information and transportation systems, and mobile devices and networks will face a number of technical, economic and regulatory challenges.

This year we received 12 submissions, and the members of the Technical Program Committee identified 6 high quality papers for presentation in the workshop technical sessions. Finally, the workshop program includes an exciting and thought-provoking Keynote talk given by Prof. Markos Papageorgiou, Professor and Director of the Dynamic Systems and Simulation Laboratory of the Department of Production, Engineering and Management of the Technical University of Crete, who is highly recognized for his work on the modelling and control of urban traffic systems.

The organization of this workshop has been possible due to the hard work and dedication of many colleagues. Special thanks are due to the members of the Technical Program Committee and to all external referees for their invaluable contributions in completing the review process. We are also very grateful to all the authors for submitting their fine work to our workshop.

In the end, we truly hope that you will find the workshop program interesting and stimulating.

Workshop Chairs

Raffaele Bruno, Gaurav Bansal, Mate Boban, Panagiotis Pantazopoulos

Workshop Program

June 12th, 2018

08:00-09:00 Registration

09:00-09:10 Opening Remarks

09:05-10:00 Keynote Talk

Traffic management in the era of vehicle automation and communication systems (VACS) - Markos Papageorgiou

10:00-10:30 Position Paper

[Towards a Security Assurance Framework for Connected Vehicles](#)

Panagiotis Pantazopoulos, Sammy Haddad, Costas Lambrinouidakis, Christos Kalloniatis, Konstantinos Maliatsos, Athanasios Kanatas, Andrés Váradi, Matthieu Gay, and Angelos Amditis;

10:30-11:00 Coffee Break

11:00-12:05 ITS applications and communications

[1] [Analysis of Communication Demands of Networked Control Systems for Autonomous Platooning](#)

Daniel Plöger, Leo Krüger, and Andreas Timm-Giel;

[2] [Environment-Aware Communications for Cooperative Collision Avoidance Applications](#)

Guillaume Jornod, Roman Alieiev, Andreas Kwoczek, and Thomas Kürner

[3] [Securing Road Traffic Congestion Detection by Incorporating V2I Communications](#)

Vinh Thong Ta, Amit Dvir, and Yalin Arie

12:05-12:50 Platforms for Connected Cars

[4] [V2X communications for infrastructure-assisted automated driving](#)

Michele Rondinone, Thomas Walter, Robbin Blokpoel, and Julian Schindler;

[5] [IoT and Microservices Based Testbed for Connected Car Services](#)

Soumya Kanti Datta, Mohammad Irfan Khan, Lara Codeca, B. Denis, Jérôme Härri, and Christian Bonnet;

12:55-13:00 Closing

10:30-11:00 Lunch