

Workshop / Industry Panel "Cooperative and Automated Driving"

Date Tuesday 22 September 2020

Time: 15:00-18:00 CEST

Description

The fifth Workshop and Industry Panel on "Cooperative and Automated Driving" will be held on 22 September 20, 2020, in conjunction with the IEEE Intelligent Transportation Systems Conference (ITSC 2020 www.itsc2020.org/), one of the major annual conferences of the IEEE Intelligent Transportation Systems Society (ITSS). The Workshop targets connected, cooperative and autonomous technologies for Cooperative ITS and automated driving. Similar to the past, the workshop also features an Industry Panel with experts from related industries, which will again foster the interactive exchange of academia and industry.

Recent developments in telecommunications, sensor, information processing and control technologies have enabled substantial progress in the domain of ITS. C-ITS is in a very early stage of deployment, as it is technologically achievable, but the deployment requires cooperation of multiple stakeholders. Automated driving is on the horizon, and will still need substantial and longer-term development and testing to make even the high automation levels a reality in complex situations, such as in urban environments, and in a transit period of only partial market penetration. Cooperative and automated transport are certainly complementary. They are expected to bring substantial benefits in terms of safety, comfort and (traffic and fuel) efficiency. Many challenges exist in this important domain.

The workshop targets the challenges for (C-)ITS applications, especially connected and cooperative systems towards automated driving. Competing communication technologies (e.g. ITS-G5 / IEEE 802.11p, and cellular networks), sensor, information processing and control technologies will be highlighted. The impacts of C-ITS applications will be analysed. Requirements for strong cooperation between industry, authorities and academia in different regions will be addressed.

The workshop is expected to be very interactive. Participants will have an excellent opportunity to discuss with and to challenge distinguished speakers and panellists. The technical areas to be discussed include, but are not limited to the following:

- Connected and Automated Vehicles
- V2X communications
- C-ITS deployment
- Standardisation
- 5G research and testing
- Connected and cooperative systems
- Impacts evaluation of connected, cooperative and automated transport

Organiser: Meng Lu, Dynniq, The Netherlands

Moderators: Tim Leinmueller, Denso, Germany and Meng Lu, Dynniq, The Netherlands

Program

15:00-15:10 Opening and Introduction, by Meng Lu, Dynniq, The Netherlands; Tim Leinmueller, Denso, Germany

15:10-15:25 Qingwen Han, Chongqing University, P.R. China: Scenario Oriented V2V Field Test Scheme with Dense Node Array

15:25-15:40 Meng Wang, Delft University of Technology, The Netherlands: String-Stable Platooning Control Subject to Heterogeneous and Stochastic Delays

15:40-15:55 Robert Gee, Continental, Japan: V2X and 5G Deployment Considerations: Accelerating Near-Term Benefits

15:55-16:10 Leonardo Gomes Baltar, Intel, Germany: Interoperability in Vehicular Networks (V2X) enabled by Edge and Cloud Computing

16:10-16:20 Coffee Break

16:20-16:35 Maciej Muehleisen, Ericsson, Germany: Interoperable Cloud-to-Cloud Communication for Cooperative, Connected and Automated Mobility (CCAM)

16:35-16:50 Apostolos Kousaridas, Huawei, Germany: 5GCroCo project: 5G-enabled Cooperative, Connected and Automated Mobility (CCAM) Trials

16:50-17:05 Jonathan Petit, Qualcomm, USA: Security and Privacy of Connected Automated Driving

17:05-17:20 Matti Kutila, VTT, Finland: 5G/C-V2X Connectivity for Automated Driving

17:20-17:50 Panel discussion

17:50-18:00 Closing remarks, by Tim Leinmueller, Denso, Germany; Meng Lu, Dynniq, The Netherlands

This Workshop/Industry Panel is sponsored and co-organised by IEEE Future Networks Initiative, 5G-HEART, and 5G-DRIVE

