Call for Papers

IEEE 5G Auto – Workshop on 5G and Cooperative Autonomous Driving

Website: http://autodrive5g.hevs.ch/

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Scope and Motivation:

With the emergence of highly automated and autonomous driving vehicles, rigorous requirements in terms of responsiveness, security, resiliency and scalability are needed to enable new services that improve efficiency and safety on the road.

The recent progress on 5G ultra reliable and low latency communications is paving the way to novel solutions that address these challenging requirements. To this end, a plethora of paradigms, (such as Fog/Multi-Access Edge computing, Software Defined Networking, Network Function Virtualization); emerging protocols for V2X communication (LTE-V, C-V2X, etc.) and advanced localisation/navigation systems (3D High Definition maps, Advanced Driver Assistance Systems) have been proposed or are still under development to support future 5G road safety use cases.

Therefore, in the path towards fully autonomous and safe coordinated driving, it is crucial to investigate how and up to which point the 5G paradigm, as an enabler of evolved vehicular services, is able to meet the requirements of autonomous driving, accommodate the emergency of new roles and behaviours of connected vehicles and handle the heterogeneity of new applications in terms of data rates, latency and hyper-connectivity.

In the spirit of ICC, this workshop aims at favoring a multidisciplinary, cross-layer perspective to 5G and autonomous cooperative driving, bringing together researchers, developers, and practitioners from academia and industry.
Topics of Interest:

We invite paper submissions including, but not limited to the topics listed below:

- Use case requirements for autonomous vehicles
- Cellular vehicle-to-everything communication
- Multi-Access Edge computing for Ultra-reliable and low-latency communication
- Simultaneous Localization and Mapping
- Fog-based zero-time handover mechanisms
- Caching techniques for enabling ultra-low latency services.
- SDN for autonomous driving management
- Mobility-aware spectrum sharing
- Big Data stream processing and analytics techniques
- Named Data Networking for autonomous vehicles
- HD dynamic mapping and accurate positioning
- ADAS systems for autonomous vehicles
- Intrusion detection systems specific to autonomous vehicles
- Security issues in 5G for autonomous cooperative driving

IMPORTANT DATES:

- **Paper submission**: January 25th, 2019

PAPER SUBMISSION:

Prospective authors are invited to submit high-quality original technical contributions for presentation at the workshop and publication in the IEEE ICC 2018 Proceedings and IEEE Xplore. All submissions should be written in English with a maximum paper length of six (6) printed pages (10-point font) including figures without incurring additional page charges (maximum 1 additional page with over length page charge for an additional fee, if accepted) in the standard IEEE two-column conference format.

Papers must be registered on EDAS and submitted in PDF format. Submission link:

HTTPS://EDAS.INFO/NEWPAPER.PHP?C=25625