

# 5G-V2X Systems and Connected Cars Summer School

**Organized by**

**Vehicular Networking and Intelligent Transportation Systems Research Group**



## **Scope**

Vehicular Networks are the key component of ITS; enabling and integrating the use of various technologies, communication standards and the infrastructures. Vehicular networks are composed of vehicles and infrastructure units. They enable a range of important applications and services such as multimedia content sharing, traffic monitoring and safety enhancement.

On the other hand, connectivity appears to be the key enabler for these value added services. Intermittent connectivity and spatiotemporal characteristics of vehicle traffic prevent utilization of these services at everywhere and/or anytime. In the roadmap and standardization of 5G, 3GPP Release 14 includes V2X communication and provides solutions for the connectivity between vehicles and between vehicles and the infrastructure. In addition to the services briefly given above, autonomous driving is the new service that cellular network connectivity will enable.

Recently, there are new open project calls on V2X systems and V2X communications. In addition to proposing new projects for these calls, this summer school aims to provide:

- a state-of-the-art overview
- study on V2X and 5G-V2X standards
- discussions on the models in the literature
- new models to be proposed at the end of the summer school
- hands-on programming for the simulation of 5G-V2X communications.

## **Program**

The summer school is planned for five weeks. Starting with an overview of the state-of-art V2X Systems, standards will be discussed in detail. A one-week hands-on programming training will be given to build the simulation environment for V2X systems and communications. Sample applications and scenarios will be implemented and tested on the simulation environment.

## **Schedule**

TBA very soon.

## **Organizer:**

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