Drive for All

Seminar at MINES ParisTech

Wednesday 29th March 10:30 – 11:30

Service-oriented Cooperation of Driverless Vehicles from model, mechanism to simulation

The Chair *Drive for All* is pleased to invite you to a seminar on "Service-oriented Cooperation of Driverless Vehicles—from model, mechanism to simulation". We have the honor to receive Prof. ZHANG Kailong from the Northwestern Polytechnical University in China.

This seminar is public and free of charge, registration is mandatory.

As driverless vehicles have become a reality and vehicular communication technologies are in rapid developing, the study of Cooperative Intelligent Transportation System (C-ITS) has been becoming a novel and hot research direction. It can be increasingly envisioned that such novel C-ITSs will become vital infrastructures for future smart social city, as mobile service platforms, in which various driverless vehicles will undertake diverse missions as service carriers, covering emergency vehicles, shuttle vehicles, logistics vehicles, taxi, and private vehicles etc. From this aspect, C-ITSs show more and more heterogeneous, cyber-physical, cooperative, and service-oriented features and are beginning to be merged with the emerging cyber-physical-social systems. That way, the classic cooperation problems in ITS must present some new connotations, challenged current models and mechanisms. After analyzing the essence of typical cooperative problems with QoS constraints, the modeling, design, and simulating methods in a new time-space-service domain will be explained in this talk. And further, a QoS-based cooperative mechanism will be described and demonstrated.

Venue

MINES ParisTech – room Vendôme
60, Boulevard Saint-Michel 75006 Paris
Luxembourg station on RER line B

Drive for All is the International Chair MINES ParisTech, Peugeot-Citroën, Safran, Valeo on automated driving of ground vehicles.

The chair unites researchers from MINES ParisTech's Robotics Centre with teams from international partner institutions — Shanghai Jiao Tong University in China, the University of California, Berkeley in the United States and Ecole Polytechnique Fédérale de Lausanne in Switzerland.

Prof. ZHANG Kailong is an associate professor in school of computer science and technology, Northwestern Polytechnical University (NPU), China, since 2010. He obtained his MS degree and PhD degree at 2003 and 2009 respectively. He has been connected with Networked Embedded Computing and Technology Laboratory in NPU since 2003. Now, he is also a researcher and the assistant director of Shaanxi Provincial Key Laboratory of Embedded System Technology.

He has been conducting studies on intelligent embedded computing and real-time intelligent systems, covering the architecture, adaptive real-time computing, intelligent mechanisms and design methods for autonomous Cyber-Physical Systems. From 2012 to 2014, he was a post-doctor with the CyberCars program of the Center of Robotics in Mines ParisTech, Paris, France, mainly working on the cooperative mechanisms of multiple driverless vehicles by using state-driven automatic control and vehicular ad-hoc networks. In the field, he has undertaken/participated several China national/provincial important research projects, such as NSF projects and NDRC project. He has published more than 60 academic papers on international journals and conferences, such as IEEE Trans on ITS, IEEE Communication Letters, and IEEE ITSC etc. In recent years, he has won several awards for his research, including a HP scholarship (2006), a Shaanxi Provincial first Prize award of Science and Technology (2006), and a Chinese Ten Youths Award in Embedded System Domain (2011).

Now, he also serves as the program committee member and reviewer to several international journals, typically including "IEEE Trans on ITS", "Elsevier-Physica A: Statistical Mechanics and its Applications", "Oxford-The Computer Journal", "Elsevier-Ad Hoc Networks", "Wiley-Security and Communication Networks", "Chinese Journal of Computers", "Chinese Acta Automatica Sinica", and also to serial international conferences, IEEE PiCOM, IEEE ICESS, IEEE/ACIS ICIS etc.