



The 2018 IEEE Intelligent Vehicles Symposium (IV'18)

Changshu, Suzhou, China

June 26 - June 30, 2018

IV'18 Special Session on

Parallel-Driving-Based Control Optimization of Intelligent

Electrified Vehicles: from CPS to CPSS

Scope and goal:

As a typical Cyber-Physical System, an intelligent electrified vehicle (iEV) represents a perfect combination of the two promising technologies of energy and intelligence. Beyond CPS, the Cyber-Physical-Social Systems (CPSS), which is more tightly conjoined, coordinated, and integrated with human and social characteristics, has been steadily growing to be an emerging research focus. In this context, the emerging parallel driving, which is a cloud-based CPSS framework aiming at synergizing connected automated driving, offers an ample solution for achieving smarter, safer and more efficient performances of intelligent electrified vehicles in future transportation. This special session aims to compile the latest research and development advances in parallel-driving-based iEV.

Topics of interests (include but not limited to):

- Dynamic modelling of vehicles and mechatronic systems
- CPSS-based control and optimization for vehicles
- Cloud-based monitoring and management of vehicle systems
- Parallel driving and parallel electrified vehicle
- Driver-vehicle interaction and collaboration in iEVs
- Advanced control and estimation of electrified powertrains
- Electrified vehicle dynamics and control
- Testing, verification and assessment of intelligent vehicles
- Fault diagnosis and fault tolerant control of automotive systems
- Integration of electrified vehicles within ITS and/or smart grid
- Advanced battery management systems

Important Dates:

Papers submission: January 29th, 2018

Notification of acceptance/rejection: March 31st, 2018

Camera-ready version due: April 8th, 2018

Conference days: June 26th - July 1st, 2018

Paper Submission:

Prospective authors are required to submit their manuscripts electrically through the conference Papercept submission system (<https://its.papercept.net>) and with the special session code “**cxw1f**” for the special session. Submitted papers shall not exceed six pages as a pdf file in IEEE two column format. See more detailed information at the conference website (<http://www.2018iv.org/>) to prepare your paper.

Organizers:

Chen Lv, Ph.D., Research Fellow, Cranfield University, UK

Email: c.lyu@cranfield.ac.uk

Hongyan Guo, Ph.D., Associate Professor, Jilin University, China

Email: guohongyan220@163.com

Hong Wang, Ph.D., Research Associate, University of Waterloo, Canada

Email: hong.wang@uwaterloo.ca

Lei Zhang, Ph.D., Assistant Professor, Beijing Institute of Technology, China

Email: lei_zhang@bit.edu.cn