

# Sophia Workshop at Tongliao

July 30 – August 1, 2019



## Future of Networked Intelligent Vehicle Control Systems

The objective of this workshop is to provide young researchers with an opportunity to better understand the challenges and academic trends in Networked Intelligent Vehicle Control Systems, and also to enhance the academic-industrial connections. The workshop will invite the world-leading experts from automotive industry and academic to deliver exciting presentations and provides interactive discussions.

### Program:

#### 30<sup>th</sup> July Registration

10:00-14:00 Changfeng International Hotel

#### Technical Session I (Chair : Dr. Jinwu Gao)

16:00-17:30 Cooperation Control of Networked Intelligent Vehicle and its applications  
( 网联化智能汽车的协同控制技术与应用 )  
*Prof. Shengbo Li (Tsinghua University)*

17:30-18:00 Discussion

18:30-20:30 Welcome Reception

#### 31<sup>st</sup> July Opening Address

8:50-9:00 Prof. Tielong Shen (Sophia University)

#### Technical Session II (Chair : Dr. Yuhu Wu)

9:00-10:30 Energy Management of connected HEVs and PHEVs  
*Prof. Xiaosong Hu, (Chongqing University)*

10:30-11:00 Discussion

11:30-13:00 Lunch

#### Academic-Industrial Round-Table Discussion (Chair: Prof. Tielong Shen)

17:00-18:30

- Networked systems and its industrial application
- What is the main expectations by automotive industry on powertrain control research?
- What challenges will be brought with the development of the autonomous driving and intelligent transportation technologies?

18:30-20:30 Banquet

#### 1<sup>st</sup> Aug. Technical Session III (Chair : Dr. Mingxin Kang)

8:30-8:50 *Dr. Yahui Zhang, Combustion Control of Spark-ignition Engines based on Map-learning*

8:50-9:10 *Dr. Fuguo Xu, Look-ahead Prediction-based Real-time Optimal Energy Management for Connected HEVs*

9:10-9:30 *Zhenhui Xu, online actor-critic algorithm to solve the continuous-time infinite horizon optimal control problem*

(Official Language: English / Chinese)

### Organizer:

- Shen Laboratory, Sophia University
- Technical Committee on Vehicle Control and Intelligence, CAA

### Venue:

- Changfeng International Hotel  
(通辽市扎鲁特旗长峰国际酒店)  
*Addr. Huangshan Street, Lubei Town, Zhalute Qi, Tongliao, Inner Mongolia, China*

### Chair :

- Tielong Shen (Sophia Univ.)

### Steering Committee :

- Yuhu Wu (Dalian Univ. of Technology)
- Jinwu Gao (Jilin Univ.)
- Mingxin Kang (Northeastern Univ.)
- Jiangyan Zhang (Dalian Minzu Univ.)
- Yahui Zhang (Sophia Univ.)