Call for Special Session Papers

The 2018 IEEE Intelligent Vehicles Symposium

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IV'18 Special Session on Intelligent Vehicle Motion Control and Safety

- **Code: hvg5b**

- **Session Organizer:**

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Guodong Yin is currently a professor in School of Mechanical Engineering, Southeast University, Member of IEEE. He received his PhD (Vehicle Engineering) in 2007, Southeast University. From August 2011 to August 2012, he was visiting scholar of Ohio State University, USA. His main research focuses in vehicle system dynamics and control, intelligent vehicle systems. He has published more than 60 peer-reviewed journal and conference papers.		
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Bin Li is currently a researcher in Department of Mechanical & Industrial Engineering, Concordia University, Canada. He received his PhD degree from Shanghai Jiao Tong University, Shanghai, China in 2010. He was Research Fellow on next generation electric vehicle project at University of Waterloo and on mobile robotic control project at McGill University. His research interests focus on road vehicle system modelling, dynamics & control, electrified vehicles, integrated vehicle motion control, driver behavior modelling & analysis, automated vehicle control.		

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Yanjun Huang is currently a Postdoc Fellow of Mechanical and Mechatronics Engineering at University of Waterloo, Canada. He received his Ph.D. degree in 2016. He received the M.S. degree in Vehicle engineering from Jilin University, China in 2012. He is working on advanced control strategies and their real-time applications; vehicle dynamics and control; intelligent vehicle control; HVAC system modeling and control; Modeling of hybrid powertrains, components sizing and power management control strategies design through concurrent optimization and HIL testing; Variable valve actuation system for engines.

Technical Outline of the Session and Topics:

Safety and energy saving are always the main concerns of the academia and automotive industry. Intelligent vehicles, as a promising solution to these concerns, have attracted an increasing attention. Intelligent vehicles can improve the vehicle controllability, safety, and transportation efficiency by integrating the recent advancements in sensing, communication, computation, and intelligent transportation system. The key technologies of intelligent vehicles feature sensing, fast data and signal processing, decision-making, and advanced control & optimization. This special session aims to look for contributions on recent research and applications mainly but not exclusively of advanced control methods/technologies for intelligent vehicles to enhance driving safety, energy efficiency.

The specific topics of interest within the scope of this special issue include, but are not limited to, the following:

- Lateral and longitudinal vehicle motion control
- X-by-wire technologies
- Autonomous vehicle sensing and actuation
- Data and signal processing technologies
- Advanced driver assistant systems
- Driver-machine cooperative system
- Vehicle energy management and efficiency control
- Intelligent transportation system
- Simulations and experiments for Intelligent vehicles