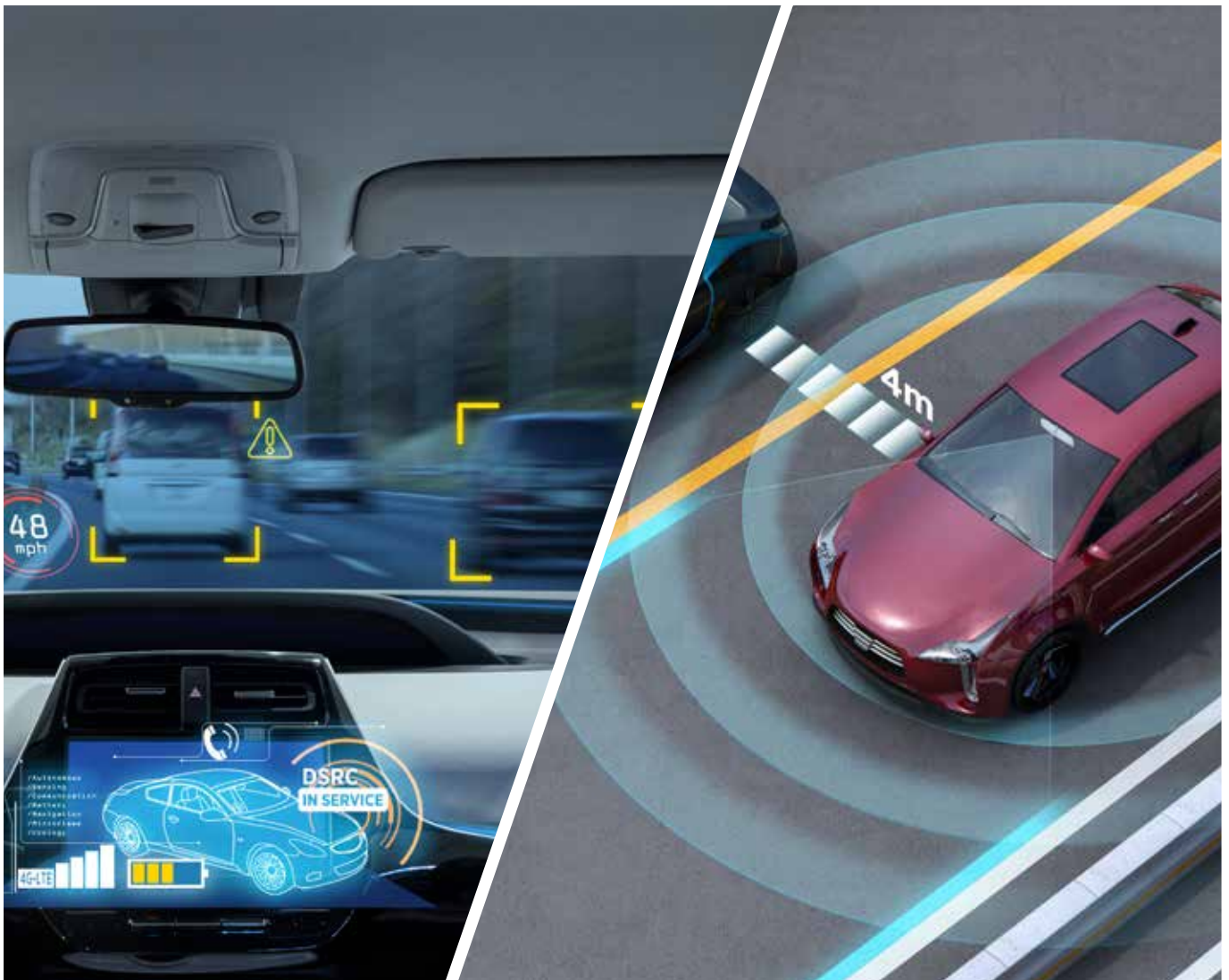




# SAE 2017 Intelligent and Connected Vehicles Symposium

## 汽车智能与网联技术国际学术会议

September 26-27, 2017  
Kunshan China  
[www.sae.org/events/icvs](http://www.sae.org/events/icvs)



## SCOPE

For automotive electronics and systems engineers involved in automated and connected vehicle development who need information and insight into the latest research, best practices and systems integration solutions associated with V2V, V2I, and V2X, the **SAE 2017 International Technology Forum On Intelligent and Connected Vehicle** (in partnership with the Science and Technology Bureau of Kunshan Development Zone) is a multi-track event that provides access to both academic and industry expertise and leadership in vehicle electronics, automation, and connectivity development.

The event features expert speakers and technical papers from the global automotive industry and academia on the latest research and innovations covering cyber security, sensors, systems development, and intelligent transportation systems. Unlike other industry events on connectivity and automation, SAE's ICVS program focuses on bridging the gap between academic research and industry application.

## HOSTS



SAE International



Science and Technology Bureau of  
Kunshan Development Zone

# COMMITTEE

Sorted by First Letter of Surname

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**Zhong, Zhihua**  
Academician  
CAE  
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Tongji University

## Consultative Committee (China)



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### Shocket, Abe

TE Connectivity

### Bai, Jie

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### Deng, Weiwen

Beihang University

### Yin, Chengliang

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University

### Barkai, Joe

Industry Analyst,  
Consultant and Author

### Gu, Jianmin

Volvo

### Zhao, Shengjie

Tongji University

### Cavanaugh, Tim

SAE International

### Li, Keqiang

Tsinghua University

### Chen, Chaozhuo

ZongMu Technology

### Yao, Danya

Tsinghua University

# WHO SHOULD ATTEND

## For All Attendee Types

- Communicate concerns, issues, and possible solutions regarding current industry and regulatory challenges to connected and intelligent vehicles.
- Share experiences and discuss potential solutions with other industry peer participants.
- Hear, discuss, learn, understand and apply new strategies for connected and intelligent transportation systems.

## For OEMs

- Have an open forum to discuss concerns with regulators, suppliers, and academia. OEMs can provide feedback on current research and direction to both the supplier and academic communities regarding future technology applications.
- Learn about the latest system and component solutions being offered by the supplier community. Suppliers very often offer low-cost options and solutions to current challenges faced by OEMs with respect to vehicle and systems development.
- Benchmark and discuss the latest intelligent/connected vehicle strategies, developments, and systems integration with OEMs experiencing the same challenges.

## For System and Component Suppliers and Service Providers

- Learn about the latest transportation and vehicle development strategies being used by OEMs and discussing its impact with regards to new component and systems development.
- Better understand downstream requirements being offered by OEMs and regulatory agencies. This knowledge is key for suppliers looking to position current products/services and develop the next generation of products/services that meet future OEM needs.
- Learn about the latest intelligent and connected vehicle research that could lead to future product/service development and enhancement efforts.

## For Research Community

- Have an open forum to discuss and share the latest research on intelligent transportation systems development, sensor development, and cyber security.

# TECHNICAL PROGRAMS

**TUESDAY, SEPTEMBER 26**

TIME	REGISTRATION	
8:45	<b>WELCOME</b>	
9:00	<b>Keynote</b>	
	<p><b>Subject TBA</b>            Zhong, Zhihua Academician - Chinese Academy of Engineering            President - Tongji University</p> <p><b>The Turing Test of Unmanned Driving</b>            Li, Deyi Academician - Chinese Academy of Engineering            President - Chinese Association for Artificial Intelligence</p>	
10:30	<b>KUNSHAN PRESENTATION</b>	
10:50	Break	
11:20	<b>Panel</b>	
	<p><b>Technology Innovation and Business Transformation Shaping the Future of Intelligent Connected Vehicles</b></p> <p><b>Moderator</b>            Chen, Chaozhuo ZongMu Technology</p> <p><b>Panelists</b>            Barkai, Joe Industry Analyst, Consultant and Author            Dr. Gu, Jianmin Engineering Director - VOLVO Car China            Prof. Li, Keqiang Tsinghua University</p>	
12:20	Lunch	
	<b>BALLROOM A</b>	<b>BALLROOM B</b>
	<p><b>ICVS100: Intelligent Vehicle Technologies</b>            Chair: Prof. Chen, Hui</p>	<p><b>ICVS300: Human-Vehicle-Environment Interaction</b>            Chair: Prof. Deng, Kevin</p>
13:20	<p><b>Best Practices in the Development of Complex Intelligent Vehicle Systems</b>            Zhou, Jianguang Vice President - Dongfeng Motor Technical Center</p>	<p><b>Human-Vehicle Interaction Challenges: Is Technology The (Only) Answer?</b>            He, Jugang Vice President - Changan Auto R&amp;D Center</p>
13:50	<p><b>Local Path Planning for Intelligent Vehicle Obstacle Avoidance Based on Dubins Curve and Tentacle Algorithm</b>            Wu, Lingfei Guangzhou Automobile Group</p>	<p><b>Effects of Human Adaptation and Trust on Shared Control for Driver-Automation Cooperative</b>            Li, Renjie Tsinghua University</p>

TIME	BALLROOM A	BALLROOM B
14:10	<b>Path Following Based on Model Predictive Control for Automatic Parking System</b> Ma, Chengjun Univ of CAS / IEECAS	<b>Identification of Driver Individualities Using Random Forest Model</b> Li, Weinan Jilin University
14:30	<b>Firmware OTA: The best choice of the Smart Vehicle software upgrade</b> Rui, Yanan Adups Technology Co., Ltd.	<b>Driver Lane Keeping Characteristic Indices for Personalized Lane Keeping Assistance System</b> Lan, Xiaoming Tongji University
14:50	<b>Path-tracking Controller design for a 4WIS and 4WID Electric Vehicle with Steer-by-wire System</b> Hang, Peng Tongji University	<b>Personalized Controller Design for Electric Power Steering System Based on Driver Behavior</b> Zhu, Bing Jilin University
15:10	Break	
	<b>ICVS100: Intelligent Vehicle Technologies</b> Chair: Prof. Chen, Hui	<b>ICVS600: Cybersecurity</b>
15:30	<b>OEMs, Suppliers, Outside Innovators: The Changing Landscape of Automotive Innovation and Design</b> Dr. Zha, Hongshan Vice President - GAC Auto R&D Center	<b>Large Scale Vehicle's Information Security Testing Research And Method</b> Zhong, Jeffrey Director of Engineer - VisualThreat
16:00	<b>Longitudinal Planning and Control Method for Autonomous Vehicles Based on A New Potential Field Model</b> Ruan, Yandong Tongji University	<b>Research on Vehicle Cybersecurity Based on Special Security Hardware and ECDH Algorithm</b> Wu, Zhihong Tongji University
16:20	<b>Motion Planning of Automatic Driving in Complex Traffic Scenarios</b> Dang, Dongfang	<b>Research on CAN Network Security Aspects and Intrusion Detection Design</b> Li, Fang Institute of Electrical Engineering, CAS
16:40	<b>Obstacle Avoidance for Self-driving Vehicle with Reinforcement Learning</b> Zong, Xiaopeng Beihang University	<b>The Development of Safety Cases for an Autonomous Vehicle: a Comparative Study on Different Methods</b> Yang, Junfeng Birmingham City Univ.
17:30	<b>Keynote</b> <b>Connected &amp; Autonomous EV Revolution</b> Tin Hang Liu Founder CEO - OSVehicle	
18:30	<b>NETWORKING RECEPTION</b>	

# TECHNICAL PROGRAMS

**TUESDAY, SEPTEMBER 27**

TIME	REGISTRATION	
9:00	<b>Keynote</b>	
	<b>Autonomous Vehicles, Past, Present, Future</b> Litkouhi, Bakhtiar Manager, Automated Driving & Vehicle Control Systems Electrical & Controls Systems Research Lab - General Motors  <b>Subject TBA</b> Stephens, Renee VP U.S. Auto Quality - J.D. POWER	
10:30	Break	
	<b>BALLROOM A</b>	<b>BALLROOM B</b>
	<b>ICVS400: Connected Vehicles and Cooperative Driving</b>	<b>ICVS800: Intelligent Transportation Systems</b>
11:15	<b>Evaluation of Shanghai's Industrial Chain of Intelligent and Connected Vehicles Based on AHP Method</b> Chen, Yi Tongji University	<b>Macroscopic Traffic States Estimation Based on Vehicle-to-Infrastructure (V2I) Connected Vehicle Data</b> Xu, Zhe
11:35	<b>Boosted Deep Neural Network with Weighted Output Layers</b> Cui, Hua Tongji University	<b>Development of Smart Public Transport System by Converting the Existing Conventional Vehicles to EV's in Indian Smart Cities</b> Singh, Suyash ABV- IITM, Gwalior
11:55	Lunch	
	<b>ICVS200: Sensors, Sensing and Perception</b> Chair: Pro. Bai, Jie	<b>ICVS500: Tools and Methods for Intelligent Vehicles</b> Chair: Dr. Gu, Jianmin
13:00	<b>The Last Piece of Puzzle of The Automatic Sensor</b> Hu, Yanshan Vice General Manager - Xuanyuan	<b>Advanced Design Methods to Tackle Increased Vehicle Systems Complexity</b> Li, Hongjian Director - Intelligent & Connected Vehicle Department of FAW Technical Center
13:30	<b>Integrated Positioning System Method for Intelligent Vehicle Based on GPS and UWB</b> Ke, Min Jilin University	<b>Stability Control of Autonomous Vehicles with Four In-wheel Motor Drive for Severe Environments</b> Li, Xin Hong Kong Productivity Council
13:50	<b>Edge Enhanced Traffic Scene Segmentation Algorithm with Deep Neural Network</b> Tian, Huan Neusoft	<b>Development and Test of ESC controller with Driver-In-the-Loop Platform</b> Sun, Daoyuan Wuhan University of Technology

TIME	BALLROOM A	BALLROOM B
14:10	<b>3D Scene Reconstruction with Sparse LiDAR Data and Monocular Image in Single Frame</b> Zhong, Yuanxin Tsinghua University	<b>Traffic Modeling Considering Motion Uncertainties</b> Li, Jianping Jilin University
14:30	<b>Efficient Lane Detection Using Deep Lane Feature Extraction Method</b> Wang, Zhangyu Beihang University	<b>The trajectory planning of the lane change assist based on the model predictive control with multi-objective</b> Wang, Yangyang Tongji University
14:50	Break	
15:20	<b>Hybrid Camera-radar Vehicle Tracking System with Image Perceptual Hash Encoding</b> Chen, Sihan Tongji University	<b>Dynamic Modeling and State Estimation for Multi-In-Wheel-Motor-Driven Intelligent Vehicle</b> Lin, Zhichao Wuhan University of Technology
15:40	<b>2-D CFAR Procedure of Multiple Target Detection for Automotive Radar</b> Li, Sen Tongji University	<b>Automatic Generation Method of Test Scenario for ADAS based on Complexity</b> Xia, Qin Chongqing University
16:00	<b>The Application of Compressed Sensing in Automotive Radar Signal Processing for the Target Location</b> Bi, Xin Tongji University	<b>An Omnidirectional Collision Warning Method Based on V2X Communication Technology</b> Huang, Xiangyu Beijing Wanji Tech. Co., Ltd
16:20	<b>A Modified Chirp Sequence Design for Monopulse Automotive Radar</b> Chen, Tao China Automotive Engineering Research Institute Co Ltd	<b>Analysis of Illumination Condition Effect on Vehicle Detection in Photo-realistic Virtual World</b> Yang, Shun Jilin University
16:40	<b>A hybrid Method for Stereo Vision-based Vehicle Detection in Urban Environment</b> Li, Wenhui Jilin University	<b>Ethernet Standards for the Automotive Industry</b> Shigeru, Kobayashi TE Connectivity
	<b>Panel</b>	
17:00	<b>Moving Forward: Accelerators and Inhibitors</b> <b>Moderator</b> Chen, Chaozhuo ZongMu Technology <b>Panelists</b> Prof. Bai, Jie Tongji University Dr. Du, Jiangling Director of China Science Lab - General Motors Wu, Xuebing Vice President - Baidu	
17:45	<b>EXCELLENT PAPERS AWARD</b>	



# REGISTRATION

**Fee:** RMB 3,000 (TWO DAYS)

All registration amenities include access to technical sessions, exhibit, tea break, lunch, reception, networking opportunities. Digital Presentations will be provided after the forum, which has been permitted by speakers.

## CONTACT INFO:

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**Scan QR Code  
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## TO REGISTER ONLINE:

[www.sae.org/events/icvs](http://www.sae.org/events/icvs)

# VENUE INFORMATION

## Jinling Hotel Kunshan

**Address:** 389 East Qian Jin Road, Kunshan City, Jiangsu Province, China

**Phone:** +86-512-5538-8888

## Information of Local Transportation:

To Shanghai Pudong Int'l Airport : around 102km

To Shanghai Hongqiao Int'l Airport: around 45km

To Shanghai Metro Line 11 HuaQiao Rd station: around 15km

To Kunshan South Railway Station : around 10km

**Taxi fee:** around CNY 370.00

**Taxi fee:** around CNY 130.00

**Taxi fee:** around CNY 30.00

**Taxi fee:** around CNY 30.00





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