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

Chairman

Zhong, Zhihua
Academician
CAE
President
Tongji University

Consultative Committee (China)

He, Hangen
Professor
National University of Defense Technology

Li, Deyi
Academician
CAE
President
CAAI

Li, Jun
Academician
Deputy Chief Engineer & Director of R&D Center
FAW

Shen, Feng
Vice President
Volvo Car China
President
Volvo Car China R&D Centre
CTO Polestar

Wang, Yunpeng
Vice president
Beihang University
Professor
Chang Jiang Scholars

Yang, Zhigang
Director
Shanghai Automotive Wind Tunnel Center
Dean
Tongji University

Yu, Zhuoping
Principal Assistant, Professor & Doctoral Supervisor
Tongji University

Zhao, Fuquan
Chairman
FISITA 2018—2020
Dean
TASRI
Fellow
SAE International

Organizing Committee

Aymeric, Rousseau
Argonne National Laboratory

Bai, Jie
Tongji University

Barkai, Joe
Industry Analyst, Consultant and Author

Cavanaugh, Tim
SAE International

Chen, Chaozhuo
ZongMu Technology

Chen, Hui
Tongji University

Deng, Weiwen
Beihang University

Gu, Jianmin
Volvo

Li, Keqiang
Tsinghua University

Shocket, Abe
TE Connectivity

Yin, Chengliang
Shanghai Jiaotong University

Zhao, Shengjie
Tongji University

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.
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<th>TIME</th>
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<tbody>
<tr>
<td>8:45</td>
<td><strong>WELCOME</strong></td>
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<tr>
<td>9:00</td>
<td><strong>Keynote</strong></td>
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<td><strong>Subject TBA</strong></td>
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<tr>
<td></td>
<td>Zhong, Zhihua Academician - Chinese Academy of Engineering</td>
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<td>President - Tongji University</td>
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<tr>
<td></td>
<td><strong>The Turing Test of Unmanned Driving</strong></td>
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<td></td>
<td>Li, Deyi Academician - Chinese Academy of Engineering</td>
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<td>President - Chinese Association for Artificial Intelligence</td>
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<tr>
<td>10:30</td>
<td><strong>KUNSHAN PRESENTATION</strong></td>
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<tr>
<td>10:50</td>
<td>Break</td>
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<td>11:20</td>
<td><strong>Panel</strong></td>
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<tr>
<td></td>
<td><strong>Technology Innovation and Business Transformation Shaping the Future of Intelligent Connected Vehicles</strong></td>
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<td><strong>Moderator</strong></td>
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<td>Chen, Chaozhuo ZongMu Technology</td>
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<td><strong>Panelists</strong></td>
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<td></td>
<td>Barkai, Joe Industry Analyst, Consultant and Author</td>
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<td></td>
<td>Dr. Gu, Jianmin Engineering Director - VOLVO Car China</td>
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<td></td>
<td>Prof. Li, Keqiang Tsinghua University</td>
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<td>12:20</td>
<td>Lunch</td>
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<tr>
<th>BALLROOM A</th>
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<tbody>
<tr>
<td><strong>ICVS100: Intelligent Vehicle Technologies</strong></td>
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<tr>
<td>Chair: Prof. Chen, Hui</td>
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<tr>
<td><strong>ICVS300: Human-Vehicle-Environment Interaction</strong></td>
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<td>Chair: Prof. Deng, Kevin</td>
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<tr>
<td><strong>13:20</strong></td>
<td><strong>Best Practices in the Development of Complex Intelligent Vehicle Systems</strong></td>
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<tr>
<td>Zhou, Jianguang Vice President - Dongfeng Motor Technical Center</td>
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<td><strong>Human-Vehicle Interaction Challenges: Is Technology The (Only) Answer?</strong></td>
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<td>He, Jugang Vice President - Changan Auto R&amp;D Center</td>
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<td><strong>13:50</strong></td>
<td><strong>Local Path Planning for Intelligent Vehicle Obstacle Avoidance Based on Dubins Curve and Tentacle Algorithm</strong></td>
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<td>Wu, Lingfei Guangzhou Automobile Group</td>
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<td><strong>Effects of Human Adaptation and Trust on Shared Control for Driver-Automation Cooperative</strong></td>
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<td>Li, Renjie Tsinghua University</td>
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<tr>
<td>14:10</td>
<td>Path Following Based on Model Predictive Control for Automatic Parking System</td>
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<td>Ma, Chengjun, Univ of CAS / IEECAS</td>
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<tr>
<td>14:30</td>
<td>Firmware OTA: The best choice of the Smart Vehicle software upgrade</td>
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<td>Rui, Yanan, Adups Technology Co., Ltd.</td>
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<td>14:50</td>
<td>Path-tracking Controller design for a 4WIS and 4WID Electric Vehicle with Steering-by-wire System</td>
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<td>Hang, Peng, Tongji University</td>
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<td>15:10</td>
<td>Break</td>
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<td>Chair: Prof. Chen, Hui</td>
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<td>15:30</td>
<td>OEMs, Suppliers, Outside Innovators: The Changing Landscape of Automotive Innovation and Design</td>
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<td>Dr. Zha, Hongshan, Vice President - GAC Auto R&amp;D Center</td>
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<tr>
<td>16:00</td>
<td>Longitudinal Planning and Control Method for Autonomous Vehicles Based on A New Potential Field Model</td>
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<td>Ruan, Yandong, Tongji University</td>
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<td>16:20</td>
<td>Motion Planning of Automatic Driving in Complex Traffic Scenarios</td>
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<td>Dang, Dongfang</td>
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<td>16:40</td>
<td>Obstacle Avoidance for Self-driving Vehicle with Reinforcement Learning</td>
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<td>Zong, Xiaopeng, Beihang University</td>
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<td>17:30</td>
<td><strong>Keynote</strong></td>
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<td>Connected &amp; Autonomous EV Revolution</td>
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<td>Tin Hang Liu, Founder CEO - OSVehicle</td>
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<tr>
<td>18:30</td>
<td><strong>NETWORKING RECEPTION</strong></td>
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## TECHNICAL PROGRAMS

**TUESDAY, SEPTEMBER 27**

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<tbody>
<tr>
<td>9:00</td>
<td><strong>Keynote</strong></td>
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</table>
|       | **Autonomous Vehicles, Past, Present, Future**  
Litkouhi, Bakhtiar Manager, Automated Driving & Vehicle Control Systems Electrical & Controls Systems Research Lab - General Motors  
**Subject TBA**  
Stephens, Renee VP U.S. Auto Quality - J.D. POWER |
| 10:30 | Break        |
| 11:15 | **BALLROOM A**  
ICVS400: Connected Vehicles and Cooperative Driving  
Chen, Yi Tongji University  
**Evaluation of Shanghai’s Industrial Chain of Intelligent and Connected Vehicles Based on AHP Method**  
**ICVS500: Tools and Methods for Intelligent Vehicles**  
Chair: Dr. Gu, Jianmin  
**ICVS200: Sensors, Sensing and Perception**  
Chair: Pro. Bai, Jie  
**ICVS800: Intelligent Transportation Systems**  
Xu, Zhe  
**Macroscopic Traffic States Estimation Based on Vehicle-to-Infrastructure (V2I) Connected Vehicle Data**  
**Development of Smart Public Transport System by Converting the Existing Conventional Vehicles to EV’s in Indian Smart Cities**  
Singh, Suyash ABV- IIITM, Gwalior |
| 11:35 | **BALLROOM B**  
**ICVS200: Sensors, Sensing and Perception**  
Chair: Pro. Bai, Jie  
**ICVS500: Tools and Methods for Intelligent Vehicles**  
Chair: Dr. Gu, Jianmin  
**ICVS800: Intelligent Transportation Systems**  
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| 11:55 | Lunch        |
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Chair: Pro. Bai, Jie  
**ICVS500: Tools and Methods for Intelligent Vehicles**  
Chair: Dr. Gu, Jianmin  
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| 14:10 | **3D Scene Reconstruction with Sparse LiDAR Data and Monocular Image in Single Frame**  
Zhong, Yuanxin  Tsinghua University | **Traffic Modeling Considering Motion Uncertainties**  
Li, Jianping  Jilin University |
| 14:30 | **Efficient Lane Detection Using Deep Lane Feature Extraction Method**  
Wang, Zhangyu  Beihang University | **The trajectory planning of the lane change assist based on the model predictive control with multi-objective**  
Wang, Yangyang  Tongji University |
| 14:50 | **Break** |                                                                          |
| 15:20 | **Hybrid Camera-radar Vehicle Tracking System with Image Perceptual Hash Encoding**  
Chen, Sihan  Tongji University | **Dynamic Modeling and State Estimation for Multi-In-Wheel-Motor-Driven Intelligent Vehicle**  
Lin, Zhichao  Wuhan University of Technology |
| 15:40 | **2-D CFAR Procedure of Multiple Target Detection for Automotive Radar**  
Li, Sen  Tongji University | **Automatic Generation Method of Test Scenario for ADAS based on Complexity**  
Xia, Qin  Chongqing University |
| 16:00 | **The Application of Compressed Sensing in Automotive Radar Signal Processing for the Target Location**  
Bi, Xin  Tongji University | **An Omnidirectional Collision Warning Method Based on V2X Communication Technology**  
Huang, Xiangyu  Beijing Wanji Tech. Co., Ltd |
| 16:20 | **A Modified Chirp Sequence Design for Monopulse Automotive Radar**  
Chen, Tao  China Automotive Engineering Research Institute Co Ltd | **Analysis of Illumination Condition Effect on Vehicle Detection in Photo-realistic Virtual World**  
Yang, Shun  Jilin University |
Li, Wenhui  Jilin University | **Ethernet Standards for the Automotive Industry**  
Shigeru, Kobayashi  TE Connectivity |

**Panel**

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</table>
| 17:00 | **Moving Forward: Accelerators and Inhibitors**  
Moderator  
Chen, Chaozhu  ZongMu Technology |
|       | Panelists  
Prof. Bai, Jie  Tongji University  
Dr. Du, Jiangling  Director of China Science Lab - General Motors  
Wu, Xuebing  Vice President - Baidu |

17:45  **EXCELLENT PAPERS AWARD**
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:
Mr. Zhang, Sean
Phone: +86-21-6140-8926
Email: Sean.Zhang@sae.org

TO REGISTER ONLINE:
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 Taxi fee: around CNY 370.00
To Shanghai Hongqiao Int’l Airport: around 45km Taxi fee: around CNY 130.00
To Shanghai Metro Line 11 HuaQiao Rd station: around 15km Taxi fee: around CNY 30.00
To Kunshan South Railway Station: around 10km Taxi fee: around CNY 30.00