



安亭·上海国际汽车城  
Anting · Shanghai International Automobile City

# SAE 2015 NEW ENERGY VEHICLE FORUM 新能源汽车国际论坛

September 15-16 , 2015

DoubleTree by Hilton Hotel Huaqiao - Kunshan  
Anting - Shanghai International Automobile City

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



# **SAE 2016 HYBRID AND ELECTRIC VEHICLE TECHNOLOGIES SYMPOSIUM**

February 9-11, 2016

Anaheim, California, USA - Disneyland Hotel

## SAE 2015 New Energy Vehicle Forum

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Should a catastrophic event occur, attendees should follow the safety and security instructions issued by the facility at the time of the event. This includes listening for instructions provided through the public address system and following posted evacuation routes if required.

In the event of an emergency or a major disruption to the schedule of events at the SAE 2015 New Energy Vehicle Forum, attendees and exhibitors may call this number to receive further information about the resumption of this event. Updates will also be provided via the SAE website at <http://www.sae.org>

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### 安亭·上海国际汽车城

Anting • Shanghai International Automobile City

In September 2001, the Shanghai Municipal Government took the decision to create the Shanghai International Automobile City (referred to as SIAC) in Anting town, Jiading district. The planned area covers

100 square kilometers and the investment is expected to reach 80 billion RMB. SIAC has functional areas such as automobile R&D, manufacturing, trade, cultural expo and education. The focus is on pillar automobile industries such as whole car manufacturing and vehicle parts and components.

The emerging industries in SIAC include new energy vehicles R&D and manufacturing, automobile finance, and healthcare. Its vision is to create the future of mobility, build a livable city with a powerful innovative industry and automobile cultural and become the commanding heights of China auto industry. SIAC will have its place in the world.

### Organizer:

Ocean Communications Limited

### Media:



TIME	SEPT 15, 2015 TUESDAY	SEPT 16, 2015 WEDNESDAY
9:00	Forum Opening & Welcome	
9:30		<b>TECHNICAL SESSION:</b> COMPONENT AND SYSTEM TESTING AND EVALUATION
10:00	<b>TECHNICAL SESSION:</b> MARKET PERSPECTIVES	
10:30		Tea Break
11:00	Tea Break	
11:30		<b>TECHNICAL SESSION:</b> ENERGY STORAGE SYSTEM DEVELOPMENTS
12:00	<b>TECHNICAL SESSION:</b> OEM PASSENGER CARS	
12:30		
13:00	Lunch	Lunch
13:30		
14:00	<b>TECHNICAL SESSION:</b> INFRASTRUCTURE, CHARGING, AND ENERGY EFFICIENCY	<b>BUSINESS SESSION:</b> INVESTMENT, M&A, TECHNOLOGY TRANSFER
14:30		
15:00		
15:30	Tea Break	Tea Break
16:00		<b>Panel Discussion:</b> FAQ & CORRESPONDING METHOD OF TECHNOLOGY TRANSFER
16:30	<b>TECHNICAL SESSION:</b> POWER SYSTEMS	
17:00		
17:30		

The purpose of this events is to provide an open exchange of ideas. Remarks made by participants or members of the audience cannot be quoted or attributed to the individual or their company unless express permission has been granted by the individual and their company. Any record of remarks, discussion, or photographs may not be used unless express permission has been granted by the individual and their company.

**Registration:**

Sept 14	Monday	12:45 - 17:00	Hotel Lobby, 1st Floor
Sept 15	Tuesday	08:00 - 18:00	Ballroom Foyer, 2nd Floor
Sept 16	Wednesday	08:00 - 13:00	Ballroom Foyer, 2nd Floor

**Tea Break:**

Location: Ballroom Foyer, 2nd Floor

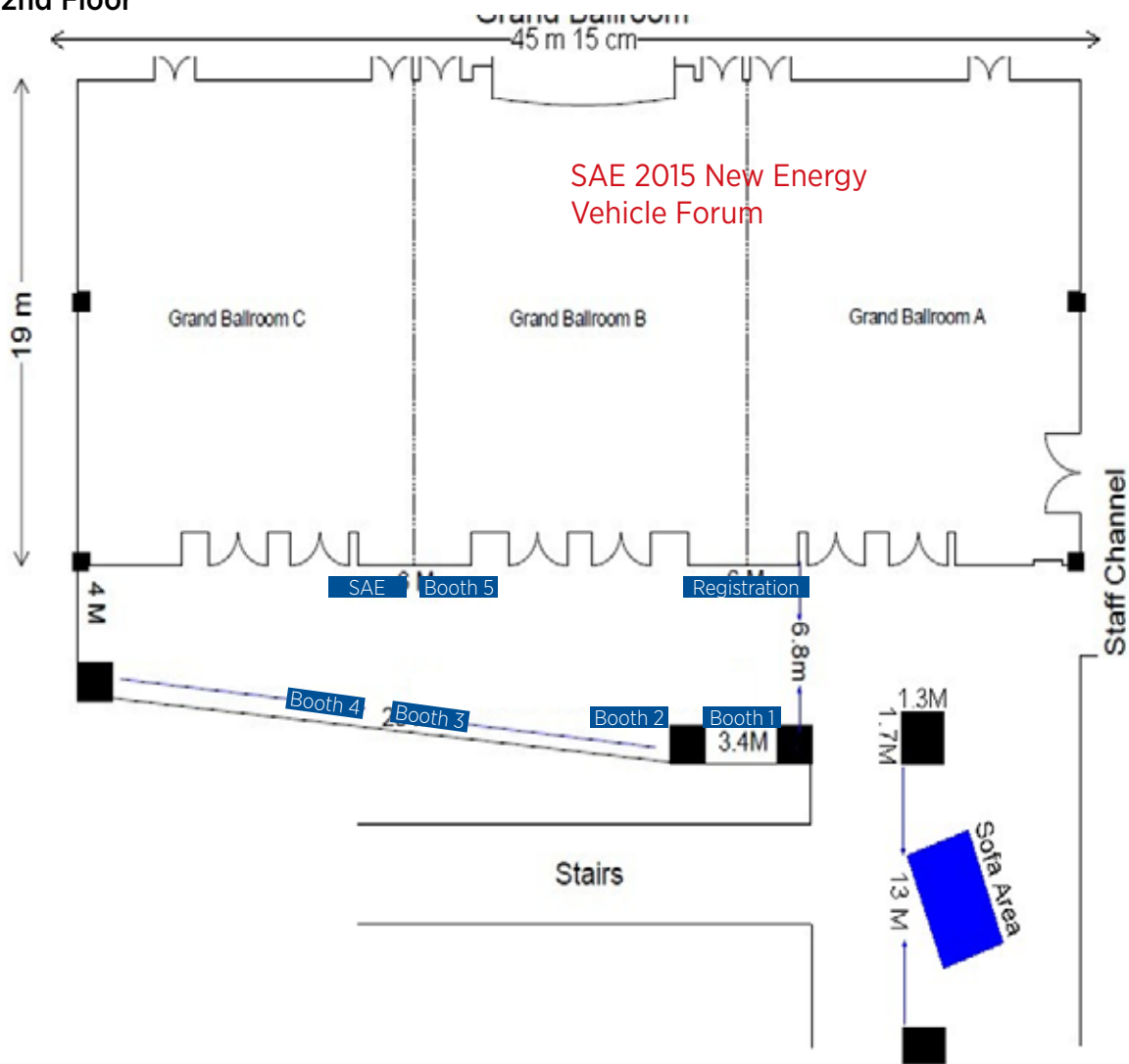
**Lunch:**

Location: Magnolia Café, 1st Floor

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**2nd Floor**



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**TUESDAY**  
**SEPT 15**

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## FORUM OPENING AND WELCOME

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09:00

**Scott Sward**, Director of Global Business Development, Sales & Marketing, SAE International  
**Jian XU**, Executive General Manager, Shanghai International Autocity Development Co., Ltd.

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## MARKET PERSPECTIVES

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09:30

### The Strategic Outlook of Electrification

**Mazen Hammoud**, Director of Powertrain Engineering, Asia Pacific, Ford Motor Company

10:00

### NEV Rollout and Sales -Challenges for Conventional OEM Structures

**Andrew McIndoo**, Electric Vehicle Senior Management Consultant at P3

10:30

### BAIC's NEV Strategies and Outlook for the Future

**Wenzhang ZHAN**, Director of New Energy Vehicle Management Dept. at BAIC

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## OEM PASSENGER CARS

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11:30

### Ford's Vehicle Electrification Technology and Vehicles

**Ming KUANG**, Technical Leader in vehicle controls at Research and Innovation Center of Ford Motor Company

12:00

### Roewe 550 Plug-in Hybrid Vehicle --- SAIC 'NetGreen' Strategy

**Yunfei LUAN**, Chief Engineer of HEV/PHEV Platform at SAIC Motor

12:30

### True Electric Vehicle Design

**Christian Okonsky**, Founder & CEO at KLD Energy Technologies Inc.

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## INFRASTRUCTURE, CHARGING, AND ENERGY EFFICIENCY

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14:00

### IBM Solutions in New Energy Vehicles

**Jun ZHU**, Senior Technical Staff Member & Senior Manager, IBM Research - China (CRL)

**Jiong XIE**, IoT Continuous Engineering Technical Leader, IBM GCG

14:30

### 360° of EV-Charging: Charging Approaches, Challenges, Influencing Factors and Future Prospects

**Stephen XU**, Senior Management Consultant, P3 North America Inc.

15:00

### "No Electric Vehicle Without an Ecology" the Ecological Layout of Dianzhuang's Charging Infrastructure

**Yue XIAN**, Founder, President & CEO at Beijing Dianzhuang Technology

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## POWER SYSTEMS

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16:00

### Examining ways to Maximizing Power Density in Electric Machines for Traction and Power Generation in Hybrid Electric Vehicles

**Eddie (Yoo Sik) KIM**, Electromechanical Business Development Manager, Parker Hannifin Korea Automation Office

16:30

### Capacitor Technologies for IGBT and Wide Band Gap Based Inverters

**Joseph CUI**, FAE Manager, Kemet Asia

17:00

### Growing System Applications of Power Electronics in China

**Richard ZHU**, Technical Manager, Head of Department, Infineon (Beijing) Automotive System Engineering



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**COMPONENT AND SYSTEM TESTING AND EVALUATION**


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**WEDNESDAY**  
**SEPT 16**

09:00

**Vehicle Level Abuse Testing of xEVs – Internal Fire***Erik Spek, Chief Engineer, TÜV SÜD Canada*

09:30

**EV/EVSE Interoperability Studies in U.S.***Jonny DONG, Technical manager of EV battery, Intertek China*

10:00

**Range Estimator Algorithms in Modern EVs and Related Testing Methods***Christophe Moure, Project Manager, EV/HEV, Powertrain, IDIADA*


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**ENERGY STORAGE SYSTEM DEVELOPMENTS**


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11:00

**Electrification Options to Meet Future Fuel Efficiency Regulations***Hongtao SHI (Alfred), Business Development & Technical Sales, Li-ion Product Line, Johnson Controls Inc.*

11:30

**ECE R100 Regulations/ E-marking of Batteries***Jonny DONG, Technical manager of EV battery, Intertek China*

12:00

**High Efficient E-machines and Power Electronics for High Performance New Energy Vehicles***Bernd Blankenbach, Technical Director Development Electric Machines, AVL TRIMERICS GmbH*


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**BUSINESS SESSION: INVESTMENT, M&A, TECHNOLOGY TRANSFER**


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14:00

**International Technology M & A Platform***Hui LIN, Director of Technology Property Rights Transaction; Operation and General Manager of SUAEE*

14:30

**Explore the Values of Patent Big Data***Chun-Quan XIAO, General Manager, Gainia Intellectual Assets Service, Inc*

15:00

**Several Legal Issues in Technical Mergence***Qingji ZHU, Senior Partner, Dacheng Law Office*


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**BUSINESS PANEL: FAQ & CORRESPONDING METHOD OF TECHNOLOGY TRANSFER**


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16:00

Moderator:

**Jie XU**, Technology Transaction Dept Business Officer,  
Shanghai United Assets and Equity Exchange

Panelists:

**Hui LIN**, Director of Technology Property Rights Transaction;  
Operation and General Manager of SUAEE

**Chun-Quan XIAO**, General Manager, Gainia Intellectual Assets Service, Inc

**Qingji ZHU**, Senior Partner, Dacheng Law Office

**Liping ZHANG**, CEO, Hebei Yujie Vehicle Industry Co., Ltd.; Yogomo Group

**James Lee**, Deputy General Manager, Zidesen Investment Consulting (Shanghai) Co., Ltd.



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### Scott Sward

Director of Global Business Development, Sales & Marketing  
SAE International

## WELCOME SPEECH

Scott has spent his publishing career in the industrial/manufacturing industries serving the functions of design engineering to plant operations/manufacturing in both the international and domestic markets.

He began his publishing career with Chilton Co in 1982 which was subsequently acquired in 1997 by Cahners/Reed Business Information. Prior to joining SAE International in 2008 he ran the new business development division of a custom publishing firm serving both consumer, association and business-to-business clientele. In each position held, he had primary P&L responsibility and was charged with the development and implementation of strategic business plans and new product initiatives.

Sward received his education from Miami University and John Marshall Law School.

SEPT 15



### Jian XU

Executive General Manager  
Shanghai International Autocity Development Co., Ltd.

## WELCOME SPEECH

Dr Xu Jian obtained his doctorate in Management Science and Engineering at Tongji University; now he is the Executive General Manager of Shanghai International Auto City Development Co., Ltd. Dr Xu joined the Communist Party of China in November 1997, and started to work since March 2001. He has previously worked as the secretary of party committed in Anji Logistics Co., Ltd., and the Deputy Mayor of Longnan city, Gansu Province.

With the entrepreneurial spirit, Dr Xu went to the west of China after finished his master degree. He had served in the deputy secretary and Party Member of the Communist Youth League in Gansu Province, the party secretary of Qinan County, and the municipal Party Member of Longnan City Gansu Province, dedicating to develop economy

and education in these areas.

Dr Xu joined Shanghai International Auto City in 2014, since then he has been devoting himself to the development and construction of Shanghai International Auto City, actively promoting the construction and investment work of "Auto Tech-Innovation Park" project, and committed to make the Park be a national first and world-leading innovation and R&D highland for automotive industry.

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### Mazen Hammoud

Director of Powertrain Engineering, Asia Pacific,  
Ford Motor Company

## The Strategic Outlook of Electrification

Dr. Mazen Hammoud is the newly appointed Director, Powertrain Engineering, Asia Pacific. Prior to this appointment, he was Ford's Electrified Powertrain Systems Chief Engineer in charge of system architecture, component sizing, controls, and calibration for all HEV, PHEV, and BEV programs globally to deliver cost-effective best-in-class fuel economy and a superior driving experience. After Mazen assumed the Electrification role in 2012, Ford's Electrification market share has grown more than threefold to 14% of the segment in North America, while winning multiple awards.

Since joining Ford in 1998, Dr. Hammoud held several leadership positions in Powertrain Controls and Calibration. He delivered multiple award winning programs for driveability and fuel economy using EcoBoost technology. In Powertrain electronics, he managed to reduce cost and complexity while improving quality by applying Ford's Commodity Business Plan and

Supplier Aligned Business Framework strategies.

Mazen's career, including eight years at GM, is focused on sustainability and the environment by reducing emissions and improving fuel economy of modern Powertrains. He is responsible for numerous innovations published in technical papers and international patents. Mazen frequently participates in panel discussions, represents Ford in media events, and delivers industry speeches.

Dr. Hammoud holds a Bachelor (WSU), Master (U of M) and Ph.D. (U of M) degrees in Mechanical Engineering and an MBA in Organizational Behavior from the University of Michigan. An SAE Fellow, he serves on several professional and academic boards and is currently Chairman of the SAE Foundation Board of Trustees.

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**Andrew McIndoo**  
Electric Vehicle Senior  
Management Consultant  
P3

## xEV Rollout and Sales -Challenges for Conventional OEM Structures

SEPT 15

Andrew is a Senior EV Management Consultant at the P3-Group: a global engineering consulting company supporting the automotive, aviation, telecommunication and energy industries.

He combines a unique blend of engineering creativity and business talent to leverage new ideas in the clients company's strategic business plans for sustainable growth. He innately understands new technologies as well as prevailing market dynamics to communicate the strategic importance of change management within an organization.

Andrew has more than 15 years of professional engineering experience. He started his career with General Motors Ovonic Battery and then went on to help start a solar in-road pedestrian

warning light company in Reno, Nevada. He also started his own residential solar installation company in Texas with his solar NABCEP certification. He has worked with several other manufacturing companies throughout the years to affect organizational change and implement lean manufacturing strategies.

Andrew completed his MBA studies from Walsh College of Business and Accountancy and completed his Bachelor's degree in Industrial Technology Engineering from Texas A&M University Kingsville. He also is Six Sigma black belt certified.

He lives in Royal Oak, a northern suburb of Metro Detroit and enjoys driving his electric car and riding his electric bike.

### ABSTRACT

The automotive industry has had over 100 years to develop the customer experience with the internal combustion vehicle. Now, with the increasing interest and growth in electrified vehicles, this model must change.

With the advancement of electrified vehicles, along with mobility devices, consumers who are interested in these vehicles want or need additional services and equipment from the dealership, the road, and the OEM. With these additional needs, new methods to develop the

customer experience and drive more consumers towards electrified vehicles must be used. The electrified vehicle user is smart, money conscious, environmentally aware and wants their electric vehicle experience to be meaningful and useful.

From an EV adopter perspective, there are methods and necessary steps that must be taken to bring the customer centricity from the current internal combustion engine model to the new EV model.



**Wenzhang ZHAN**  
Director of New Energy  
Vehicle Management  
Dept. at BAIC

## BAIC's NEV Strategies and Outlook for the Future

SEPT 15

Zhan Wenzhang, PhD, Senior Engineer, BAIC New Energy Vehicle Management Department Director, world-famous middle-young EV expert, Middle-young Technology Pioneer awarded by Ministry of Science and Technology, recipient of Beijing Labor Day Medal, Candidate of 100 Technology Pioneers Development Program in Beijing, and BAIC Innovative Talent and Outstanding Individual. With enriched experiences in the development and management of new-energy vehicles as well as research work, Zhan is one of the leaders in BEV community in China. He was the head of 863 Project of Ministry of Science and Technology, and more than 10 important research projects assigned by Beijing Science and Technology Committee. BAIC's E150, M30 and SAAB93 BEVs developed under his leadership have been massively produced, welcomed by the market for their domestically advanced technology and quality, resulting in a leading position in sales

competition in China. He made great contribution to the micro hybrid BSG, medium hybrid ISG and full hybrid EV-AT. He applied for 37 patents and already secured 35.

Dr. Zhan's other social responsibilities include: SAE-China Suspension Deputy Director; Reviewer/Acceptance Expert for Energy-saving and New Energy Vehicle Major Specific Project, 863 Program of Ministry of Science and Technology; Member of MIIT-UN WP29 EV Safety Global Technology Reference (EVS GTR) Expert Group; Technology Expert Group Member, Vehicle Electronics and Controls Engineering Center, Ministry of Education; Assessor of Power Battery Manufacturer and Product, MIIT; Member of China Vehicle Industry Award Foundation; Member of Australia Vehicle Engineering Society; Member of Technology Committee of National Battery and Material Laboratory, University of Wollongong.

### ABSTRACT

The potential for electrification in passenger cars and heavy vehicles to mitigate China's air pollution and carbon emissions has attracted the government's attention and policy support – including subsidies, tax breaks, and license plate allocations. With China's passenger new energy vehicle (NEV) market now showing unprecedented growth, this presentation will give an overview of relevant policies and players

in this space, and analyze the market dynamics of NEVs over the next decade to determine if this rapid pace of growth is sustainable. A forecast on sales of plug-in hybrid electric vehicles (PHEVs) and of EVs will be given. Also, unmet needs like inadequate charging infrastructure and lagging cost reduction, which continue to stand in the way of true mass market adoption will be explored.

## Ford's Vehicle Electrification Technology and Vehicles

SEPT 15



### Ming Kuang

Technical Leader in Vehicle Controls at Research and Innovation Center of Ford Motor Company

Ming Kuang is a Technical Leader in vehicle controls at Research and Innovation Center of Ford Motor Company, leading the development of global vehicle control architecture and advanced hybrid vehicle controls. He started his career at Ford as a control engineer in electric vehicle programs in 1991. He has worked in both research and production organizations in the area of vehicle dynamics and controls, electric and hybrid, and fuel cell electric vehicles technologies, and vehicle controls. In his prior and current positions, Mr. Kuang played an instrumental role in the development of hybrid vehicle controls for both the first Escape Hybrid and the Fusion Start-Stop vehicles. He was recognized by the company with Henry Ford Technology Awards in 2005 and 2012 for his contributions to both developments respectively. His current responsibilities and interests range from developing and implementing global vehicle controls architecture, establishing vehicle control system development

#### ABSTRACT

With China's rapid economic growth, the demand for individual mobility from Chinese consumers will significantly increase. As a result, there are growing concerns of the environmental impact from automobile emissions. Electrification is an essential element in meeting increased vehicle demand while addressing environmental concerns. This presentation highlights Ford's 90-year-old vision, and the

and implementation methodologies, to advancing vehicle control algorithms for Electrification.

Mr. Kuang has authored and co-authored over 41 technical papers published on IEEE journal, ASME, ACC, CDC, DSCC, SAE and other engineering conferences. He holds 59 U.S. patents and 14 oversea patents. He has received major awards from both internal and external of Ford, Technical Achievement Award in 2008 and 2011, SAE International Henry Ford II Distinguished Award for Excellence in Automotive Engineering in 2007, and Henry Ford Technology Awards in 2005 and 2012, to name a few.

Mr. Kuang is a member of SAE International. He holds a Master of Science degree in mechanical engineering from University of California, Davis, and a Bachelor of Science degree in mechanical engineering from South China University of Technology in the People's Republic of China.

current product strategy. It then gives an overview of Electrification Evolution, showcasing Ford's cutting edge electrification technologies and describes Ford's electrified vehicles. Finally, Ford's expanding manufacturing capacity and supply base in China to deliver NEVs that Chinese customers want and value will be discussed.

## Roewe 550 Plug-in Hybrid Vehicle --- SAIC 'NetGreen' Strategy

SEPT 15



### Yunfei LUAN

Chief Engineer of HEV/PHEV Platform at SAIC Motor

Dr. Luan Yunfei is the PHEV/HEV Platform Chief Engineer at Shanghai E-Propulsion Auto Technology Co., Ltd, Shanghai, China. Prior to SAIC, he has held worked at ChangAn New Energy Vehicle as the technical director, BAE Systems, Santa Clara, California, GM Powertrain Troy, Michigan. He is a Ph. D. graduate in mechanical

#### ABSTRACT

Since the launch of Roewe 550 Plug-in Hybrid Vehicle in March 2014, the energy saving technologies, quality and reliability of this vehicle gained quick popularity. This presentation is a deep dive of its technical features, with emphasis of the key components. With quick production ramp up during the past summer, the SAIC "NetGreen" strategy begins to show its power and ambition

Engineering from Wayne State University, Detroit, Michigan and has published papers on GM mild hybrid vehicle and gasoline cold start engine calibration. He holds patents on hybrid control strategies and is a co-author of "Principles and Applications of Powertrain Controls for Hybrid and Electric Vehicles".



### Christian Okonsky

Founder & CEO  
KLD Energy  
Technologies Inc.

## True Electric Vehicle Design

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In 2007, after 20 years of bringing leading-edge products to market, Christian Okonsky founded KLD Energy Technologies, named after his oldest sons Keil, Luke, and Dean, to develop products that make the world a better, safer, cleaner place for future generations. As KLD's chief executive officer, Okonsky brings strong leadership experience and a drive to innovate.

Okonsky spearheads the strategic vision of the company and oversees the direction of its breakthrough motor system technology, as well as new vehicle products currently under development. A prolific inventor and technological innovator, he currently holds over two dozen U.S.

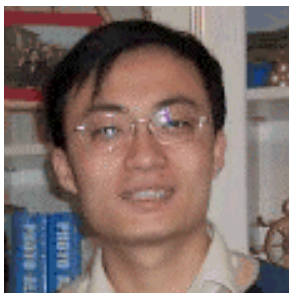
and foreign patents.

Prior to launching KLD Energy Technologies, Okonsky worked on a range of projects from engineering Dell's first notebook computer to developing a stealth technology F22 launcher for EDO Corporation. He has managed numerous design ventures and has extensive experience creating manufacturing environments for technologically advanced products.

A seasoned entrepreneur, Okonsky formed Okonsky Diversified in 2007, a global product design and sourcing enterprise in Austin, Texas. Okonsky holds a Bachelor's Degree in engineering from Texas A&M University.

### ABSTRACT

Presentation will address the key factors for a true electric vehicle design. It will highlight the significant variables that need to be addressed to propel the adoption of EV's. KLD will share practices to meet the expectations of the EV market through a holistic sustainable vehicle experience.



### Jun ZHU

Senior Technical Staff  
Member & Senior  
Manager  
IBM Research - China  
(CRL)

## IBM Solutions in New Energy Vehicles

SEPT 15

Jun ZHU is a Senior Technical Staff Member at the IBM Research - China (CRL) in Shanghai driving the Smarter Mobility division. He joined IBM Research after receiving his Master degree in computer science at Shanghai JiaoTong University in 2001. Since then, he had devoted himself to a couple of innovation projects in IBM Research including model-driven business integration, cloud-based service delivery platform, big data driven software and service quality assurance and

etc. His recent focus is on analyzing the big data from connected vehicles to derive insights to drive the cross industry transformation opportunities in automobile, insurance, smarter traffic and etc. The projects led by Mr. Zhu won a couple of awards like Technical Accomplishments and Outstanding Technical Accomplishment of IBM. Mr. Zhu is an IBM Master Inventor with more than 50 patents filed. He has published more than 30 papers in top international conferences and journals.

### ABSTRACT

This presentation will introduce the latest progresses of connected vehicle big data analysis research in IBM, in particular, how Telematics data can be combined with various contextual data sources (e.g., weather, traffic, road condition ..... ) to derive differentiated insights on driver, vehicle and the complex driving environment from new energy vehicles perspective, and hence enable innovation use cases to significantly improve the safety and user experiences of new energy vehicle owner, but also the efficiency and effectiveness of the solution engineering practices of new energy vehicle makers. And IBM Continuous Engineering (CE) offers

innovative approach and solid support for the connected vehicle engineering lifecycle, i.e. EE and embedded software development through unlocking engineering knowledge, continuous verification and strategic reuse. By applying the CE best practices, many customers of both automotive OEMs and suppliers successfully improved the engineering cycle also meeting the regulatory compliance such as ASPICE, ISO26262 and secured high quality delivery of their connected car products and services, including some world leading new energy vehicle manufactures.



### Jiong XIE

IoT Continuous  
Engineering Technical  
Leader  
IBM GCG

## IBM Solutions in New Energy Vehicles

SEPT 15

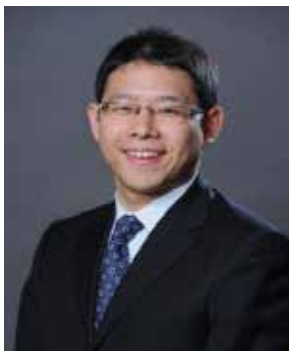
Jiong Xie is now IoT Continuous Engineering Technical Leader at IBM GCG. In this role, he is responsible for introducing Continuous Engineering solution and help customers transform their engineering process for complex and connected products and implement lifecycle platform to support different roles. Before taking this position, he has made rich experiences in automotive engineering process improvement and supporting tool platform focusing on

systems and software engineering lifecycle at IBM Germany, where he was in diverse architect and technical leadership roles for 8 years. Customers he supported include leading automotive OEMs, for example Daimler, VW, etc as well as suppliers for example Bosch, Continental. He is certified for several IBM lifecycle management solutions and holds a master degree in computer science at TU Darmstadt Germany.

### ABSTRACT

This presentation will introduce the latest progresses of connected vehicle big data analysis research in IBM, in particular, how Telematics data can be combined with various contextual data sources (e.g., weather, traffic, road condition ..... ) to derive differentiated insights on driver, vehicle and the complex driving environment from new energy vehicles perspective, and hence enable innovation use cases to significantly improve the safety and user experiences of new energy vehicle owner, but also the efficiency and effectiveness of the solution engineering practices of new energy vehicle makers. And IBM Continuous Engineering (CE) offers

innovative approach and solid support for the connected vehicle engineering lifecycle, i.e. EE and embedded software development through unlocking engineering knowledge, continuous verification and strategic reuse. By applying the CE best practices, many customers of both automotive OEMs and suppliers successfully improved the engineering cycle also meeting the regulatory compliance such as ASPICE, ISO26262 and secured high quality delivery of their connected car products and services, including some world leading new energy vehicle manufactures.



### Stephen XU

Senior Management  
Consultant  
P3 North America Inc.

## 360° of EV-Charging: Charging Approaches, Challenges, Influencing Factors and Future Prospects

SEPT 15

Stephen (Yizhou) Xu is an Associate Principal with P3 North America, Inc. With more than 6 years' experience in the automotive industry, Stephen is specialized in market and product strategy in the areas of electric mobility and Telematics/infotainment. Stephen has project experience with major U.S., European, and Asian OEMs and Tier I companies in E-Mobility

related product strategy, merger & acquisition, market entry strategy, manufacturing program management, and benchmarking study. He is the co-author of the SAE-P3 book "Unwinding Electric Motors: Strategic Perspectives and Insights for Automotive Powertrain Applications" and co-sponsor for 2012 SAE E-Motor Technology Symposium in Stuttgart, Germany.

### ABSTRACT

The range of an EV is between 150 and 200km today (European driving cycle conditions). Driving behavior and the environment conditions are not always similar to the European Driving cycle so the range can reduce to 50-70% of the tested results. Thus the operating range of EVs is still limited by the charging infrastructure and hence EVs cannot be used area-wide by customers which directly influence the overall user experience.

While in Europe and North America private charging is strongly preferred, public charging is the predominant use case for private users in Asia including China.

Currently China has its GB/T DC fast charging standard, which will develop into the most relevant charging scenario in China. For foreign OEMs this standard poses significant challenges because its technical peculiarities are diverse and in-depth knowledge of the according norms

and standards of this systems is vital. Looking at high power DC-charging from a technical perspective, besides the differences of the charging standards, there are two more major challenges predominant. These challenges are interoperability between vehicle and infrastructure and finding feasible locations for charging unit regarding to the grid. All in all, increasing vehicle range and battery capacity lead to (high power) DC fast charging as a major trend for both BEV and PHEV, which means the major challenges, have to be taken under consideration.

Within the scope of the charging performance and infrastructure, the P3 Group has conducted sophisticated tests on over 1500 charging stations worldwide, which has yield valuable knowledge regarding technical as well as process-related issues.



### Yue XIAN

Founder, President  
& CEO at Beijing  
Dianzhuang Technology

## “No Electric Vehicle Without an Ecology” the Ecological Layout of Dianzhuang’s Charging Infrastructure

SEPT 15

With extensive experiences in the study of Internet, Mr. Xian Yue entered this industry very early and witnessed the transition in China market from Internet, to Mobile Internet, and to the current O2O. He has sharp market insight and in-depth understanding about Internet industry, and years of automobile marketing and internet marketing career enabled him with profound knowledge about automobile industry and extensive resources. With managerial experiences in internet companies and international companies, as well as his own experiences of

initiating businesses, he was able to catch the opportunities of NEV and help his team grow rapidly. His unique advantages include profound understanding about vehicle and internet industry, independent and extensive experiences in starting new businesses and leading teams.

Mr. Xian Yue graduated from Sichuan University. He was manager at Kingsoft, Elong.com, Dentsu and founder of Mylop. As company founder, now he is President and CEO of Beijing Dianzhuang Technology.

### ABSTRACT

1. Solve the infrastructure construction problem from internet thinking.
2. Create industrial ecological chain and provide full services through charging, rent, sale and operation.
3. Take user experience as a purpose, integrate upstream and downstream industries to facilitate the arrival of green generation



### Eddie (Yoo Sik) Kim

Electromechanical  
Business Development  
Manager  
Parker Hannifin Korea  
Automation Office

## Examining ways to Maximizing Power Density in Electric Machines for Traction and Power Generation in Hybrid Electric Vehicles

SEPT 15

Eddie Kim is the Asia Pacific Electromechanical Business Development Manager for Parker Hannifin Corporation. He is a mechanical engineer graduate from Korea Aerospace University. In his career, he has gained experience working for the development of flat panel displays, semiconductors, and hybrid vehicle for the global market. Mr. Kim has been involved with

the global hybrid vehicle team in various projects implementing patented electric vehicle motors and drives, particularly for commercial vehicles. In the past, he has played a key role in rapidly localizing many global products from other Parker divisions to the Asian region in response to local market requirements as well as strengthening the resource in Korea to serve Asian market.

### ABSTRACT

In every electrification program, traction motor efficiency is paramount. Efficiency of electrical energy use is usually what is most discussed; however, there is another form of efficiency that is quite important: power density. This efficiency is carried out by maximizing performance and minimizing volume and weight.



**Joseph CUI**  
FAE Manager  
Kemet Asia

## Capacitor Technologies for IGBT and Wide Band Gap Based Inverters

SEPT 15

Joseph Cui is Kemet FAE manager for Asia and has nearly 8 years working experience in passive components market. He holds E.E. degree from Xidian University.

Joseph's team has widely connection with the R&D center in global and local automotive electronics suppliers. They has good

understanding for the way how to customize the key DC-Link film capacitor for EV/HEV application according to various actual size and electrical parameter request. They are also cooperating with many power module suppliers and offer total auto grade capacitor solution for PHEV and Charger station application.

### ABSTRACT

Film Capacitors currently play a key role in the power electronics inverter architecture used in NEVs ranging from the DC Link, IGBT snubber and EMI suppression capacitors. Current technology will be reviewed and we will discuss

developments in capacitor design architecture and materialsets to meet evolving system specification operating profiles.



**Richard ZHU**  
Technical Manager  
Head of Department  
Infineon (Beijing)  
Automotive System  
Engineering

## Growing System Applications of Power Electronics in China

SEPT 15

2011.06-- Infineon (Beijing) Automotive System Engineering, Head of Department, Technical Manager.

Set up xEV lab in Beijing. Developing xEV system applications based on advanced semiconductor solutions, providing POC(Proof of Concept), prototypes of inverter(driver board, logical board), DC/DC and advanced motor control algorithm and software with Infineon MCUs. Starting functional safety implementation on xEV parts and other critical ECU (EPS). Now are developing low voltage power electronics applications in 48V and 12V to realize fuel efficiency applications in vehicle.

Delphi China Technical Center, Advanced Engineering, Engineer Group Manager.

2005.11 - 2011.05 Technical Manager

Built Advanced Engineering team in Shanghai across Body Electronics, Active Safety and Infotainment BLs. Developing TDPs (Technical Development Projects) on

Infotainment of Smart Phone Connection, Body Electronics of new E/E architecture and network, and Active Safety of Vision Recognition, etc.

Graduated from Fudan Univ., E.E. Department in 1988

### ABSTRACT

China CAFÉ and CO2 emission reduction are the main driven factors to develop China power electronics application in vehicle. Each OEM has different vehicle platforms and therefore calculates the average fuel consumption by implementation dedicated system solutions. There are many ways to reduce fuel consumption in vehicle: from high voltage high power pure EV (about 100kW), to middle power HEV (30kW), to

BSG system (10kW), and even to 12V electronics system which can replace traditional mechanical system to save dozens of watts. Infineon set up a system lab in China at the end of 2010. We developed many system applications (POC, prototype, demo, reference, etc) for the local market specified and grow together with our customers to reduce vehicle fuel consumption.





### Erik Spek

Chief Engineer  
TÜV SÜD Canada

## Vehicle Level Abuse Testing of xEVs – Internal Fire

SEPT 16

Mr. Spek is Chief Engineer for TÜV SÜD Canada, a member of the global TÜV SÜD third party testing services organization for cell and battery manufacturers, vehicle OEMs and utility grid users of energy storage systems. He is also a consultant in the field of energy storage systems focusing on applications, verification testing, cell and battery production facilities safety and sodium ion battery development. Mr. Spek is co-holder of a patent for next generation sodium metal chloride

architecture for low cost and very high energy density. He has authored articles on Weibull statistics for battery life and BEV range modeling and has been active in the battery industry since 1984. Mr. Spek is a member of SAE International and is a Certified Manufacturing Engineer with SME. He received an M.A.Sc. from the University of Waterloo and is a registered Professional Engineer in Ontario, Canada.

### ABSTRACT

TÜV SÜD is a global provider of 3rd party certification and testing services for a wide variety of industries and products including batteries and hybrid and electric vehicles. In addition to performance and life testing, TÜV SÜD has focused on abuse testing of cells, packs and full xEVs. This presentation describes a 2013/2014 test program undertaken by contract for SAE International and the National Highway Traffic Safety Administration to examine the

effects of a battery internal fire in six xEVs. The presentation covers:

- The program objective
- A summary of current related standards
- Risk management of the potential hazards
- Development of the test procedures, measured parameters and the provocation methods
- Key results, observations and future test programs



### Jonny DONG

Technical Manager  
Intertek Automotive  
Services

## EV/EVSE Interoperability Studies in US

SEPT 16

Jonny Dong is Technical manager, EV battery, Intertek China and has eight years of experience in automotive validation in No. 1 third party automotive component lab in China.

- 8 years automotive validation experience in No.1

### ABSTRACT

With several OEMs and variations of Plug In Electric Vehicles and myriad options for home, workplace and public charging infrastructure, interoperability between the Vehicles and Infrastructure remain an ongoing concern. The SAE J1772 standard provides design and protocol guidance for developers, but even so, some challenges remain. Therefore, the SAE J2953

third party automotive component lab in China.

- Expert of automotive component validation

standard was written to define a protocol for determining the interoperability of an EV/ EVSE combination. This discussion reviews the recent J2953 Phase 1 Interoperability study conducted at Intertek, including test conditions and iterations, issues noted and overall observations, conclusions and next steps.



**Christophe Moure**  
Project Manager  
EV/HEV, Powertrain,  
IDIADA

## Range Estimator Algorithms in Modern EVs and Related Testing Methods

SEPT 16

Mr Christophe Moure holds an Information Systems Engineering degree from the National Institute of Applied Sciences of Rouen in France. He joined Applus IDIADA group four years ago as project engineer for developing powertrains of hybrid and electric vehicles. Before he worked

five years for Delphi Diesel Systems in France coordinating the design and the development of functional safety aspects within a diesel vehicle and customized strategies regarding engine control (vehicle driveability, start/stop systems or full hybrid, etc.).

### ABSTRACT

One of the main concerns when considering range estimation in electric vehicles is its low reliability due to internal aspects such as the accuracy of the SOC prediction and by external factors. This lack of reliability leads to the driver lacking confidence in the real range that the EV can travel.

As a consequence IDIADA has considered important to analyse this specific topic and propose procedures and strategies to evaluate the range estimator of electric vehicles. This

prediction capability means that the driver feels that the indicated range decreases in the same way as the driven distance and avoids as much as possible sudden changes in the estimated range that could lead to a lack of confidence in the system.

The procedure to evaluate a range estimator in electric vehicles will be presented and a use-case with a set of vehicles from the market which were selected to illustrate this innovative procedure.



**Hongtao SHI (Alfred)**  
Business Development &  
Technical Sales,  
Li-ion Product Line,  
Johnson Controls Inc.

## Electrification Options to Meet Future Fuel Efficiency Regulations

SEPT 16

Director of Engineering and Operation, Valence Technology, responsible for product development, new product introduction to production, manufacturing facility daily management. Senior Manager System Engineering, Johnson Controls Inc., responsible for customized product development utilizing JCS core technology.

Senior Manager Battery Technology, Better Place Inc., responsible for battery related technical and commercial businesses. Technical Sales Lead China, Johnson Controls Inc., transition from engineering to business, responsible for business development and technical sales for the li-ion product line.

### ABSTRACT

With the changes and dynamics of the drivers for the new energy vehicle market, OEs are seeking more technical options for addressing the challenges to date and future. This presentation will address these dynamics and relations

between them and will propose a full pack of solution options from ESS perspective.



**Jonny DONG**  
Technical Manager  
Intertek Automotive  
Services

## ECE R100 Regulations/E-Marking of Batteries

SEPT 16

Jonny Dong is Technical manager, EV battery, Intertek China and has eight years of experience in automotive validation in No.1 third party automotive component lab in China.

- 8 years automotive validation experience in No.1

third party automotive component lab in China.

- Expert of automotive component validation

### ABSTRACT

Global certifications and regulatory approvals provide changing and increasing challenges for Electric Vehicle developers. For many global markets, compliance with UN ECE regulations are a prerequisite for market acceptance. For Electric Vehicle batteries in particular, recent changes to the R100 regulation has increased the component-level compliance requirements, prior

to full-vehicle testing. This discussion provides background on the E/e marking schemes and the specific requirements and timelines for meeting the updated R100 regulation for Electric Vehicle Batteries.



### **Bernd Blankenbach**

Technical Director  
Development Electric  
Machines,  
AVL TRIMERICS GmbH

## **High Efficient E-Machines and Power Electronics for High Performance New Energy Vehicles**

SEPT 16

1999-2005 CAE Methods Development Engineer  
at GETRAG Transmission Company

2005-2008 Project Leader and System Engineer  
for hybrid and electric transmissions at GETRAG

2007-2009 In charge of hybrid and electric  
transmissions at GETRAG

2008-2009 Senior Manager Systems Engineering  
at GETRAG

2010-2012 Senior Expert Hybrid and Electric  
Power Trains at Mercedes Benz Technologies

Since 2012 Technical Director Development  
Electric Machines at AVL TRIMERICS



### **Hui LIN**

Director of Technology  
Property Rights  
Transaction;  
Operation and General  
Manager of SUAEE

## **International Technology M & A Platform**

SEPT 16

Dr. Lin Hui holds Bachelor's Degree of Biological Sciences, Master of Laws and a PhD in Sciences, and is a Senior Engineer and Technology Consultant. Now he is Director of Technology Property Rights Transaction and Operation and General Manager of SUAEE.

Dr. Lin has long been undertaking theoretical research and practices of technological property rights transaction, commercialization of research

### **ABSTRACT**

Chinese companies make frequent mistakes in many international technology M&A cases, because they are short of various internal and external capabilities. They have to think about how to improve the efficiency of technique transfer by making use of platforms, and how to introduce advanced and practical technologies in

findings, protection of IPRs and technology management. He is also in charge of related research on various subjects of different levels, and participates the research and drafting of related national, provincial and departmental policies, and facilitate technology M&As for domestic and abroad enterprises as well as science and technology program financing.

China through equity and property transactions.



**Chun-Quan XIAO**  
General Manager  
Gainia Intellectual Assets  
Service, Inc

## Explore the Values of Patent Big Data

SEPT 16

Mr. Xiao Chunquan holds Physics Bachelor degree from South Carolina State University and Management Bachelor degree from Houston Baptist University. He has more than 20 years' experience in the operation of intellectual property rights. He was a part of U.S. Texas Instrument and Standard Oil. After returning China, he started Gania Intellectual Asset Services Inc, a company dedicated for exchanges between Mainland China and Chinese Taiwan on intellectual asset and the improvement of operational services of intellectual property rights in China.

He is an expert of applying the theories of intellectual property rights with the actual operation of businesses, applying law chapters with the needs arising from market operation. He provided guidance and service to more than 200 companies and institutions, including initiators, Fortune 500 companies, universities, research institutes, incubators and government authorities.

### ABSTRACT

Patent data is a treasure bank to be explored. According to a report of U.S. Patent and Trademark Office, the effective use of patent information can save a company 60% R&D time and 40% costs. By taking the advantage of this treasury of data, the managers of a company can be well positioned to see industry trend and the prospect of innovation, as well as to plan strategies for operations. This presentation will discuss how to open the gate of data treasury with big data analysis approaches from the

He has published extensively in his fields and held more than 300 lectures of various sizes.

His main social responsibilities

- (China Mainland) China Intellectual Property Society Senior Fellow
- (China Mainland) Distinguished Lecturer for MIIT "Galaxy Project"
- (Shanghai) Member in Expert Bank of Shanghai Intellectual Property Administration
- (Taiwan) Member of Patent and Technology Transition Rights and Interests Committee of National Taiwan University
- (Taiwan) Auditor for Promoting Technology Trade Center Project, Industrial Development Bureau, Ministry of Economic Affairs
- (Taiwan) Auditor for University and College Research Centers, Ministry of Education

following perspectives:

1. Find out the big trends of industry values - no more estimation
2. Know about technology trends - make accurate judgment to avoid blind investment
3. Know about technology competitions - seek niche points
4. Guide corporate operations - suggest the best competition/co-operation strategies



**Qingji ZHU**  
Senior Partner, Dacheng  
Law Office

## Several Legal Issues in Technical Mergence

SEPT 16

Ms. Zhu Qingji is Vice Chairman of Korean M&A and Investment Association, Chairman of China Support Commission of Business Platform Forum, Legal Adviser of China Huadong Region South Korea Commerce Chamber Federation, member of Suzhou Korean International School Consortium Council.

### ABSTRACT

To make international technology M&A successful, a variety of problems should be considered, including the complementation of technologies and soft power (corporate culture, organizational structure, external environment and employees' psychology, etc.)

She has been engaged in plenty of projects regarding acquisition and reorganization, foreign M&A, foreign investment, leading to her enriched practical experiences and expertise.



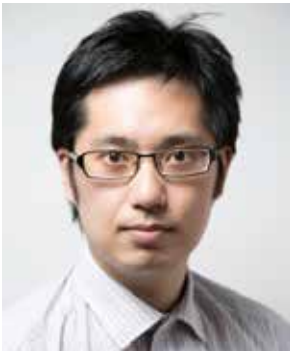
### **Liping Zhang**

CEO, Yogomo Group  
Hebei Yujie Vehicle  
Industry Co., Ltd.

## **Business Panel: FAQ & Corresponding Method of Technology Transfer**

SEPT 16

Mr. Zhang is Henan Deputy to the People's Congress and got his EMBA degree from Beijing University. He founded Hebei Yogoma Special Car Manufacturing in 2008 to produce dredging vehicles, cooling vehicles, insulated vans, wingspan cars, vans and semi-trailers. In May 2009, he founded Hebei Yujie Vehicle Industry Co., Ltd. to produce mini electric vehicles. It's now the biggest EV manufacturer in China.



### **Jie XU**

Technology Transaction  
Dept Business Officer  
Shanghai United Assets  
and Equity Exchange

## **Business Panel: FAQ & Corresponding Method of Technology Transfer**

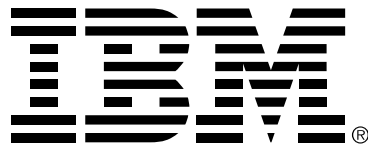
SEPT 16

### **MODERATOR**

Mr. Jie XU works in Shanghai United Assets and Equity Exchange, engaged in regional cooperation, international technology transfer as well as technology M&A, technology project trading and cooperation partners management, SME investment and financing services, project consultation and planning, innovative businesses promotion, and trade matchmaking etc.

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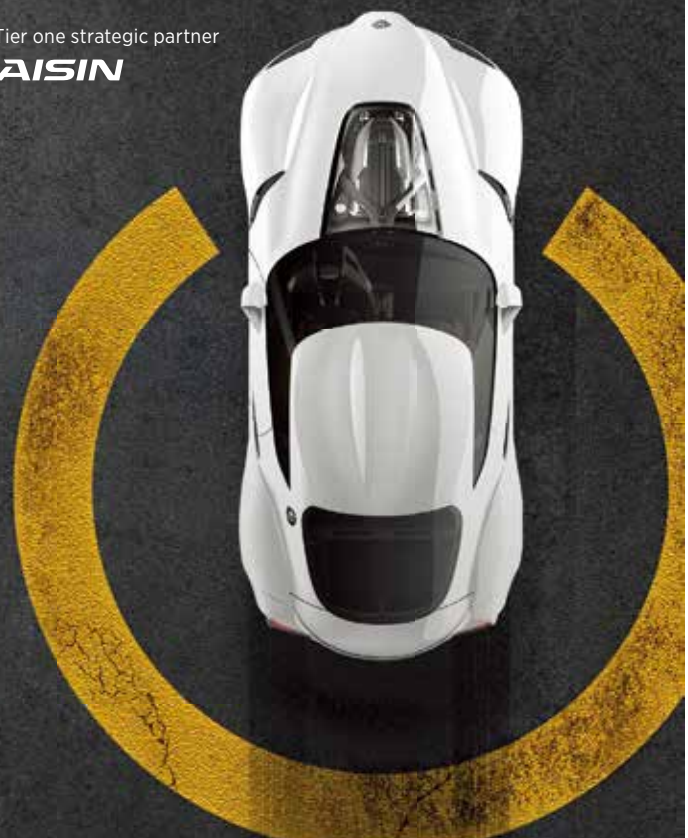
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## A

### Anwha (Shanghai) Automation Engineering Co., Ltd

Address: 7513 Hunan Highway, Pudong New Area, Shanghai, P.R.China

<http://www.anwha-auto.com/>

#### BOOTH 3

Anwha (Shanghai) Automation Engineering Co., Ltd. ("Anwha" for short) provides assembly automation integration solutions, with design, machining and manufacturing capacity of non-standard equipment. Our products are widely applied to automotive powertrain and parts, new energy automobile, aircraft manufacturing, etc., and meet various customer demands.

Anwha's engineering technology R&D team has rich experience and innovative spirit, and core team members had worked in World Top 500. Anwha employs internationally advanced management philosophy, and establishes our own characteristic technical development methods and quality control system in core technology.

Anwha was established in Pudong New Area, Shanghai in 2011, and was listed on "New Three Boards" on Dec. 27, 2012. Through years of efforts, Anwha has established some branches and offices in Liuzhou (Guangxi), Tianjin and Haian (JiangSu), covering industrial areas in North China, East China and South China.

With the values of "Creditable. Responsible. Professional. Insistent", Anwha is committed to being a leading enterprise of high-end assembly automation industry, leading "China Design" towards the world.

## E

### Eagtop Electronic Trchnology Co., Ltd

Address: 158 Tangming Road, Shidanghu Industrial Park, Songjiang, Shanghai, P.R.China

<http://www.eagtop.com/>

#### BOOTH 5

EAGTOP is specialized in researching, developing and manufacturing Passive Power Electronics Devices. The main products include Film Capacitor, Laminated BusBar, Liquid Cooling Plate, Composite Superconducting Flat Heat Pipe, 3D Phase Change Heat Sink, Reactor, Resistor, Braking Unit, EMC Filter and so on. EAGTOP was authenticated by ISO9001:2008 and ISO/TS16949-2009.

EAGTOP, constantly committed to pioneering and innovating products in its industry, provides highly competitive and comprehensive solutions to the electronic passive device application for worldwide customers in various fields involving Industrial Drive, New Energy, Railway Transportation, Power Quality, etc. In persistent pursuit of fully understanding customers' demands and putting effort into conducting collaborative R&D together with our customers, we strive to improve the user experience and create value for our customers to the largest extent.

## I

### IBM

Address: No.28 Hong Chuan East Road,Dalian, 116040, P. R.China

<http://www.ibm.com/big-data/cn/zh/big-data-and-analytics/iot-summary.html>

#### BOOTH 2

As much as 90 percent of all data generated by devices such as smartphones, tablets, connected vehicles and appliances is never analyzed or acted on. IBM enables businesses to transform their industry with new services, offerings and sources of revenue.

Announcing the IBM IoT Continuous Engineering Solution designed to help manufacturers create smart, connected devices for the Internet of Things. This solution helps teams adopt continuous engineering practices to address cost, time and quality challenges in delivering complex, connected products. IBM is now adding new product line engineering (PLE) features to help engineers streamline the design of product lines while reducing data duplication and the chance of design errors.

## K

### KEMET Electronics Corporation

Address: 101 NE Third Ave Ste 1700, Ft Lauderdale, FL 33301 United States

<http://www.kemet.com>

#### BOOTH 4

KEMET is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

## S

### Shanghai International Automobile City

Address: 888 South Moyu Road, Anting, Jiading, P.R. China  
<http://www.at-siac.com/>

#### BOOTH 1

In September 2001, the Shanghai Municipal Government took the decision to create the Shanghai International Automobile City (referred to as SIAC) in Anting town, Jiading district. The planned area covers 100 square kilometers and the investment is expected to reach 80 billion RMB. SIAC has functional areas such as automobile R&D, manufacturing, trade, cultural expo and education. The focus is on pillar automobile industries such as whole car manufacturing and vehicle parts and components. The emerging industries in SIAC include new energy vehicles R&D and manufacturing, automobile finance, and healthcare. Its vision is to create the future of mobility, build a livable city with a powerful innovative industry and automobile cultural and become the commanding heights of China auto industry. SIAC will has its place in the world.



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Anwha Automation

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