

From the Organizer of the World's Largest Automotive Transmission Meeting Place

2nd International CTi Symposium and Exhibition

1700+ attendees from  
over 20 countries worldwide!

# Innovative Automotive Transmissions, Hybrid & Electric Drives

国际 CTi 第二届中国论坛和展会

创新汽车变速器、  
混合动力和电力驱动技术



China 中国

25 to 27 September 2013, Shanghai

2013年9月25日至27日, 上海金茂君悦大酒店



Simultaneous Translation English ↔ Chinese  
Conference documentations are available in English & Chinese

Program in Chinese available at 中文会议日程请参见: <http://china.transmission-symposium.com>

## Plenary Speeches



**Dr Alexander Schad**  
Senior Manager Powertrain  
Engineering Department,  
Shanghai Volkswagen, China



**Pierre Lebel**  
Vice President in charge of R&D,  
PSA Peugeot Citroën, China



**Peter Huang**  
Associate Director,  
Greater China Powertrain Forecast,  
IHS Automotive China



**Ulrich Plewnia**  
Vice President Product Development,  
GETRAG Asia Pacific Transmission  
Technology (Shanghai) Co., Ltd



**Tetsuya Takahashi**  
Corporate Vice President,  
Jatco Ltd, Japan



PSA PEUGEOT CITROËN



The Source  
for Critical Information and Insight™

■■■ GETRAG

Jatco

THE annual technology update & networking place in China! 30+ Outstanding speeches from:

FIAT  
Geely  
PSA Peugeot Citroën  
Volkswagen  
Afton  
AVL

Castrol  
Continental  
Drivetrain Innovations  
FEV  
GETRAG  
Hoerbiger

hofer  
Hunan SGT  
IAV  
IHS  
Jatco  
Jing-Jin Electric

Magneti Marelli  
Romax  
Schaeffler  
teamtechnik  
ZF  
Clausthal University

Techn. Univ. of Braunschweig  
Tongji University



The information and contacts you need to establish and secure your place in this fast growing market!  
获取您在这一快速增长的市场中建立并巩固自己的地位所不可或缺的信息及联系方式!



# Transmission and drive systems in China – remarkable growth and diversity of solutions

In no other market is the urgency to reduce environmental pollution and mineral oil dependency – with the aid of efficient drive systems – greater than in China. It is the world's biggest automobile market, and has an expected annual growth rate of 8% over the next years. The government's twin goals – making China the global leader in alternative drive systems, and the leading market for electric mobility – are therefore a logical step, and one that will have a tremendous impact on development. With regard to the introduction of electric vehicles, a "new realism" has now arrived in China, just as it has in other markets.

The primary aim will involve introducing potential customers to electric mobility with the aid of "plug-in hybrids" and incentives for buyers. In parallel to this, there are three other important goals: to improve charging infrastructures, make batteries more cost efficient and extend cruising ranges. These development trends were approved at the Shanghai Automobile Exhibition this year: In addition to improvements to conventional drive systems, the development and series production of hybrid and electric drive systems are accelerating at breathtaking speed. The program of our Symposium takes this trend into account with numerous technical presentations.

Transmissions have become increasingly important due to the electrification of drive trains. New active transmissions with integrated electric motors for electric and hybrid drives are taking over more controlling tasks, and have become a "key aggregate" of efficient drive systems. In every market, various transmission concepts such as DCT, AT, CVT and AMT are competing intensively in terms of significant vehicle characteristics such as comfort, efficiency, dynamics, drivability and cost. Manual transmissions-, or MTs, dominate in many markets – including China. But there is also a steady, ongoing demand for cost-effective automatic transmissions.

For all drive train engineers, developing practical, custom-made solutions which meet market expectations while taking diversity, complexity and cost into account is both a challenge and a necessity. Here are some of the questions we will be focusing on at our 2nd Symposium:

- What potential can be provided by using new transmission concepts, drive train topologies and components to increase comfort, driving pleasure and safety, and to reduce fuel and energy consumption?
- Which transmission and drive concepts, operating strategies and production technologies are appropriate for which user scenarios and markets?
- What are the tools for efficient transmission and power train development?

Taking these questions as our starting point, we will focus on the overall development of vehicle drive systems and transmissions, present the latest technologies, and take a glimpse into the future.

The successful Introductory Day will take place ahead of the main Symposium. The aim is to give career changers and newcomers interdisciplinary knowledge, and to acquaint them with the theory and practice of conventional and electrical drives and transmissions.

The panel discussion will be dedicated to current topics of transmissions and drive system electrification, against the background of the environment and energy discussion, as well as the new transmission and drive concepts for different markets.

Our 2nd Symposium offers a full program with high-ranking experts in the plenum, around 30 presentations in two parallel sessions, the panel discussion and the combined Transmission Expo. Once again, it will provide an important forum for international transmission and drive experts to exchange options and experience.

I look forward to meeting you in Shanghai.

Kind regards



Prof. Dr Ferit Küçükay  
Director of the Institute of Automotive Engineering  
Technical University Braunschweig

### Chairman

#### Prof. Dr Ferit Küçükay

Director of the Institute of Automotive Engineering  
Technical University Braunschweig

#### Prof. Huiyan Chen

Professor at the College of Mechanical and Vehicle Engineering  
Beijing Institute of Technology

#### Dr Yong Chen

Chief Engineer & Vice President  
Geely Automotive Research Institute

#### Dr Robert Fischer

Executive Vice President  
AVL List GmbH

#### Dr Rolf Gall

Head of Engineering Center  
ZF (China) Investment Co., Ltd.

#### Prof. Xin Guan

Dean of School of Automobile Engineering  
Jilin University

#### Dakai Li

Chairman of the Board  
ShaanXi Fast Auto Drive Group Co. Ltd

#### Prof. Dr Jun Li

President, Professor Engineer  
China FAW Group Corporation

#### Kaiguo Li

Vice President  
China Automotive Engineering Research Institute

#### Jan Gang Lu

Deputy General Manager  
Sheng-Rui Transmission Corporate Limited

#### Ulrich Plewnia

Vice President Product Development  
GETRAG Asia Pacific Transmission Technology (Shanghai) Co., Ltd

#### Francois Schoentgen

Vice President & Managing Director Business Unit  
Powertrain Transmission Asia  
Continental Automotive Holding Co., Ltd.

#### Haoding Wen

Director LuK China Sales & Business Development  
Schaeffler Group Greater China

#### Prof. Dr Xiangyang Xu

Deputy Dean of School of Transportation Science & Engineering,  
Director of SimulationX, Training Center (BUAA),  
Beihang University

#### Prof. Dr Tong Zhang

Director, National Fuel Cell Vehicle and Powertrain System,  
Engineering Center, Clean Energy Automotive Engineering Center,  
Tongji University

#### Wei Zhang

General Manager  
Beijing Gear Co., Ltd.



## Project Management Transmission Symposium



### Sylvia Zenzinger

Managing Director CTI Transmission Symposia

Phone: +49 (0)2 11.96 86-38 84

E-Mail: [sylvia.zenzinger@car-training-institute.com](mailto:sylvia.zenzinger@car-training-institute.com)

## Organisation



### Kristina Alekseenko, Conference Coordinator

Phone: +49 (0)2 11.96 86-36 52

Fax: +49 (0)2 11.96 86-46 31

E-Mail: [kristina.alekseenko@car-training-institute.com](mailto:kristina.alekseenko@car-training-institute.com)

## Registration



### Maria Forko, Conference Coordinator

Phone: +49 (0)2 11.96 86-34 52

Fax: +49 (0)2 11.96 86-44 52

E-Mail: [maria.forko@car-training-institute.com](mailto:maria.forko@car-training-institute.com)

## Marketing/Cooperations



### Roman Irlinger, Senior Marketing Manager

Phone: +49 (0)2 11.96 86-36 84

Fax: +49 (0)2 11.96 86-46 84

E-Mail: [roman.irlinger@car-training-institute.com](mailto:roman.irlinger@car-training-institute.com)

## Sponsorship and Exhibition



### Michael Follmann, Senior Sales Manager

Phone: +49 (0)2 11.96 86-37 29

Fax: +49 (0)2 11.96 86-47 29

E-Mail: [michael.follmann@car-training-institute.com](mailto:michael.follmann@car-training-institute.com)



### Vanessa van der Mark, Sales Coordinator

Phone: +49 (0)2 11.96 86-37 61

Fax: +49 (0)2 11.96 86-47 61

E-Mail: [vanessa.vandermark@car-training-institute.com](mailto:vanessa.vandermark@car-training-institute.com)

## Press and PR



### Claudia Büttner, Head of Press and Public Relations

Phone: +49 (0)2 11.96 86-33 80

Fax: +49 (0)2 11.96 86-43 80

E-Mail: [claudia.buettner@car-training-institute.com](mailto:claudia.buettner@car-training-institute.com)

## Follow us on:



#cti\_sym



[www.facebook.com/euroforum.de](http://www.facebook.com/euroforum.de)

Blog: [www.getriebe-symposium.com](http://www.getriebe-symposium.com)

## Objective

Newcomers and beginners will get an overview on the basics of conventional, hybrid and electric drives during the introductory day. Based on road resistances and the characteristics of modern propulsion systems, the need for transmissions as torque and speed converting units will become obvious. In the session 'design layouts', different transmission concepts will be discussed. The last session will be focusing on drive train management and the resulting challenges regarding drivability and efficiency.

## About the instructors

The introductory day will be held by the Institute of Automotive Engineering (IAE), Technical University Braunschweig, Germany. The IAE under the direction of Prof. Dr Ferit Küçükay has excellent experience in all relevant areas of automotive research and development. It is the leading institute in Germany for automotive transmission development and research. With its close contact to the automotive and supplier industry, technical service providers, inspection authorities and public research institutions as well as national and international interdisciplinary working methods it is highly experienced in solving complex problems and ensuring up-to-date seminars. The IAE holds this introductory day regularly also as an integral part of the European CTI Transmission Symposium in Berlin (Germany).

9.00 Reception and handout of the proceedings

9.30 Welcome address by CTI and Prof. Dr Ferit Küçükay

## 9.45 Automotive drive concepts

- Drive characteristics and driving resistances, basics of longitudinal dynamics
- Background and function of starting devices, transmissions, hybrid and electric drives
- Design and function of
  - conventional drive concepts
  - serial, parallel and power-split hybrid drives
  - electric drives
- Market and development trends

11.15 Coffee break

## 11.45 Design layouts

- Starting devices – clutch, dual-mass flywheel, torque converter
- Transmission concepts (1):
  - Manual transmission (MT) – two and multiple-shaft transmission for front-wheel and standard drive

1.00 Lunch

## 2.00 Design layouts and drive train management

- Transmission concepts (2):
  - Automated manual transmission (AMT) – “add on” and integrated solutions
  - Dual-clutch transmission (DCT) – in production, application, introduced prototypes
  - Automatic transmission (AT) – different gear set arrangements, examples of application
  - Continuously variable transmission (CVT) – layout, chains and belts, driveability
- All-wheel drives

3.15 Coffee break

## 3.45 Drive train management

- Drive train management and operating strategy
- Control – shifting characteristics, applications
- Interfaces to engine, body, chassis

5.00 End of the Introductory Day



## Plenary Speeches

Chairman:

**Prof. Dr Ferit Küçükay**, Director of the Institute of Automotive Engineering, Technical University Braunschweig, Germany

8.30 Reception and hand out of the proceedings, opening of the Transmission Expo

9.00 Welcome address by CTI and the chairman

### 9.15–9.40 **Challenges and approaches for electrified drive systems**

- Electrification – the road to sustainable mobility
- Plug-in-hybrids – the introduction to electromobility
- Requirements on future transmission systems

**Dr Alexander Schad**, Senior Manager Powertrain Engineering Department, Shanghai Volkswagen, China

### 9.45–10.10 **PSA policy for new energy and low fuel consumption technologies in Asia**

- Field of constraint and customer target
- The technologies available addressing customer expectations and legal requests
- Potential innovative solutions

**Pierre Lebel**, Vice President in charge of R&D, PSA Peugeot Citroën, China

### 10.15–10.40 **Opportunity for advanced transmission in China**

- Driving force for advanced transmissions
- What is different in China?
- How to face it?

**Peter Huang**, Associate Director,  
Greater China Powertrain Forecast, IHS Automotive China

10.45–11.30 Coffee break and visit to the Transmission Expo



## Parallel Sessions

### Session A

#### Transmission Concepts

**A1** 11.30–11.55

#### **6DCT150 – The new efficient, lightweight dual clutch transmission in the PowerShift family**

- Markets, requirements, strategies for drive trains
- Cooperation between local and foreign companies
- High efficient dual-clutch-transmission concepts for passenger cars
- Mechatronics, electro-hydraulics, actuators and sensors

**Dr Carsten Bänder**, Senior Manager Product Engineering Automatic Transmissions, GETRAG, Germany

**A2** 12.00–12.25

#### **Development of the new C725 7-speed dual dry clutch transmission for FWD passenger vehicles**

- Dual dry clutch transmission
- Electro-hydraulic mechatronic actuation system
- Transmission rightsizing and weight reduction
- System integration

**Alessandro Bordoni**, Chief Engineer,  
FIAT – EMEA Powertrain Engineering, Italy

### Session B

#### **HEV & EV Drive Concepts – Components – Layout – Transmissions**

**B1** 11.30–11.55

#### **The modular hybrid transmission kit**

- Hybrid drive and electrification
- Full hybrid systems in modern drivelines
- Plug-in hybrids, next step into the future?

**Dr Harald Massmann**, Vice President Head of Region Asia/Pacific,  
ZF (China) Investment Co., Ltd. China

**B2** 12.00–12.25

#### **Electromechanical flywheel KERS system for mainstream applications**

- Low-cost e-axle technology for EV and hybrid
- Powersplit: combination of electrical and kinetical energy
- Flywheel: power output boost of electrical drive system by factor 5

**Dr Bas Vroemen**, Vice President,  
Drivetrain Innovations B. V., The Netherlands



12.30–2.00

Lunch and visit to the Transmission Expo

1.30–1.55 **Extra speech during lunch break**

## AMT in the industrial development of the spring in China

- Review of AMT development and industrial engineering in China in the past almost 30 years
- Development and application of SGT AMT
- Manufacture engineering of SGT AMT

**Dr Yingjun Wei**, General Manager/Director,  
Hunan Sino-German Automobile Automatic Transmission Co., Ltd, China



**A3** 2.00–2.25

## The MY13 GEN4 AMT technology

- AMT technology development history and road map
- The MY13 Gen4 AMT technology
- How will MY13 Gen4 FMT technology adapt to China's market?

**Giuseppe Medico**, R&D manager, Magneti Marelli S.p.A., Italy

**B3** 2.00–2.25

## China P2 hybrid system

- China market requirements for hybrid vehicles
- Most suitable hybrid concept for China
- P2 hybrid specifications and achievement for Chinese applications
- Modular design of Schaeffler P2 hybrid system

**Dr Mingkui Niu**, Director eMobility China, Schaeffler Holding (China) Co., Ltd.

**A4** 2.30–2.55

## Future automatic transmission requirements

- Future engine development trends
- Launch performance & fuel economy
- FEV's solutions for future transmissions

**Dr Stefan Kirschstein**, Manager Transmission Development,  
FEV GmbH, Germany

**B4** 2.30–2.55

## Hybrid operation strategy of a new axle-split hybrid

- Systematic layout process for hybrid electric vehicles
- Numerical optimisation methods for determination of an optimal operation strategy
- Derivation of a rule-based operation strategy for online applications

**Dr Michael Stapelbroek**, Team Leader Vehicle Electronics & E-Mobility,  
FEV GmbH, Germany

3.00 Coffee break and visit to the Transmission Expo

3.00 Coffee break and visit to the Transmission Expo

**A5** 3.40–4.05

## The automobile 6-speed manual transmission development practice at an Chinese OEM

- Development strategy for 6-speed manual transmission
- Development model simulation analysis research
- NVH development research
- Shifting comfort development research

**Dr Yong Chen**, Vice President, Geely Automobile Research Institute, China

**B5** 3.40–4.05

## Analysis and optimisation of a magnetic power-split transmission for a hybrid electric vehicle

- Use of advanced tools to evaluate a new transmission technology
- System-level analysis of a novel hybrid transmission concept
- Holistic optimisation and sensitivity analysis of a new hybrid driveline concept

**Dr Zhiwei Zhang**, Deputy General Manager (China),  
Romax Technology Limited, China

**A6** 4.10–4.35

## Some thoughts on how to increase sales of automatic transmissions at Chinese OEMs within the booming Chinese automotive market

- The need to inform consumers about AT technology and communicate on their benefits
- How to encourage dealers to sell more AT as an option for final buyers
- Finding a conducive pricing of the automatic transmission for selling more ATs

**Chloe Pringalle**, Communication and Marketing Manager,  
Business Unit Transmission Asia, Continental Automotive Asia Pacific Co., Ltd.  
Shanghai

**B6** 4.10–4.35

## Concept development of electric vehicles with range-extender

- Diversity of REs and E-REVs
- Topological concept development of energy managements
- Object-oriented optimisation of energy management strategy

**Dr Ke Song**, Lecturer, Clean Energy Automotive Engineering Center,  
School of Automotive Studies, Tongji University, China



4.40

Short break and change to plenum

4.50

**Panel discussion**

5.45

End of day one

5.45–8.00

Evening Event





## Plenary Speeches

Chairman: **Prof. Dr Ferit Küçükay**

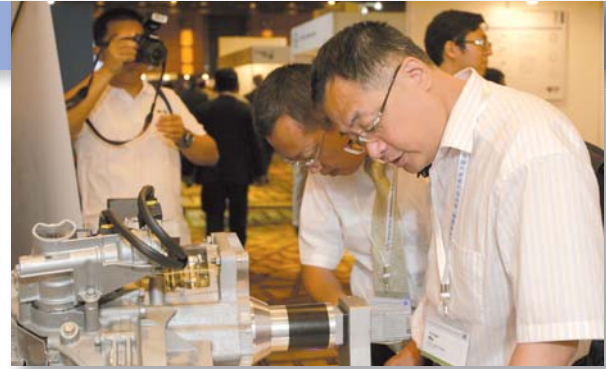
8.30 Reception and opening of the Transmission Expo  
9.00 Opening of day 2 by the chairman

9.10–9.35 **Plenary Speech**  
tbd

9.40–10.05 **Development of real world drive cycles**

- Data acquisition
  - Vehicle, equipment, cities, ▪ Method of capture
- Simulation
  - Load cycles ▪ Event frequencies
- Specifications for DVP&R
  - Function based design ▪ Front loading methods
- Correlation with real world data
  - Alignment to existing database

**Ulrich Plewnia**, Vice President Product Development, GETRAG Asia Pacific Transmission Technology (Shanghai) Co., Ltd, China



10.10–10.35 **Hybridized CVT as innovative 2-pedal transmissions**

- Future of electrification and hybridization on transmissions
- Technical evolution on Jatco's CVT line up as the 1st stage for conventional fields
- Introduction of hybrid version (CVT8 hybrid) as the 2nd stage for an electrification of power source

**Tetsuya Takahashi**, Corporate Vice President, Jatco Ltd, Japan

10.40–11.20 Coffee break and visit to the Transmission Expo

## Parallel Sessions

### Session C

#### Simulation – Development Tools – Function Development – Testing

**C1** 11.20–11.45  
**Efficient and robust software development for double clutch transmissions for the Chinese market**

- DCT control software development for serial production
- System simulation ▪ Software testing ▪ Vehicle calibration

**Markus Schnabler**, Head of Function and Software Development and  
**Dr Thomas Hackl**, CTO, hofer forschungs- und entwicklungs GmbH, Austria

**C2** 11.50–12.15  
**Automated testing and calibration of hybrid powertrain vehicles to achieve real-life coverage**

- Hybrid testing on powertrain test bed
- Hybrid system analysis and test definition
- Hybrid calibration to meet vehicle targets
- Test automation to achieve real-life test coverage

**Thomas Reinhold Weck**, Manager EE & Transmission Integration, AVL List GmbH, Austria

**C3** 12.20–12.45  
**Multiple gear dog clutch transmission control by means of simulation and the use of special control algorithms**

- Low space requirements and weight ▪ Lower production costs compared to similar systems ▪ High efficiency ▪ Low drag torque

**Martin Kern**, Function and Software Development, hofer forschungs- und entwicklungs GmbH, Germany

### Session D

#### Transmission Components

**D1** 11.20–11.45  
**Challenges and approaches in adaptation of friction clutches**

- Clutch control
- Adaptation methods
- Classification

**Thorsten Arndt**, Research Assistant, Clausthal University of Technology and  
**Roland Serway**, Head of Department SW & Algorithm Development, Transmission- and Hybridsystems, IAV GmbH, Germany

**D2** 11.50–12.15  
**Automatic transmission stop/start dynamic bistable latch**

- Automatic transmission stop/start
- Dynamic bistable latching element
- Development process
- Virtual dynamic process performance simulation

**Zhang AnPing**, Product Manager, Schaeffler China

**D3** 12.20–12.45  
**Revolution for synchronizers of compact gearboxes**

- New, revolutionary principle of synchronizer
- Compact and cost effective synchronizer systems for MTs
- Improvement of efficiency and NVH

**Ottmar Back**, Head of Product Management, HOERBIGER Antriebstechnik GmbH, Germany



12.50–2.20

Lunch and visit to the Transmission Expo

1.50–2.15 **Extra speech during lunch break**

**Transmission testing from R&D to mass production**

- R&D test stand for transmission
- Pre-production test stand for transmissions
- End of line test stand for transmissions
- Test field (complete test area) for transmissions

**Dr Lingxiang Xu**, CEO, teamtechnik China

12.50–2.20

Lunch and visit to the Transmission Expo

1.50–2.15 **Extra speech during lunch break**

**Targeted transmission fluid property design for improved fuel economy**

- Fuel economy
- Automatic transmission fluid (ATF)
- CO<sub>2</sub> emission reduction
- Fluid property design

**Dr Joseph B. Carroll**, Senior R&D Scientist, Afton Chemical Corporation, USA

**C4** 2.20–2.45

**Development of start-off slip control and torque converter**

- An enhanced start-off slip control function and a compatible torque converter were newly developed and adopted for the Jatco CVT8 series to meet heightened market needs for improved fuel economy

**Masatsugu Endou**, Assistant Manager,  
Jatco Ltd, Japan

**D4** 2.20–2.45

**Torque converter damper solutions for commercial hybrid and power take off applications**

- Commercial automatic transmissions challenges
- Torque converter damper optimised solutions
- Hybrid application
- Power take off application

**Michael Poehler**, Program Manager, Schaeffler China

**C5** 2.50–3.15

**Efficient software development for transmission using a variation of tools**

- Optimised software development environment & software validation
- Calibration assessment & feedback into software functionality/calibration updates
- Fleet evaluation tool box

**Michael Gallion**, Department Manager Software & Controls,  
AVL Powertrain, UK

**D5** 2.50–3.15

**Impact of inverter capability on motor parameters and electric propulsion system performance**

- Motor performance to meet powertrain requirements
- E-drive ampere-volts to meet motor specifications
- Systematic optimisation between e-motor and e-drive

**Dr William Cai**, CTO, Jing-Jin Electric, China

**C6** 3.20 – 3.45

**Optimisation of launch dynamics and comfort with AT, DCT, AMT**

- Engine dynamics and powertrain modelling
- Evaluation of launch comfort and performance
- Optimisation

**Artur Plötner and Andreas Jordan**, Scientific Assistants,  
Technical University Braunschweig, Germany

**D6** 3.20–3.45

**Co-engineering: Tailored lubricants to maximize transmission efficiency**

- Systematic lubricant approach to enable maximum fuel economy for the drivetrain
- Novel lubricant formulation
- Transmission and axle fluid design
- Lubricant fuel economy potential in Chinese OEM applications

**Dr Matthias Donner**, A&P Driveline Capability Manager,  
Castrol China Technology Centre, China

3.50

Short break & change to plenum

4.10–4.35

**Plenary Speech**

tbd

4.40–5.00

Summary of the Symposium

5.00

End of the Symposium





## Co-Organizer and Partners

### ■ 2nd CTI Symposium China goes green

**KlimaINVEST**  
Green Concepts



#### CO<sub>2</sub>-compensation

CO<sub>2</sub>-compensation describes a compensation mechanism that aims to compensate the emission of greenhouse gases with the creation and support of international climate protection projects. The 2nd CTI Symposium China supports the Fujian wind farm north of Hong Kong which contributes to realize the development plan to generate environmental friendly electricity by using the prevailing strong and stable wind. Thanks to this project, 23,000 tonnes of CO<sub>2</sub>-emissions, which contributes to a significant improvement of the air quality. This Gold Standard Project comply with the stringent specifications of the Climate Protection Secretariat of the United Nations (UNFCCC) and offers further environmental and social advantages.

### ■ Co-Organizer

**informa**  
exhibitions

英富曼会展 (北京) 有限公司

[www.informaexhibitions.cn](http://www.informaexhibitions.cn)



[www.ibc-asia.com](http://www.ibc-asia.com)

### ■ Partners



Delegation der Deutschen Wirtschaft  
Delegation of German Industry and Commerce  
Shanghai  
德国工商大会上海代表处



The German Chamber Network

**storymaker**  
世媒公关 Agentur für Public Relations

**National Fuel Cell Vehicle and Powertrain System Engineering Center**  
**Clean Energy Automotive Engineering Center**  
**Tongji University**

### ■ Media Partners

**AI 汽车制造业**  
AUTOMOBILE INDUSTRY

**汽车与配件**  
automobile & parts

**汽车零部件**  
Automobile Parts  
[www.ccibuzz.com](http://www.ccibuzz.com)

**汽车工艺与材料**  
AUTOMOBILE TECHNOLOGY & MATERIAL

**汽车技术**  
Automobile Technology

**国际汽车设计及制造**  
Automotive Manufacturing and Design for China

**中国汽车要闻**  
CBU

**ChinaAuto 汽车**  
中英文双语月刊 中国

**齿轮传动**  
GEAR001.COM

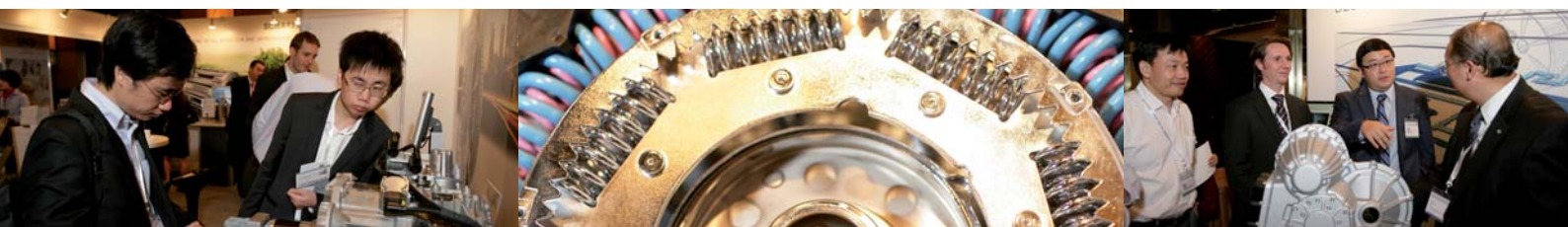
**现代汽车工业**  
Broadly 汽车工业决策者必读

**MC 现代零部件**  
Modern Components

**zaoche 造车**  
汽车设计与制造资讯平台

**engine technology**  
INTERNATIONAL

**transmission**  
TECHNOLOGY INTERNATIONAL





# brose

Technik für Automobile

**Brose** is partner to the international automotive industry, and is the fourth-largest family-owned company among the top 100 automotive suppliers worldwide. The supplier exploits its expertise in mechanics, electrics and electronics gained over decades to find the right solutions tailor-made for the needs of its customers. The focus is on new products designed to cut fuel consumption, thus helping to reduce CO<sub>2</sub> emissions.

In China the mechatronic specialist started its activities in 1996 and has been growing ever since. Brose is now present with seven production sites in five of China's most important automotive regions and has localized its entire product portfolio as well as its research and development competence in the country.

## **Brose China Co., Ltd.**

3/F No. 557, Anchi Rd., Anting  
Shanghai 201805, P.R. China  
[www.brose.com](http://www.brose.com)

# ■ ■ ■ GETRAG

**GETRAG** is the world's largest independent supplier of transmission systems for passenger cars and light commercial vehicles. Founded in 1935 as a family business, the company today combines the creative strength of its roots with the reach and flexibility of a global corporation. Headquartered in Untergruppenbach/Germany, GETRAG manufactures and develops passenger car transmission products and solutions for the important automotive markets Europe, Asia and North America always staying close to its international customers with 24 locations and about 13.000 employees worldwide. In 2012, GETRAG reached a turnover of 3 billion Euros. The portfolio ranges from classical manual transmissions, automated manual transmissions and automatic transmissions based on dual clutch technology (DCT) to various hybridization solutions, range extender systems and purely electric drivetrains.

## **GETRAG Getriebe- und Zahnradfabrik Hermann Hagenmeyer GmbH & Cie KG**

Hermann-Hagenmeyer-Strasse  
74199 Untergruppenbach, Germany  
[www.getrag.com](http://www.getrag.com)

## Co-Sponsor



**Dana Holding Corporation**, a global technology leader, manufactures innovative solutions for current and future automotive engines and transmissions. When using Dana's award-winning sealing and thermal technologies, major OE manufacturers maintain a decisive lead in technology by reducing complexity, friction losses, weight, and emissions. Dana's automotive solutions are found in virtually every vehicle engine and transmission worldwide.

## **Dana Holding Corporation**

Power Technologies Group  
3939 Technology Drive  
Maumee, OH 43537, USA  
[www.dana.com](http://www.dana.com)



**AVL** is the world's largest privately owned and independent company developing IC engine powertrains plus the associated instrumentation and test systems. AVL develops and improves all kinds of powertrain systems incl. alternative and hybrid systems and is a competent partner to the engine and automotive industry. The products of the business area 'Engine Instrumentation and Test Systems' comprise all the instruments and systems required for engine and vehicle testing.

**AVL List GmbH**  
Hans-List-Platz 1  
8020 Graz, Austria  
[www.avl.com](http://www.avl.com)



The **Brand Kern-Liebers Precision Parts (Taicang) Co., Ltd.** (BKL) is a Joint Venture between the Brand Group and Kern-Liebers Group. In Europe the Brand Group is already the leading producer of straight and arc springs for transmission. Now this innovative technology is offered locally in China, based on the know-how regarding material, development, prototyping and as well our sophisticated manufacturing technology.

**Brand Kern-Liebers Precision Parts (Taicang) Co., Ltd.**  
No. 88 Nanjing Road  
Jiangsu Province 215400  
Taicang-City, P.R. China  
[www.Brand-Kern-Liebers.com.cn](http://www.Brand-Kern-Liebers.com.cn)



**BorgWarner Transmission Systems and TorqTransfer Systems** harness a legacy of more than 100 years as an innovator in transmission and all-wheel drive technology. Product segments include components and systems for step-ratio automatic, wet and dry dual clutch, and automated manual transmissions; all-wheel drive transfer cases and active all-wheel drive couplings; and electric vehicle transaxles and transmissions.

**BorgWarner Transmission Systems  
BorgWarner United Transmission  
Systems Co. Ltd**  
No. 15 North Fuquan Road,  
Dalian Development Area, Liaoning, P.R. China  
[www.borgwarner.com](http://www.borgwarner.com)



**Bühler Motor** is an independent, globally acting company focused on the development and production of mechatronic drive solutions like innovative hydraulic pumps and actuator systems. With 1,650 employees at eight locations worldwide we are a leading supplier of the automotive industry. We are committed to offer world-class products to help to improve the drivetrain efficiency and performance.

**Bühler Motor GmbH**  
Anne-Frank-Strasse 33-35  
90459 Nuremberg, Germany  
[www.buehlermotor.com](http://www.buehlermotor.com)



BP Group is one of the leading global oil companies and **Castrol** is its lubricant specialist function. With 110 years of experience in the development and production of innovative lubricants, Castrol is a partner to many automobile and transmission manufacturers. Castrol stands for exceptional technical expertise, innovation and premium quality.

**Castrol**  
Castrol China Technology Centre  
255 Gui Qiao Road  
201206 Shanghai, P.R. China  
[www.castrol.com](http://www.castrol.com)



## DIEHL

Synchro Tec

**DIEHL SynchroTec Manufacturing(Wuxi)** is a 100% subsidiary of DIEHL Schmiedetechnik Germany. It is the Asia-Pacific base of DIEHL Metall's Synchronizer Ring Division. DIEHL started manufacturing Synchronizer Rings since 1956, 80 million Synchronizer Rings annually worldwide with 40% market share worldwide and 50% market share in Europe. Over 150 different types of synchronizer rings are delivered to global automotive market, and four production bases for Synchronizer Rings: Germany, Brazil, China and India. Diehl SynchroTec has product of high-performance synchronizer rings made of brass and steel, which meets the highest requirements regarding exact geometry, high wear resistance and strength.

### Diehl SynchroTec Manufacturing (Wuxi) Co., Ltd.

No.59, Ximei Road  
Wuxi Hi-Tech Industrial Development Zone  
21 4112 Wuxi, Jiangsu, P.R. China  
[www.diehl.com/diehlmetall](http://www.diehl.com/diehlmetall)



### ERNST GROB AG offers customized solutions

High precision machines to cold form:

- external and internal splines on tubes and solid material parts
  - external and internal splines on sheet metal parts e.g. clutch housings
- Slotting machines for various operations on hollow cylindrical parts:
- trimming
  - oil hole punching
  - snap ring groove forming e.g. on clutch housing

### ERNST GROB AG

Beijing Office  
Rm 503 Haiyuncang Building, No.1 Haiyuncang Road  
Dongcheng District, Beijing 100007, P.R. China  
[www.ernst-grob.com](http://www.ernst-grob.com)



The **Felss Group** manufactures metal processing machines and components mainly for the automotive industry. The technical focus is on cold forming processes rotary swaging, axial forming, bending and end forming.

The Felss Group is globally active with headquarters in Königsbach-Stein, two sites in Bretten-Gölshausen and Nesselwang, Germany as well as sites in China, USA and Switzerland.

### Felss Systems GmbH

Dieselstraße 2  
7502 Königsbach-Stein, Germany  
[www.felss.com](http://www.felss.com)



**FEV** is an independent powertrain systems research, design and development company. From concept to production, FEV offers comprehensive transmission design and development solutions for a variety of applications ranging from electric or hydraulic hybrids to conventional systems. We provide extensive functional/durability testing and benchmarking for all trans-missions types.

### FEV GmbH

Neuenhofstrasse 181  
52078 Aachen, Germany  
[www.fev.com](http://www.fev.com)



**hofer** is a leading engineering company in energy-efficient powertrain systems. Among over 500 employees worldwide, we hold expertise in transmissions, engines, hybrid and electric drive systems, mechatronics, electronics and software. Focusing on developing DCT, hybrid- and electric drives, we provide innovative products and services, from the necessary software to application specific know-how and support.

### hofer GmbH & Co.KG

Gewerbepark 1,  
4451 Garsten, Austria  
[www.hofer.de/cn](http://www.hofer.de/cn)



### IAV – Your Partner for Automotive Engineering

As a leading automotive engineering partner, IAV offers more than 30 years of experience and unrivaled expertise. Employing 5,000 members of staff, we assist manufacturers and suppliers worldwide. Established in 2005, IAV China benefits from an expert team of engineers specialized in developing transmission and hybrid systems.

### IAV Automotive Engineering

185 Moyu Road  
Anting Town, Shanghai 201805, P.R. China  
[www.iav.com](http://www.iav.com)



The **Infineum Group** of Companies is a world-class developer, manufacturer and marketer of lubricant additives used primarily in automotive, heavy-duty diesel and marine engines. The product range includes additives for diesel fuels, specialty additives for large power generation engines, automotive transmission fluids and gear oils.  
[www.infineum.com](http://www.infineum.com)

### Infineum International Ltd.

**Milton Hill Business and Technology Centre**  
P.O. Box 1 Abingdon  
Oxfordshire OX13 6BB\*, United Kingdom  
[www.infineum.com](http://www.infineum.com)



**JATCO** is a full line-up producer of AT/CVTs, from lightweight vehicles to full-sized automobiles. Our research & development field is currently based in Japan, USA, France and Korea to support customers worldwide. Manufacturing plants are located in Japan, Mexico, China and Thailand producing approx. 5 million gearboxes annually.

### JATCO (Guangzhou)

**Automatic Transmission Co., Ltd.**  
Dawning Center A block 27F.2701 room.  
No. 500 Hongbaoshi Road, Changning District,  
Shanghai 201103, P.R. China  
[www.jatco.co.jp/ENGLISH/index.html](http://www.jatco.co.jp/ENGLISH/index.html)



... simply shift better. – **KOKI TECHNIK Transmission Systems GmbH** is your competent and reliable partner when it comes to the development up to the serial production of customized shift modules for automatic and manual transmissions.

### KOKI TECHNIK Transmission Systems GmbH

Bernd-Beltrame-Strasse 7  
09399 Niederwuerschnitz, Germany  
[www.kokitransmission.com](http://www.kokitransmission.com)



**Magna Powertrain** is a premier supplier for the global automotive industry with full capabilities in powertrain design, development, testing, and manufacturing. Offering complete system integration sets us apart from our competitors.

Manufacturing locations, engineering centers and sales offices are situated close to our global customer base, stretching throughout all regions of the world.

### Magna Powertrain

8F, Tower A, Eton Place  
69 Dongfang Road  
Pudong, Shanghai PRC 200120, P.R. China  
[www.magnapowertrain.com](http://www.magnapowertrain.com)



**Mubea Tellerfedern GmbH** produces highly-stressed transmission springs for modern automatic transmissions, CVT- and dual clutch transmissions. The transmission weight and costs can be reduced by up to 4% by using Mubea disc springs instead of coil springs. Further products in the transmission sector are light weight transmission shafts. The weight of these shafts can be reduced by up to 30%.

### Mubea Tellerfedern GmbH

Im Kirdorf 34  
57567 Daaden, Germany  
[www.mubea.com](http://www.mubea.com)



**Oerlikon Graziano** is World's No.1 in development and supply of transaxles for high performance cars, and full electric vehicles, and highly specialised in transmission systems for 4WD (PTU, RDM), key player in applying innovative technology as DCT, AMT and eLSD for some new supercars. Leading transmission controls technology is provided by Vocis (UK), majority owned by Oerlikon Graziano.

**Oerlikon Graziano**  
Via Cumiana 14  
10098 Rivoli (Torino), Italy  
[www.oerlikon.com/graziano](http://www.oerlikon.com/graziano)



**Paul Beier** is one of the leading companies in the field of tool manufacturing and mechanical engineering. Our customers are top German and international industrial enterprises. They rely on our precision and professionalism. And value the flexibility and proximity offered by a medium-sized enterprise such as ours.

**Paul Beier GmbH**  
**Werkzeug- und Maschinenbau & Co. KG**  
Naumburger Straße 36  
34127 Kassel-Rothenditmold, Germany  
[www.beier-kassel.de](http://www.beier-kassel.de)



**Sulzer Metco's Friction Systems** is specialized in synchronizers for manual and dual-clutch transmission as well as developing and manufacturing customer-oriented synchronizer components and modules. Sulzer is the leader in carbon friction technology, offering an economic solution together with stamped steel synchronizers for maximum gear shifting comfort during the lifetime of the vehicle. Locations: Germany, USA, Brazil, Italy, China, India, England, Japan

**Sulzer Metco Surface Technology (Shanghai) Co., Ltd**  
B1 & B2, No. 539, Baian Road, Anting, Jiading District  
Shanghai, P.R. China  
[www.sulzer.com](http://www.sulzer.com)



**RFX** is specialized in developing and manufacturing oil seals for car and truck, including for engine crankshaft and valve stem, transmission system, shock absorber, axle and power steering system. RFX is an OEM and ODM supplier with annual production capability more than 100 million pcs.

**Yantai RFX Oil Seal Co., Ltd.**  
No.587, Longmen West Road, Laiyang City, Shandong Province 265200, P.R. China  
[www.chinarfx.com](http://www.chinarfx.com)



**ROLLAX** is in many areas worldwide well-known, we develop and produce a wide range of Gearbox, Suspension, Steering column and Seat components. We are gearbox specialist, we have experience, technology, quality and highly automated production, we could be your reliable development partner.

**Rollax Bearings (Nanjing) Co., Ltd**  
5th Zhuyuan Road (S), Yongning Industrial Concentration Zone, Pukou District, Nanjing 211801, P.R. China  
[www.rollax.de](http://www.rollax.de)



**Schaeffler** is a renowned supplier to the automotive industry as well as a leading manufacturer of bearings. With its INA, LuK and FAG brands, Schaeffler is an innovative development partner with system expertise for the entire drive train. Precision products ensure reduced energy consumption and lower emissions, as well as increased driving comfort and safety.

**Schaeffler Trading (Shanghai) Co., Ltd.**  
No.1 Antuo Road  
Anting Jiading District, Shanghai, P.R. China  
[www.schaeffler-group.com](http://www.schaeffler-group.com)



## Exhibitors



**SCHERDEL**, with its 29 locations and 3800 employees worldwide, offers a full product range in the area of engineering springs, metal forming and joining technology.

The value chain contains service, engineering and production as well as in-house tool and machine construction for products used for powertrain, body and interior applications.

**SCHERDEL GmbH**

Scherdelstr. 2  
95615 Marktrechwitz, Germany  
[www.scherdel.de](http://www.scherdel.de)



**SEEGER-ORBIS** is the world leading innovator and global manufacturer of retaining and snap rings. We offer a large variety of industry standard products and specialize in assisting our customers with specific items for their unique design applications.

Highly qualified professionals in engineering, design manufacture and quality, together with innovative sales & marketing, Seeger is consistently focused on supporting our customers from design concept to final assembly. Seeger-Orbis has always stood for the ultimate in quality production, technically superior design support and reliable logistics, while remaining respectful of our environmental impact.

After all, a retaining ring is known as a "Seeger Ring".

**SEEGER-ORBIS**

Wiesbadener Strasse 243  
61462 Koenigstein, Germany  
[www.seeger-orbis.com](http://www.seeger-orbis.com)



As part of the Sodectia Group, **Sodectia FSG** is a well-know solution provider and manufacturer of precision fine blanking parts and powertrain products with manufacturing facilities in Europe and Asia Pacific. Our precision transmission products range from manual gearboxes up to dual clutch systems and our powertrain specialized products range from shift forks to park break systems.

**Sodectia FSG**

Schulze-Delitzsch-Strasse 23  
30938 Burgwedel, Germany  
[www.sodectia.com](http://www.sodectia.com)  
[www.fsg-automotive.de](http://www.fsg-automotive.de)



**teamtechnik GmbH** is an expanding, internationally successful production technology company. Over 750 highly qualified employees manufacture turnkey, client-specific units for assembly and testing technology. The company's services include all kinds of transmission testing units, from development test stand, stand-alone test rig to fully automatic testing systems and complete assembly and test systems. teamtechnik have been technology leaders for modular and highly flexible systems.

**teamtechnik GmbH**

Planckstrasse 40  
71691 Freiberg, Germany  
[www.teamtechnik.com](http://www.teamtechnik.com)



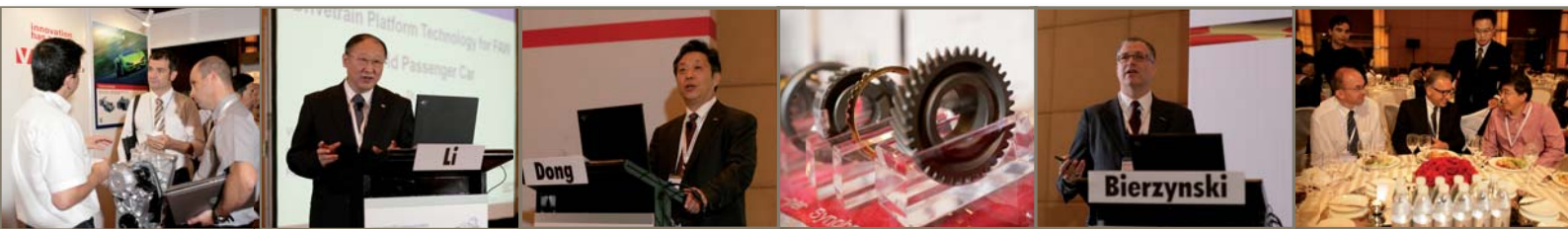
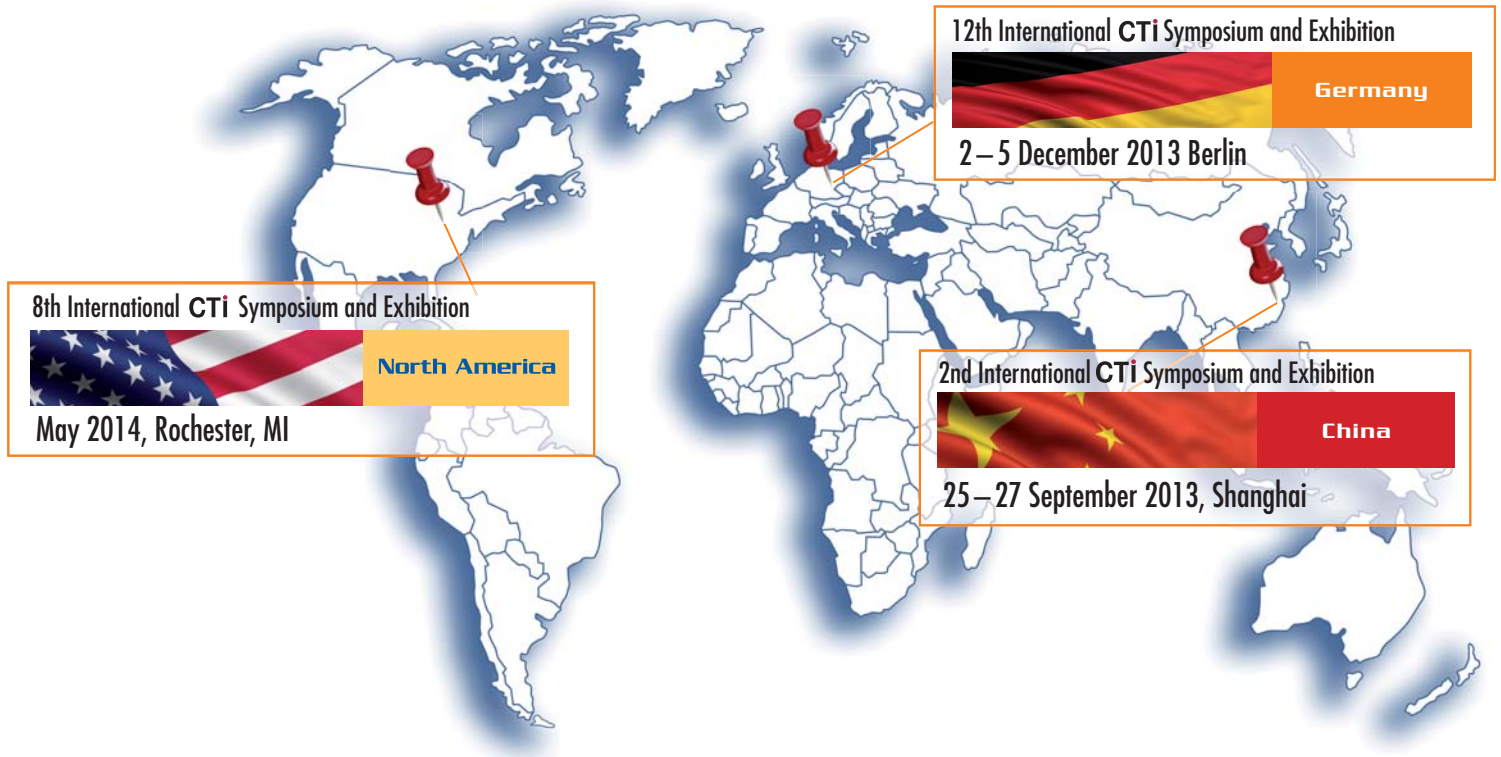
**Victrex plc** is the leading manufacturer of High Performance Thermoplastics, supporting transmission engineers in the development of more reliable and more efficient transmissions components. The proven technology for polymer based thrust washers; seal rings and actuation element save up to 80% weight and improve shift comfort.

**Victrex plc**

Part B Building G No. 1688  
Zhuanxing Road Xinzhuang Industry Park  
201108 Shanghai, P.R. China  
[www.victrex.com](http://www.victrex.com)



# Save the dates & reserve your seat!



## Get impressive insights about CTI's mega event



### ■ Convince yourself and visit:

English version: [cn.transmission-symposium.com/video](http://cn.transmission-symposium.com/video)

Chinese version: [china.transmission-symposium.com/video](http://china.transmission-symposium.com/video)

(Identification Number)



Yes, I want to register for/ 是的, 我想报名注册	Date/ 日期	Booking fee until 17 July 2013	SAVE/ 节省	Booking fee until 4 September 2013	SAVE/ 节省	Booking fee after 4 September 2013
--	----------	-----------------------------------	-------------	---------------------------------------	-------------	---------------------------------------

**STANDARD DELEGATE RATES/标准代表费用**

<input type="checkbox"/> Symposium + Introductory Day (P2300324M013) 论坛及介绍会	25 to 27 September 2013 2013年9月25日至27日	1,650 €	330 €	1,870 €	110 €	1,980 €
<input type="checkbox"/> Symposium (P2300324M023) 论坛	26 and 27 September 2013 2013年9月26日至27日	1,150 €	230 €	1,270 €	110 €	1,380 €

**CHINESE NATIONAL DELEGATE RATES/适用于中国籍代表的费率**

<input type="checkbox"/> Symposium + Introductory Day (P2300324M013) 论坛及介绍会	25 to 27 September 2013 2013年9月25日至27日	1,150 €	830 €	1,380 €	600 €	1,500 €
<input type="checkbox"/> Symposium (P2300324M023) 论坛	26 and 27 September 2013 2013年9月26日至27日	805 €	575 €	920 €	460 €	1,035 €

**AUTOMOBILE MANUFACTURERS RATES 汽车制造商**

<input type="checkbox"/> Symposium 论坛 (P2300324M023)	26 and 27 September 2013 2013年9月26日至27日	605 €	775 €	720 €	660 €	835 €
--	--	-------	-------	-------	-------	-------

☐ I am interested in sponsoring and/or exhibition opportunities. 我有兴趣提供赞助及/或参展。

Please fill this form in English. / 请您用英语填写以下表格。

First name		Surname	
Job title/Division			
Phone		Fax	
Email		Year of birth	

EUROFORUM Deutschland SE may contact me about various products and services offered by it as well as by companies of the Group and co-operation partners:  
EUROFORUM Deutschland SE公司可以通过以下填写的途径向我进行有关本公司, 本公司所属集团和合作伙伴公司产品与服务的广告宣传。

Email/邮件: ☐ Yes/是 ☐ No/否 Fax/传真: ☐ Yes/是 ☐ No/否

Company
Address
Business
Contact person
Date, Signature

Please fill-in, if invoice address differs from delegates adress/ 若发票寄往地址与客户通信地址不同, 请填写以下信息:

Name
Division
Address

**团体订购优惠: 中国籍代表团体订购时  
从第二位起享受半价优惠**

**Conditions of participation**

The attendance fee which includes conference documentation, lunches, tea/coffee and evening dinner, is payable on receipt of the invoice. Once your registration has been received you will be sent a confirmation slip. Registrations can be cancelled (in writing please) free of charge up to 14 days before the event. When a cancellation is made within 14 days of the conference date, half the participation fee will be reimbursed. In the event of cancellation on the day of the conference, or failure to attend, the full fee will be payable. The registered delegate may of course send a substitute at no additional cost. The organisers reserve the right to amend the program of events if necessary.

**Data protection**

CTI is a division of EUROFORUM Deutschland SE. We use the data collected in connection with your order and use of our services and products within the applicable legal limits for the purpose of performing our services, and to provide you with information by post and email about further offers by us, companies of our Group or co-operation partners, which are similar to the services of which you availed yourself previously. If, during the use of the data, it is transmitted to countries lacking an adequate level of data protection, we will create sufficient guarantees to protect the data. Furthermore, we will use your data if you have given us your consent to do so. You may object to the use of your data for advertising purposes or to being contacted by email or fax at any time by contacting EUROFORUM Deutschland SE, P.O. Box 11 12 34, 40512 Duesseldorf, Germany. Our customer services (Phone: +49 (0) 211.9686-33 33) shall be pleased to accept requests for changes.

Payment by credit card is of course possible! Just register and you will receive a link with all the relevant reservation data. Use the link and make your credit card payment in an easy and secure way.

**Conference Venue and Accommodation****Grand Hyatt Shanghai**

Jin Mao Tower, 88 Century Avenue, Pudong, Shanghai, People's Republic of China 200121  
Phone: +86 21 5049 1234

Fax/传真: +49 (0)211.96 86-40 40

Phone/电话: +49 (0)211.96 86-36 61 [Kristina Alekseenko]

Switchboard/电话总机: +49 (0)211.96 86-30 00

For any request in Chinese please contact Ms Yolanda Hu via Phone: +86 (0)10 65 62-33 55 or email: yolanda.hu@informa.com

若有问题需用中文解答, 请您联系胡女士。电话: +86 (0)10 65 62-33 55或邮件: yolanda.hu@informa.com。

Postal Address/通信地址:

email/邮件:

Internet/网站:

CTI, EUROFORUM Deutschland SE, P.O. Box 11 12 34, 40512 Duesseldorf, Germany

registration@car-training-institute.com

www.transmission-symposium.com/china-register