



CTI Symposium China

Automotive Transmissions, HEV and EV Drives

CTI中国论坛

汽车变速器、混合动力和电力驱动技术

21 – 23 September 2016, Shanghai | 2016年9月21日至23日, 上海

5th
Anniversary

Keynote Speakers



SCHAEFFLER

Hanbing Yang,
President Automotive,
Schaeffler Group Greater China, China



AVL

Mario Brunner,
Head of Passenger Car Transmission,
AVL List GmbH, Austria



TASRI
清华汽车产业与技术战略研究院

Prof. Frank Zhao,
PhD, Director,
Tsinghua Automotive Strategy Research Institute (TASRI), China



Jatco

Tomoyoshi Sato,
Senior Vice President, Production Division,
Jatco Ltd., China



Vorsprung durch Technik **Audi**

Michael Schöffmann,
Head of Transmission Development,
Audi AG, Germany



ZF

Dr Rolf Gall,
Head of R&D, Asia Pacific; Head of Engineering Center,
ZF (China) Investment Co., Ltd., China



FCA
FIAT CHRYSLER AUTOMOBILES

Peter Hartman,
Head of FCA APAC Powertrain,
FCA Powertrain Technologies R&D Shanghai Co., Ltd., China

Chairman

INSTITUTE
OF
AUTOMOTIVE
ENGINEERING

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



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Chairman's Welcome Address

Transmissions and Drivetrains in China – Focusing on Concepts and Components for NEV

Earlier this year, the new incentive rules from the central government for the **New Energy Vehicles** (NEV, including EV, PHEV and FCV) have officially entered into force in China. In addition, many cities have also, or are about to, introduce the new range-dependent subsidisation for NEV. These central and local incentive rules will inevitably have a huge impact on the Chinese automobile industry, especially in the area of drivetrain and propulsion technologies, which are the key to the long-term success of NEV.

On the other hand, charging stations and further infrastructures are also an essential part for the NEV. This year, thanks to the strong support of the central and local governments, the commercialisation of charging stations has been accelerated, pushing the public acceptance of NEV a huge step forward. With the help of all these measures, the NEV sales have increased more than three times in 2015 compared to last year. With the rapid market share growth, the drivetrain characteristics in NEV, such as fuel consumption, comfort and dynamics are becoming more and more important.

Another new phenomenon in the Chinese market is that many IT companies have involved in the automotive industry, particularly in the field of electric vehicles and automated driving. While the newcomers are certainly accelerating the development of electric vehicles, it is also bound to intensify the competition on the market. Although their development is still in the early phases, the newcomers have already attracted the attention of traditional automotive companies.

As mentioned above, this year, China's automotive industry and market are facing many new changes and challenges. Our CTI Symposium China this year will cover all important innovations and progress in the field of transmissions, drivetrains, components and development methods as well as market-specific requirements and global prospects. We will not only focus on a variety of new transmissions, hybrid and EV drives, but also on component-related topics, which help to optimise the complete drive system:

- Dedicated Hybrid Transmission (DHT): Which advantages does the new transmission type provide comparing to the traditional add-on hybrid transmission?
- Regulations in China: How will they further affect the development of NEV, especially the drivetrain and transmission development?
- Starting and shift elements: How can comfort, dynamics and efficiency be increased?
- On-demand actuation, lubrication, optimised bearings and seals for better transmission efficiency
- DHT, AT, DCT, CVT and AMT: Which concept offers which advantages for China?
- Optimal dynamics, comfort and efficiency with optimal drivetrain calibration
- How can different hybrid and electric drive concepts further increase the drivetrain efficiency?

We are taking the large variety of above-mentioned topics into account: **67 presentations in 8 parallel sessions**, a **panel discussion** on the question **“How will future drive systems look like?”** accompanied by the **Transmission Expo**, our “technology market for innovations at your fingertips” with **more than 40 exhibitors**.

Together with the **Introductory Day for Newcomers** in advance of the main programme, the 5th CTI Symposium in Shanghai is again an important forum for international transmission and drive experts to exchange opinions and experience and provides a valuable status update.

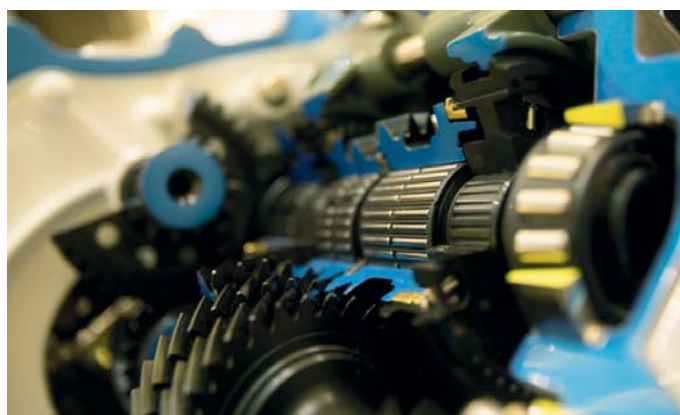
I am looking forward to your participation and to many useful discussions and ideas.

Best regards



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

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ENGINEERING



Advisory Board China



Prof. Dr Ferit Kückkay (Chairman), Managing Director, Institute of Automotive Engineering, Technical University of Braunschweig
Dr Yong Chen, Professor, Hebei University of Technology; Senior Chief Engineer, Geely Powertrain Research Institute
Gregoire Cuny, Vice President, Segment Asia, BU Transmission, Continental Automotive Holding Co., Ltd.
Prof. Dr Weirong Fang, Global Director, Transmissions & Driveline Department, SAIC Motor Technical Center
Dr Robert Fischer, Executive Vice President Engineering and Technology Powertrain Systems, AVL List GmbH



Dr Rolf Gall, Head of Engineering Center, ZF (China) Investment Co., Ltd.
Prof. Dr Xin Guan, Dean of School of Automobile Engineering, Jilin University
Gerhard Henning, Executive Chief Engineer, Automatic Transmission Team, Great Wall Auto Transmission Research Institute
Dr Calvin Lee, Senior Director Powertrain, Volvo Car China R&D
Dakai Li, Chairman of the Board, ShaanXi Fast Auto Drive Group Co. Ltd



Prof. Dr Jun Li, President, China FAW Group Corporation
Prof. Huiping Liu, Vice Director of the Energy Transportation Research Institute, Shanghai Academy of Development & Reform
Prof. Jan Gang Lu, Professor, PhD Director, Beijing Institute of Technology
Noel R. Mack, Executive Director Truck Driveline Systems, AAM
Haruhisa Nakano, Vice President, Quality Technical Center General Manager & Shanghai Branch President, JATCO (Guangzhou) Automatic Transmission Ltd.



Ulrich Plewnia, Vice President Product Development, GETRAG Asia Pacific Transmission Technology (Shanghai) Co., Ltd
Prof. Dr Peter Tenberge, Director of the Institute for Industrial and Automotive Drive Trains, Ruhr-University Bochum
Haoding Wen, Vice President, Business Division Transmission Systems, Schaeffler Greater China
Prof. Dr Xiangyang Xu, Executive Deputy Director of National Engineering Research Center for Passenger Car Automatic Transmissions, School of Transportation Science & Engineering, 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.
Prof. Dr Frank Zhao, Director of Automotive Strategy Research Institute (TASRI), Tsinghua University
Prof. Huiyan Chen, Professor at the College of Mechanical and Vehicle Engineering, Beijing Institute of Technology
Kaiguo Li, Vice President, China Automotive Engineering Research Institute



Basics and Practice of Automotive Transmissions and Hybrid and Electric Drives



Schedule: 9.00 a.m. – 5.00 p.m.

Objective

Newcomers and beginners will get an overview of 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 Symposium Berlin (Germany).

Content

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

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

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
 - Dedicated hybrid transmission (DHT)
 - Principles, applications and new concepts
- All-wheel drives

Drive train management

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

5.00 p.m. – 7.00 p.m.

Pre Check-in to the main days

Get your conference documents and avoid waiting lines on Thursday

MORNING SESSION

Plenary Speeches

8.00 Reception and hand out of the proceedings
Opening of the Transmission Expo

8.30 – 8.45

Welcome address by the Chairman of the CTI Symposium



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

8.45 – 9.05

“In the region for the region”: Schaeffler's localisation activities in China of engineering, purchasing and production



SCHAEFFLER

Hanbing Yang, President Automotive,
Schaeffler Group Greater China, China

9.05 – 9.25

Outlook of China Auto Industry



Prof. Frank Zhao, PhD, Director,
Tsinghua Automotive Strategy Research Institute (TASRI), China

9.25 – 9.45

Dedicated Hybrid Transmissions (DHT) – a new category of transmissions



Mario Brunner, Head of Passenger Car Transmission,
AVL List GmbH, Austria

9.45 – 10.00 Q & A

10.00 – 10.45 Coffee break and visit to the Transmission Expo

10.45 – 11.45 **PANEL DISCUSSION**

How will future drive systems look like?

MODERATOR:

Prof. Dr Ferit Küçükay, Technical University of Braunschweig

PANELISTS:

- **Prof. Frank Zhao**,
Tsinghua Automotive Strategy Research Institute (TASRI)
- **Michael Schöffmann**, Audi AG
- **Peter Hartman**,
FCA Powertrain Technologies R&D Shanghai Co., Ltd.
- **Mario Brunner**, AVL List GmbH
- **Dr Rolf Gall**, ZF (China) Investment Co., Ltd

Dedicated Hybrid Transmission (DHT)

12.45 – 1.15 (during lunch break)

Solution Forum

hofer powertrain 7 speed – 3 mode dedicated hybrid transmission (DHT) concept**Patrick Vikari**, Project Manager, hofer GmbH & CO KG, Germany

1.15 – 1.40

Technical characteristics of EDU (Electric Drive Unit) from SAIC Motor and patents distribution**Sidong Luo**, Director of Project Operation Dept., Shanghai E-Propulsion Auto Technology Co., Ltd and Powertrain Line Executive of Electric Drive Unit, SAIC Motor Passenger Vehicle Co., China

1.40 – 1.45 Short break and change between sessions

1.45 – 2.10

Renault-Nissan new global dedicated hybrid transmission for compact car**Nicolas Fremau**, Expert Hybrid, Renault, France, **Antoine Vignon**, Hybrid Chief Engineer, Renault, France and **Taiichi Onoyama**, Senior Expert Hybrid System, Nissan, Japan

2.10 – 2.15 Short break and change between sessions

2.15 – 2.40

AVL 7- and 8-mode dedicated hybrid transmissions**Muammer Yolga**, Department Manager System and Software (DTS), AVL List GmbH, Austria

Conventional Transmission and Drivetrain Concepts

11.45 – 1.15 Lunch and visit to the Transmission Expo

1.15 – 1.40

The first global small DCT – a joint Dongfeng GETRAG development**Dr Yan Jun**, Transmission Development Chief Engineer, Powertrain Development Department, Dongfeng Motor Corporation Technology Center, China and **Sascha Mierbach**, Platform Director DCT150/200, GETRAG, Magna Powertrain, Germany

1.40 – 1.45 Short break and change between sessions

1.45 – 2.10

5DCT130 for entry-level vehicle segment**Magnus Fridh**, Senior System Engineer, FEV Sverige AB, Sweden

2.10 – 2.15 Short break and change between sessions

2.15 – 2.40

General Motors front wheel drive seven speed dry dual clutch automatic transmission**Kevin Shipley**, Regional Chief Engineer, GM China – Global Propulsion Systems, China and **Gan Daohui**, Chief Engineer – Transmission Department, SAIC (Shanghai Automotive Industry Corporation), China

2.40 – 3.25 Coffee break and visit to the Transmission Expo

3.25 – 3.50

Multi-mode transmission – a unique transmission concept for hybrid vehicles**Masashi Aikawa**, Technology Application Manager Asia Pacific – eDrive, GKN Driveline Japan Ltd., Japan

3.50 – 3.55 Short break and change between session

3.55 – 4.20

P2-hybrid versus DHT-hybrid drive trains – evaluation and optimisation**Lin Li** and **Andreas Lange**, R&D Staff, **Prof. Dr Ferit Küçükay**, Managing Director, Institute of Automotive Engineering, Technical University of Braunschweig, Germany

4.20 – 4.25 Short break and change between sessions

4.25 – 4.50

Power split hybrid transmission with compact mechanics**Prof. Dr Peter Tenberge**, Director of the Institute for Industry and Vehicle Drive Trains, Ruhr-University Bochum, Germany

4.50 – 4.55 Short break and change between sessions

4.55 – 5.20

MAGSPLIT® – a dedicated hybrid transmission with just two rotating elements**David Latimer**, Chief Executive Officer, Magnomatics Ltd., UK

3.25 – 3.50

Development of new variator system for Jatco CVT7 W/R**Takuya Iwasawa**, Experiment Engineer, Jatco Ltd., Japan

3.50 – 3.55 Short break and change between session

3.55 – 4.20

Efficiency advancements in passenger car toroidal CVTs**Chris Gaskell**, Design & Analysis Engineer – New Concepts, Torotrak Group, UK

4.20 – 4.25 Short break and change between sessions

4.25 – 4.50

The cone-ring-transmission (KRG) will go into production**Dr Heinz-Dieter Schneider**, Manager Development, GIF-Entwicklungsgesellschaft mbH, Germany

4.50 – 4.55 Short break and change between sessions

4.55 – 5.20

Engine downsizing, enabled by the unique characteristics of an infinitely variable transmission**Michael Durack**, Technology Director, Ultimate Transmissions Pty. Ltd., Australia5.30 – 8.00 **Evening Event**

The CTI Networking Night starts with a beer and wine reception in the Transmission Expo. Afterwards enjoy a dinner with your colleagues and peers with great entertainment.

Conventional Transmission and Drivetrain Components

11.45 – 1.15 Lunch and visit to the Transmission Expo

1.15 – 1.40

iClutch™ – intelligent clutch system for manual transmission

Mark Buchanan, Senior Manager, Advanced Engineering Drivetrain Group, BorgWarner, USA

1.40 – 1.45 Short break and change between sessions

1.45 – 2.10

New facing material generation – answer to market evolution

Philippe Perret, R&D Director Friction Material, Valeo Transmissions, China

2.10 – 2.15 Short break and change between sessions

2.15 – 2.40

Multi-mode clutch module – application and performance

Calahan Campton, Advanced Product Engineer, BorgWarner Transmission Systems, USA

2.40 – 3.25 Coffee break and visit to the Transmission Expo

3.25 – 3.50

VT5 – a family of efficient, single range torque converter CVTs

Yu Yang, Business Development Partner, Punch Powertrain, Belgium

3.50 – 3.55 Short break and change between session

3.55 – 4.20

A control approach for an electro-hydraulic system within automatic transmissions

Wolfgang Ebner, Development Engineer for Powertrain Control and Simulation, AVL List GmbH, Austria and Senior Development Engineer, Virtual Vehicle Research Center, Austria

4.20 – 4.25 Short break and change between sessions

4.25 – 4.50

BD-HDI: new substrate technology for integrated transmission control units

Bernhard Schuch, Head of Competence Center Materials & Packing, Conti Temic microelectronic GmbH, Germany

4.50 – 4.55 Short break and change between sessions

4.55 – 5.20

A breakthrough for DCT synchronizers

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

5.30 – 8.00 Evening Event

Function Development, Testing, Calibration

12.45 – 1.15 (during lunch break)

Solution Forum

Engine torque accuracy – the requirement for optimised driving comfort

Björn Wultsch, Calibration Engineer Transmission & Hybrid, AVL List GmbH, Austria

1.15 – 1.40

Development of load data applicable to an emerging market by simulation

Yvan Le Neindre, Chief Engineer, and **Huilai Wei**, Supervisor Engineer, New Energy E-Drive Design Department, New Energy Engineering Institute of Great Wall Motor Co., Ltd., China and **Petra Grün**, Reliability Engineering & Risk Management Engineering and Technology Powertrain Systems, AVL List GmbH, Austria

1.40 – 1.45 Short break and change between sessions

1.45 – 2.10

Virtual calibration of conventional & hybrid drivetrain strategy

Falko Pflüger, Senior Calibration Engineer Transmission, DTC, AVL List GmbH, Austria

2.10 – 2.15 Short break and change between sessions

2.15 – 2.40

Improvement of CVT acceleration feeling utilising step-wise-shift control

Dan Wang, Engineer, Jatco (Guangzhou) Automatic Transmission Ltd., China

3.25 – 3.50

The importance of auto-calibration in transmission shift quality control

Wei Ni, Senior Transmission Engineer/Team Leader, Ricardo Shanghai Company Ltd., China

3.50 – 3.55 Short break and change between session

3.55 – 4.20

Automatic transmission limp-home strategy research

Qing Yang, System & Function Development Manager, UAES, China

4.20 – 4.25 Short break and change between sessions

4.25 – 4.50

Enabling autonomous functions on manual transmission

Pascal Maurel, Transmission System Control Laws Manager, Valeo, France

4.50 – 4.55 Short break and change between sessions

4.55 – 5.20

Model based and scalable functional safety engineering methodology

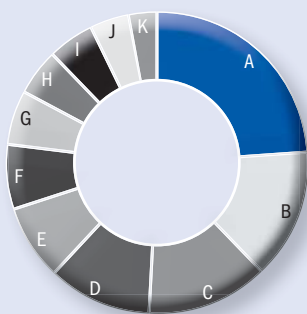
Bert Dexters, Business Development Manager, Intelligent Development Methods, Flanders Make, Belgium



Participant Structure

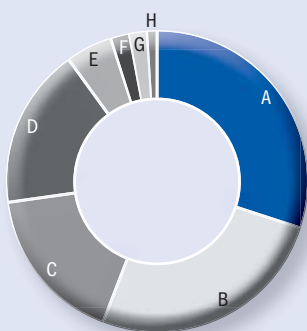
4th CTI Symposium China (2015)

by sector



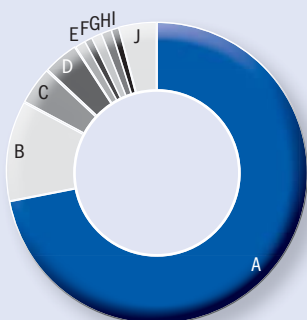
A Automotive Suppliers (without Transmission Manufacturers)	24%
B Transmission Manufacturers	14%
C OEMs	13%
D Metal Processing	11%
E Engineering/Development Service Provider	8%
F Electric/Electronics	7%
G Mineral Oil & Chemical Industry	6%
H Mechanical Engineering	5%
I Press	5%
J Plastic Industry	4%
K Others	3%

by function



A Marketing & Sales	30%
B R&D/Transmission Dev./Powertrain	26%
C Engineering/Design	17%
D General Management	17%
E Press	5%
F Business Development	2%
G Others	2%
H Project Management	1%

by country



A China	72%
B Germany	11%
C USA	4%
D South Korea	4%
E Austria	1%
F Japan	1%
G India	1%
H Great Britain	1%
I Belgium	1%
J Others	4%

Main event: 23 September 2016

MORNING SESSION

Plenary Speeches

8.00 Reception and opening of the Transmission Expo

8.30 – 8.45

Opening of the day by the Chairman of the CTI Symposium



Prof. Dr Ferit Küçükay

8.45 – 9.05

Audi quattro with ultra technology: the new innovative drive system



Audi
Vorsprung durch Technik



Michael Schöffmann, Head of Transmission Development, Audi AG, Germany

9.05 – 9.25

Transmission market and life-cycle evolution



FCA
FIAT CHRYSLER AUTOMOBILES

Peter Hartman, Head of FCA APAC Powertrain, FCA Powertrain Technologies R&D Shanghai Co., Ltd., China

9.25 – 9.45

Continuous effort to supply optimal transmission for China



Jatco

Tomoyoshi Sato, Senior Vice President, Jatco Ltd., Japan

9.45 – 10.05

“Running the Red Light” and “差不多(cha bu duo)” – cultural obstacles when doing business in China



Dr Rolf Gall, Head of R&D, Asia Pacific; Head of Engineering Center, ZF (China) Investment Co., Ltd, China

10.05 – 10.20 Q & A

10.20 – 11.05 Coffee break and visit to the Transmission Expo

NEV Transmission and Drivetrain Concepts

11.05 – 11.30

Transmission and powertrain of BMW PHEV vehicles in the Chinese market

Dr Jian Yu, Manager Drivetrain, Powertrain Dept. R&D, BMW Brilliance Automotive Ltd., China

11.30 – 11.35 Short break and change between sessions

11.35 – 12.00

GKNs new high-performance eAxle for the Volvo XC90 T8

Christian Gasch, Engineering Manager AWD & eDrive Systems, GKN Driveline, China

12.00 – 12.05 Short break and change between sessions

12.05 – 12.30

Dedicated to new energy vehicles (NEV): PHEV product modularity from ZF

Dr Ralf Kubalczyk, Director Product Line Hybrid Transmission, ZF Friedrichshafen AG, Germany

12.30 – 2.00 Lunch and visit to the Transmission Expo

1.30 – 2.00 (during lunch break)

A hybrid pulley-CVT as a carrier for wide range electrification levels

Yu Yang, Business Development Partner, Punch Powertrain, Belgium

Solution Forum

2.00 – 2.25

PHEV transmission solution for China's local OEMs

Jean-Jacques Felder, Sales Manager, PUNCH Powerglide, France

2.25 – 2.30 Short break and change between session

2.30 – 2.55

Geely transmission research and development

Dr Yong Chen, Professor, Hebei University of Technology and Senior Chief Engineer, Geely Powertrain Research Institute, China

NEV Transmission and Drivetrain Components

11.05 – 11.30

Multicore microcontrollers for advanced transmission control unit

Henry Zhang, Marketing Manager, Infineon Technologies China Co., Ltd., China

11.30 – 11.35 Short break and change between sessions

11.35 – 12.00

Transmission technology for the fuel consumption regulations

Xiaojuan Wang, Senior Manager, Brilliance Auto R&D Center (BARC), Shenyang, China

12.00 – 12.05 Short break and change between sessions

12.05 – 12.30

The hydraulic system design and development for hybrid transmission

Aiker Gao, Staff Engineer, Shanghai E-propulsion Auto Tech Co., China

2.00 – 2.25

MTplus – fuel saving through automatic sailing with manual transmissions

Junfeng Huang, Senior Manager Project Management, BU Clutch Systems, Schaeffler Automotive Great China, China

2.25 – 2.30 Short break and change between session

2.30 – 2.55

Stop/start accumulator controls and integration

Jeff Waterstredt, Senior Engineering Manager, BorgWarner Transmission Systems, USA

2.55 – 3.40 Coffee break and visit to the Transmission Expo

3.40 – 4.05

48 volt technology – more than a mild hybrid

Mario Koch, Head of R&D for BU HEV - Asia,, Continental Automotive Holding Co., Ltd., China

4.05 – 4.10 Short break and change between sessions

4.10 – 4.35

12+12V and 12+48V architectures & functions: a modular approach

Xuefei Zhang, R&D Manager of Asia System Engineering, Valeo Powertrain Business Group, China

4.35 – 4.40 Short break and change between sessions

4.40 – 5.05

Modular multi-speed transmission for MD-EVs

Dr Yueyue Deng, Engineering Specialist, Eaton Corporation, China

3.40 – 4.05

GKNs innovative 2nd generation eAxle for the new plug-in-hybrid BMW 225xe

Dr Andreas Mair, Senior Product Technology eDrive, GKN Driveline Bruneck, Italy

4.05 – 4.10 Short break and change between sessions

4.10 – 4.35

Benchmark modeling of in-wheel electric motors to improve the efficiency of battery electric vehicles

Gary Zhong, Applications Manager, Protean Electric, China

4.35 – 4.40 Short break and change between sessions

4.40 – 5.05

JSeries-parallel hybrid drive system and 2-speed transmission using electromagnetic dog clutches

Ping Yu, Chairman, CEO and Chief Powertrain Engineer, Jing-Jin Electric Technologies (Beijing) Co., Ltd., China

Transmission and Drivetrain Market, Development Requirements

11.05 – 11.30

China automotive fuel economy standards and the contribution from advanced transmission

Dr Haiyang Gao, Deputy Senior Engineer, Engineering Institute, China Automotive Technology and Research Center, China

11.30 – 11.35 Short break and change between sessions

11.35 – 12.00

New vision – China transmission market prospect

Wei Wang, Senior Analyst Greater China, Light Vehicle Powertrain Forecasts, IHS Automotive, China

12.00 – 12.05 Short break and change between sessions

12.05 – 12.30

The Chinese powertrain market: challenges and opportunities

Dr Thomas Holdstock, Powertrain Integration Engineer, SAIC Motor UK Technical Centre Ltd., UK

12.30 – 2.00 Lunch and visit to the Transmission Expo

1.30 – 2.00 (during lunch break)

Powertrain NVH performance improvement with polymer gears

Jürgen Reinert, Sales Team Leader, Victrex Europa GmbH, Germany

Solution Forum

2.00 – 2.25

The parameters selection of a plug-in hybrid car with double clutches

Yuan Liang, Senior Engineer, DongFeng Motor Company, China

2.25 – 2.30 Short break and change between session

2.30 – 2.55

Modular and scalable approaches in layshaft transmission design

Dr Carsten Bänder, Senior Manager Product Engineering, GETRAG Getriebe- und Zahnradfabrik Hermann Hagenmeyer GmbH & Cie KG, Magna Powertrain, Germany

2.55 – 3.40 Coffee break and visit to the Transmission Expo

Transmission and Drivetrain NVH

3.40 – 4.05

Innovative PM gear technology for transmission and drivetrain systems

Dr Gerd Kotthoff, Director Advanced Gear Technology, and **Dr Andreas Zeller**, RPPC Director Large & Forge EU, both GKN Sinter Metals Engineering GmbH, Germany

4.05 – 4.10 Short break and change between sessions

4.10 – 4.35

Electro-mechanical system design and integration of EV drivelines

Dr Kathryn Taylor, R&D Project Engineer, Romax Technology Ltd., UK

4.35 – 4.40 Short break and change between sessions

4.40 – 5.05

EV transmission lessons learnt

Alex Tylee-Birdsall, Director, Drive System Design Ltd., UK

Commercial Vehicle Transmission and Drivetrain

11.05 – 11.30

Light commercial vehicle applications – a new feature of ZF's modular 8-speed automatic transmission kit

Martin Vogel, Program Manager, ZF Friedrichshafen AG, Germany

11.30 – 11.35 Short break and change between sessions

11.35 – 12.00

Development of power shift transmissions for future commercial vehicles

Erik Schneider, Department Manager, IAV GmbH, Germany

12.00 – 12.05 Short break and change between sessions

12.05 – 12.30

High speed rotating transmission

Jürgen Tochtermann, Lead Engineer Transmission Design, AVL Commercial Driveline & Tractor Engineering, Austria

Transmission Actuators, Materials, Fluids, Oil Supply

2.00 – 2.25

DC270: on demand clutch cooling and lubrication system

Saboor Mughal, Technical Specialist, P/T Control and Electronics, Changan UK R&D Ltd., UK

2.25 – 2.30 Short break and change between session

2.30 – 2.55

Low friction polymeric solutions for passenger car transmissions

Qi Liu, Parts Design & Technology Representative, DuPont Kabushiki Kaisha, Japan

3.40 – 4.05

Modular electric oil pumps

Christa Tang, Head of R&D, FTE Automotive (Taicang) Co., Ltd., China

4.05 – 4.10 Short break and change between sessions

4.10 – 4.35

The lubricant influence on gearbox churning losses

Dr Chris Cao, Project Leader, Transmission Lubricants, Shell (Shanghai) Technology Ltd., China

4.35 – 4.40 Short break and change between sessions

4.40 – 5.05

Tailor-made high performance long life wet-dual clutch transmission fluids for the Chinese market

Haitao Tong, Driveline Product Development Manager, BP Castrol China Technology Center, China

Your CTI Contacts



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Organisation

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GETRAG Asia Pacific Transmission Technology (Shanghai) Co., Ltd. | www.getrag.com

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Zhejiang Defuli Automobile Transmission Co., Ltd. | www.dfl-kr.com



Diehl SynchroTec (Wuxi), wholly invested by Diehl Group, was established in Wuxi, China in 2003. Diehl started manufacturing synchronizer rings from 1956. Diehl is the global market leader in the production of 100 million high-performance synchronizer rings per year and has been a successful partner to the international automotive industry for more than 60 years. Furthermore, production sites in Germany, Brazil, China and India ensure supply to the markets worldwide. Diehl SynchroTec (Wuxi) has various advantages in Quality, R&D and Cost, which strengthens its role as a reliable and professional supplier of synchronizer rings.

Diehl SynchroTec Manufacturing (Wuxi) Co., Ltd. | www.diehl.com/metall



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Great Taiwan Gear | www.taiwangear.com



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JATCO Ltd. | www.jatco.co.jp/ENGLISH/



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KOKI TECHNIK Transmission Systems GmbH | www.kokitransmission.com



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Linamar Manufacturing Group – Asia | www.linamar.com



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Yangzhou MIASA KAIXIANG Automotive Parts & Components Manufacturing Co., Ltd is jointed invested by MIASA(Spanish Company) and Kaixiang(Chinese Company), Both of the investor are the leading company worldwide in the development and manufacturing of transmission case, shift forks, its assembling and related parts for automotive gearboxes, supplying to different automotive OEMs worldwide like BENZ PORSCHE BMW VW FORD GM VOLVO NISSAN REYNOLDS Land Rover JAGUAR P-SA Peugeot Citroen Dodge Jeep Chrysler Opel Cadillac GMC Chevrolet Magna Power train...etc

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