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# 中国亚琛年会

■ AACHEN COLLOQUIUM CHINA

DIGITAL EVENT

Univ.-Prof. Dr.-Ing. Lutz **Eckstein**  
**ika** - Institute for Automotive Engineering

Univ.-Prof. Dr.-Ing. Stefan **Pischinger**  
**VKA** - Institute for Combustion Engines

**November, 12th - 13th, 2020**  
2020年11月12日-13日

## Agenda / Program 会议活动安排



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Zoom Room I

10:00 **Opening Speech**  
开幕致词  
Univ.-Prof. Dr.-Ing. Lutz Eckstein – Head of ika, RWTH Aachen University  
Univ.-Prof. Dr.-Ing. Stefan Pischinger – Head of VKA, RWTH Aachen University

Time 时间 **Electric Motor & Hybrid Transmission 电动及混动变速箱**  
Session Chair: Zhang Wen Hui – FEV STS China

10:30 **High Power and Torque Density for 800 V Electric Motors – Challenges and Opportunities**  
高功扭密度的800V电机-挑战和机遇  
Michele Zoppello – Marelli (China) Co., Ltd.

11:00 **Development and Test of a MAGSPLIT Dedicated Hybrid Transmission and Controller for a C-Segment Vehicle**  
应用于C级轿车的混动专用变速箱和控制器的研发和试验  
Stuart Calverley – Magnomatics Ltd.

11:30 **Cost Optimization of E-Drives for Traction Applications**  
应用于牵引的电机电成本优化  
Konrad Herold – FEV Europe GmbH

12:00 Lunch 午餐

Time 时间 **Plenary Session 主旨演讲**  
Univ.-Prof. Dr.-Ing. Lutz Eckstein – ika, RWTH Aachen University  
Univ.-Prof. Dr.-Ing. Stefan Pischinger – VKA, RWTH Aachen University

12:45 **Powertrain Electrification Transition Tendency**  
动力总成电气化转型趋势  
**Wang Ruiping**  
Vice President  
GEELY Auto Group

13:05 **Mobility Requires LiDAR and LiDAR Benefits from Self-Organisation**  
出行需要激光雷达、激光雷达从自组织中获益  
**Ulrich Lages**  
Chief Executive Officer  
IBEO Automotive Systems GmbH

13:25 **Discussion**  
专家讨论

13:45 Coffee Break 茶歇

Zoom Room II

Time 时间 **UNICARagil – Architecture for Driverless Vehicles UNICARagil - 无人驾驶车辆架构**  
Session Chair: Univ.-Prof. Dr.-Ing. Lutz Eckstein – ika, RWTH Aachen University

10:30 **UNICARagil – Where we are and where we go to**  
UNICARagil - 项目研发现状和目标  
Timo Woopen – ika, RWTH Aachen University

11:00 **UNICARagil Dynamics Module**  
UNICARagil动态模型  
Timm Martens – ika, RWTH Aachen University

11:30 **The Dynamic Service-oriented Software Architecture for the UNICARagil Project**  
UNICARagil项目基于服务的动态软件架构  
Armin Mokhtarian – Informatik 11, RWTH Aachen University

12:00 Lunch 午餐



**Wang Ruiping**

Vice-President

副总裁

GEELY Auto Group



Ms. Ruiping Wang studied Internal Combustion Engines at the Xi'an Jiaotong University, which she completed with a Bachelor's Degree. Later on she achieved her Master's at the Concordia University with her thesis on Research of Isolation of Engine Vibration. Her professional career led Ms. Wang to work at Nissan Motor China as Senior Manager of the R&D Center as well as General Manager of Powertrain Division at Great Wall Motor Company Ltd. before joining Geely. Since 2012 Ms. Ruiping Wang is Vice-President of Zhejiang Geely Auto Group, China in charge of powertrain R&D and manufacturing of Zhejiang Geely Group. She has built the Geely Powertrain R&D center, led the team to develop series of powertrain products in international cooperation, while building manufacturing plants to achieve mass production.

王瑞平女士，本科就读于西安交通大学内燃机专业。研究生就读于加拿大康考迪亚大学，研究发动机隔振。加入吉利汽车之前，王瑞平女士先后在日产汽车（中国）担任研发中心高级经理，长城汽车股份有限公司动力总成部门任总经理。自2012年起，王瑞平女士担任浙江吉利汽车集团（中国）副总裁，管理动力总成研发和生产业务。她建立吉利动力总成研发中心，带领团队通过国际化合作，开发了一系列动力总成产品，并通过建立生产工厂实现量产。

**Dr. Ulrich Lages**

Chief Executive Officer

首席执行官

IBEO Automotive Systems GmbH



Dr. Ulrich Lages studied Mechanical Engineering at the Helmut Schmidt University in Hamburg. Additionally, he achieved a Bachelor of Business Administration at the GSBA Zürich and an MBA at the University of Maryland, USA. Dr. Lages is the CEO and shareholder of Ibeo Automotive Systems GmbH, which he founded as part of his doctorate in 1998. Ibeo established itself as the worldwide technology leader for LiDAR-Sensors (Acronym for Light Detection and Ranging) as well as associated products and software tools. The technology is used in driver assistance systems in the automotive industry and in autonomous driving. Over 400 employees work at the three sites in Hamburg (Germany), Detroit (USA) and Eindhoven (The Netherlands).

Ulrich Lages博士就读于德国汉堡联邦国防军大学机械工程专业。并拥有苏黎世大学工商管理学院工商管理学士学位，和美国马里兰大学MBA学位。Lages博士于1998年博士在读期间创立Ibeo Automotive Systems GmbH，是该公司的总经理及股东。Ibeo在光学雷达LiDAR（英文Light Detection and Ranging缩写）传感器及其相关产品、软件工具技术领域国际领先。该技术可应用于汽车行业驾驶辅助系统和自动驾驶。Ibeo全球有400多名员工，在德国汉堡、美国底特律和荷兰埃因霍温设有公司或办事处。

Zoom Room I

Time 时间 **High Efficiency Engines 高效发动机**  
Session Chair: Univ.-Prof. Dr.-Ing. Stefan Pischinger – VKA, RWTH Aachen University

- 14:00 **2.0L TGD I High-Efficiency Gasoline Engine**  
高热效率2.0升TGD I汽油机  
Weon Kew Hann – HYCET Technology Company Ltd.
- 14:30 **SWUMBLE 3-Cylinder High Efficiency Gasoline Engine for Future Electrified Powertrains**  
未来电气化传动系统的SWUMBLE三缸高效率汽油机  
Thomas Leroy – IFP Energies nouvelles
- 15:00 **Development of a High-Efficiency Lean-Gasoline Combustion Engine**  
高热效率稀薄燃烧汽油机的开发  
Arun Solomon – General Motors
- 15:30 **High Efficient Gasoline HEV Meeting 2030 CO<sub>2</sub> Targets – The Road towards 59 g/km Fleet CO<sub>2</sub>**  
混合动力汽车高热效率汽油机满足2030二氧化碳排放目标-59克/公里的技术路线  
Tolga Uhlmann – FEV Europe GmbH

16:00 Coffee Break 茶歇

Time 时间 **Dedicated Hybrid Engines 专用混动发动机**  
Session Chair: Dr.-Ing. Michael Wilhelm – FEV Group GmbH

- 16:15 **Geely Hybrid Engine: World Class Efficiency for Hybrid Vehicles**  
吉利混动发动机: 为混动汽车提供世界级效率  
Guiqiang Zhang – GEELY Powertrain Research Institute
- 16:45 **SYTECH Low Cost Range Extender Engine**  
SYTECH低成本增程器发动机  
Richard Tamba – SYTECH/ASFTA
- 17:15 **Dedicated Hybrid Engine – Natural Aspirated or Turbocharged?**  
专用混动发动机-自然送气或涡轮增压  
Andreas Balazs – FEV Europe GmbH

Zoom Room II

Time 时间 **Battery & Fuel Cell Technology 电池&燃料电池技术**  
Session Chair: Dr.-Ing. Cagri Cevik – FEV Europe GmbH

- 14:00 **An Efficient and Safe Way from Concept to Homologation – FEV Group's Approach for the Validation of Battery Systems**  
从概念到认证的一种高效安全方法-FEV电池系统认证方法  
Christoph Szasz – FEV eDLP GmbH
- 14:30 **A New Type of Powertrain Domain Control Concept**  
新型新能源汽车动力域控制方案  
Yongjie Han – Shenzhen VMAX New Energy Co., Ltd.
- 15:00 **Physical and Virtual Methods for the Development and Operation of Fuel Cell Systems and Components**  
燃料电池系统和零件开发的物理和虚拟方法  
Marius Zubel – FEV Europe GmbH
- 15:30 **Data-Driven Simulation of the Electric Battery Performance for Powertrain Testing**  
电池性能动力测试数据驱动型仿真  
Philipp Gesner – Mercedes-Benz AG

16:00 Coffee Break 茶歇

Time 时间 **Automotive Strategy Concepts I 汽车战略概念 I**  
Session Chair: Jens Kotte – fka GmbH

- 16:15 **New Rules of Play for Automotive Suppliers**  
汽车供应商竞争新规则: 技术战  
Johannes Berking – Oliver Wyman
- 16:45 **„Mobile Charging“ Service Innovation – Demand-Driven Flexible Charging Solutions for Customer-centered E-mobility**  
电动汽车“移动充电”服务创新: 以客户为中心, 以需求为导向的灵活充电解决方案  
Sven Gräbener – Consulting4Drive GmbH
- 17:15 **PCP 2025: Increasing Efficiency in Vehicle Development**  
PCP 2025: 提高整车开发效率  
Christian Foltz – PwC Strategy& (Germany) GmbH

Zoom Room I

- Time 时间 **48V Applications** 48V应用系统  
Session Chair: Rolf Dieter Weinowski – FEV Powertrain Co., Ltd.
- 10:30 **Autonomously Cooled eDrive and 48V P4 Application**  
自动冷却eDrive&48V P4应用系统  
Ye Jin – Valeo Powertrain (Shanghai) Co., Ltd.
- 11:00 **48V HiL Test Bench – Efficient Development of Low Voltage Power Supply Systems**  
48V HiL 测试台架-低压动力供应系统的效率开发  
Michael Engels – VKA, RWTH Aachen University
- 11:30 **48 Volt High Power – Much More than a Mild Hybrid**  
48V高压动力-远不止轻型混合动力  
Stefan Lauer – Vitesco Technologies Holding China Co., Ltd.

12:00 Lunch 午餐

- Time 时间 **Automated Driving** 自动驾驶  
Session Chair: Dr.-Ing. Adrian Zlocki – fka GmbH
- 12:45 **Test Case Derivation for Automated Vehicles Based on Relevance and Test Method Rating of Possible Scenarios**  
基于可能场景的相关度和测试方法等级的自动驾驶测试用例生成  
Andreas Pütz – Ford Werke GmbH
- 13:15 **LiDAR Testing – Test Methods and Applications**  
激光雷达测试-测试方法和应用  
Adrian Zlocki – fka GmbH
- 13:45 **Blockage Detection Algorithm for 79 GHz Automotive Radar**  
79GHz车用雷达障碍物探测算法  
Naiallen Carvalho – Valeo Autoklimatizace
- 14:15 **levelXdata – Highly Accurate Real World Scenario Data for Development and Validation of Automated Driving**  
levelXdata - 自动驾驶开发和验证的高精度真实世界场景数据  
Julian Bock – fka GmbH

14:45 Coffee Break 茶歇

Zoom Room II

- Time 时间 **Emission Concepts** 排放概念  
Session Chair: Dr.-Ing. Cagri Cevik – FEV Europe GmbH
- 10:30 **Unlimited Clean Mobility – Emissionmanagement for EU 7 and China 7 Powertrain Concepts**  
无限清洁驱动: 欧7和国7排放管理动力总成概念  
Rolf Brück – Vitesco Technologies Emitec GmbH
- 11:00 **Zero Impact Emission vs. Affordability – The ICE as Part of the Solution**  
零排放影响vs可行性-发动机作为方案的一部分  
Christian Martin – AVL
- 11:30 **Next Generation Gasoline Particulate Filters for Uncoated Applications and Lowest Particulate Emissions**  
下一代无涂层和低微粒排放的GPF应用  
Dominik Rose – Corning GmbH

12:00 Lunch 午餐

- Time 时间 **Engine Technologies** 发动机技术  
Session Chair: Univ.-Prof. Dr.-Ing. Stefan Pischinger – VKA, RWTH Aachen University
- 12:45 **Dual-Fuel RCCI Diesel-Gasoline Hybrid Truck Concept to Achieve the Future Emissions Targets**  
达到未来排放目标的双燃料RCCI汽柴油发动机卡车混动概念  
Olivier Poussin – AB VOLVO
- 13:15 **Passive MAHLE Jet Ignition System Demonstrator**  
马勒被动喷嘴点火系统示范  
Michael Bassett – MAHLE Powertrain Ltd.
- 13:45 **Water Injection and Hybridisation: Competing Technologies or a Perfect Match?**  
水喷射和混动: 竞争的技术或完美匹配?  
Joël Op de Beeck – Plastic Omnium
- 14:15 **Development of Dynamic Skip Fire Technology for Diesel Engines**  
柴油发动机动态跳跃点火技术开发  
Jackie Yuan – Tula Technology, Inc.

14:45 Coffee Break 茶歇

Zoom Room I

Time 时间 **Battery Electric Vehicles 纯电动汽车**  
Session Chair: Dr.-Ing. Ulrich Pfahl – FEV Asia GmbH

- 15:00 **A Cost-Focused 150 kW Integrated EV Powertrain**  
专注成本的150kW集成式EV动力总成  
Karel Vergote – Punch Powertrain N.V.
- 15:30 **The Next Generation in Driving Pleasure is on its Way**  
开启下一代驾驶乐趣  
Andreas Buchner – BMW Group
- 16:00 **Sokon SERES SF5 Battery Electric and REX Vehicle**  
金康赛力斯SF5电动和增程车  
Danghe Shi – Sokon Engineering Institute

16:30 **Final Remarks**  
结束语  
Univ.-Prof. Dr.-Ing. Lutz Eckstein – Head of ika, RWTH Aachen University  
Univ.-Prof. Dr.-Ing. Stefan Pischinger – Head of VKA, RWTH Aachen University

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**End of Conference 会议结束**  
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Zoom Room II

Time 时间 **Automotive Strategy Concepts II 汽车战略概念 II**  
Session Chair: Univ.-Prof. Dr.-Ing. Lutz Eckstein – ika, RWTH Aachen University

- 15:00 **Life Cycle Assessment as a Game Changing Challenge for Automotive Suppliers: Near-Term Portfolio Opportunities and Business Perspectives 2030+**  
生命周期评估是汽车供应商巨大挑战: 近期投资机会和业务展望2030+  
Alexander Busse – fka GmbH
- 15:30 **Fuel Cell – Alternative Strategies for Emission-Free Mobility**  
燃料电池-零排放出行的可选策略  
Christian-Simon Ernst – Roland Berger GmbH
- 16:00 **Benchmark Framework for Autonomous Shuttle Concepts for Future Urban Passenger Transportation**  
未来城市无人驾驶班车概念基准架构  
Mirko Engelhard – FEV Consulting GmbH

