THURSDAY, 15 May 2025, Morning

	FESTSAAL	ZEREMONIENSAAL	GALERIE
	PLENARY OPENING SESSION Chairman: B. **Geringer**, ÖVK	Plenary Opening Session at FESTSAAL Live Broadcast at GALERIE	LIVE BROADCAST of the Plenary Opening Session
08:30	**OFFICIAL OPENING**		
08:45	Markus **Heyn**, Member of the Board of Management Robert Bosch GmbH, Chairman Bosch Mobility, Robert Bosch GmbH, Stuttgart: **Asia's New Role in Automotive Industry: Regionalization and Technology Innovations**		
09:05	Matias **Giannini**, CEO, Horse Powertrain Limited, London: **Is There More than One Solution in the Drive Toward Net Zero?**		
09:25	Torsten **Eder**, Vice President Electrified Drive Systems, Mercedes-Benz Cars Development, Stuttgart: **Redefining the Future of Drive Systems**		
09:45	Frederik **Zohm**, Executive Board Member for Research & Development / Chief Technology Officer, MAN Truck & Bus SE, Munich: **From the Inventor of Diesel to the Pioneer of Zero Emissions**		
10:05	**Discussion of the lectures in this session**		
10:35	**Coffee Break**		

	HYBRID POWERTRAINS 1 Chairman: U. **Grebe**, Vienna University of Technology	COMMERCIAL VEHICLE DRIVE CONCEPTS Chairman: S. **Pischinger**, RWTH Aachen University	STRATEGIES FOR SUSTAINABILITY Chairman: C. **Beidl**, Technical University of Darmstadt
11:15	**Modular Gasoline Engine MGE: Combined Competence for Worldwide Success – A Cooperation Engine by Mercedes-Benz and Aurobay** O. **Vollrath**, Mercedes-Benz AG, Stuttgart; I. **Scholten**, Aurobay Technologies, a division of Horse Powertrain, Ningbo, China	**Practical Usability of Emission Free Heavy Duty Powertrains** K. **Beres**, Akkodis, Fellbach; O. **Hrazdera**, Akkodis, Linz	**Energy Transition in Transportation: Clean Power Comes Out of the Grid at Any Time and as Much as We Need – Right?** W. **Tillmetz**, Ulm University
11:45	**Hybrid Powertrains, a Pragmatic Approach to Decarbonize Heavy-Duty Mobility** S. **Sagener**, Cummins Ltd., Darlington	**Pathways Towards Low CO_2 and NO_X Emissions – Demonstration of a Heavy-Duty Hybrid Powertrain** C. **Bitsis**, Southwest Research Institute, San Antonio, USA	**Limits of a One-Dimensional Technology Strategy – The Influence of the Electrical Energy System on Electromobility** T. **Koch**, KIT, Karlsruhe
12:15	**Volkswagen Plug-In Hybrid with Electric Rear Axle** D. **Procházka**, Volkswagen AG, Wolfsburg	**Truck to Zero: Strategic Rollout and Heavy Electric Trucks in 24/7 Operational Use. Accelerators and Challenges for the Industrial Transformation** E. **Christ**, MOSOLF SE & Co. KG, Kirchheim unter Teck	**Pathways to the Decarbonization of Oceangoing Vessels – From Hydrogen Engines to On-Board Carbon Capture Concepts** A. **Wimmer**, Institute of Thermodynamics and Sustainable Propulsion Systems (ITnA), Graz University of Technology
12:45	**Lunch at Hofburg Conference Centre**		

THURSDAY, 15 May 2025, Afternoon

	ELECTRIC DRIVES Chairman: B. **Geringer**, ÖVK	COMMERCIAL VEHICLE-H_2 ENGINE 1 Chairman: H. **Eichlseder**, Graz University of Technology	NEW POWERSPORTS-DRIVES & NON FOSSIL FUEL APPLICATIONS Chairman: W. **Böhme**, ÖVK
14:30	**Mercedes-Benz Modular Architecture (MMA): Next Generation BEV by Mercedes-Benz** N. **Merdes**, Mercedes-Benz AG, Stuttgart	**Is 30 Bar Mean Effective Pressure the Limit for Spark Ignited Commercial Hydrogen Engines?** L. **Virnich**, FEV, Aachen	**Sustainable Powertrain Development for Powersports Applications** S. **Meyer-Salfeld**, BRP-Rotax GmbH & Co KG, Gunskirchen
15:00	**Highly Efficient Dual-Rotor Electric Drives: Setting New Standards in Performance and Cost Efficiency** A. **Rosen**, S. **Ender**, DeepDrive GmbH, Garching / Munich	**Cummins 6.7L Direct Injection, Lean Burn Hydrogen Engine for Medium- and Heavy-Duty Commercial Vehicles** L. **Liu**, Cummins Ltd, Beijing, China	**Innovative Motorsport-Powertrains for Sustainable Fuels** P. **Schöggl**, AVL List GmbH, Graz
15:30	**More Range and Efficiency: The New MEB APP350 Drive from Volkswagen** H. **Wöhl-Bruhn**, Volkswagen AG, Wolfsburg	**H_2ICE: An Additional Contribution to Defossilization** C. **Barba**, Daimler Truck AG, Stuttgart	**Use of Sustainable Aviation Fuels in a Compression-Ignition Piston Aircraft Engine** C. **Reitmayr**, F. **Kleissner**, Institute of Powertrain and Automotive Technology (IFA), Vienna University of Technology
16:00	**Battery Aging in Practice: Analysis of over 7,000 Vehicles Provide Deep Insights into Battery Life and Vehicle Residual Value** M. **Hackmann**, P3 Group, Stuttgart	**Developing Hydrogen Fueled SI-ICE for Heavy Duty Applications** J. **Ängeby**, SEM AB, Åmål	**Alternative Fuels: A Critical Part of the Automotive Decarbonization Pathway** G. **Dober**, PHINIA, Belval
16:30	**Coffee Break**		

	NEW ENGINE CONCEPTS Chairman: S. **Pischinger**, RWTH Aachen University	COMMERCIAL VEHICLE-H_2 ENGINE 2 AND STORAGE Chairman: A. **Kulzer**, University of Stuttgart	ELECTRIC AXLES Chairman: P. **Hofmann**, Vienna University of Technology
17:00	**The New MAN D3872 V12 Engine with a 30-Liter Displacement Balancing Sustainability, Cost-Effectiveness and Customer Benefits** S. **Löser**, MAN Truck & Bus SE, Nuremberg	**A 17L LPDI H_2 ICE Concept for the Very Heavy Applications by Volvo Group – Update** J. **Wärnberg**, Volvo Group Trucks Technology, Powertrain Strategic Development, Gothenburg	**Key Components for Performance and Efficiency in the Electrified Drivetrain** C. **Hagauer**, Miba Frictec GmbH, Roitham am Traunfall; R. **Hellein**, Miba Sinter Austria GmbH, Vorchdorf
17:30	**Contributing to the Environment with Internal Combustion Engines Towards Carbon Neutrality – Research on Pursuing the Potential for Negative CO_2 and Exhaust Gas Emissions** T. **Yamamoto**, Mazda Motor Corporation, Hiroshima, Japan	**Commercial Hydrogen Engine with HPDI: Roadmap to High Efficiency, Zero CO_2 and Zero Pollutants** A. **Arnberger**, AVL List GmbH, Graz	**Portfolio in Motion – New Schaeffler Electric Axle Drives** C. **Dassler**, Schaeffler Technologies AG & Co. KG, Herzogenaurach
18:00	**A Cost-Effective Combination of Modern Combustion Engines and Catalyst Designs for Worldwide Applications** H. **Björnsson**, Aurobay, Gothenburg; R. **Brück**, Emitec Technologies GmbH, Lohmar	**Liquid Hydrogen as Attractive Energy Storage Solution for Railway Applications** P. **Loidolt**, SAG - Salzburger Aluminium Gruppe, Lend	**On the Opportunities and Challenges of High-Speed Electric Powertrain and Garrett's Differentiated Technology** A. **Bouaita**, Garrett Advancing Motion, Switzerland
18:30	**End of Programme**		
20:00	**Transfer to evening event**		
20:30	**Evening at "Wine Heuriger" at the invitation of the Mayor of Vienna. Please bring your invitation to the event.**		

FRIDAY, 16 May 2025, Morning

	PASSENGER CAR ENGINE CONCEPTS Chairman: C. **Beidl**, Technical University of Darmstadt	HYDROGEN COMBUSTION SYSTEMS Chairman: H. **Eichlseder**, Graz University of Technology	BEV – THERMAL MANAGEMENT Chairman: P. **Hofmann**, Vienna University of Technology
08:00	**A "Deep Dive" into EU Fleet Regulation – Is the Regulation Fit for Purpose?** D. **Bothe**, Frontier Economics Ltd., Cologne	**Emission Concept and Calibration for a Lean Burn Hydrogen Engine Hybrid Powertrain in a Passenger Car Application** S. **Hoffmann**, Hyundai Motor Europe Technical Center GmbH, Rüsselsheim; E. **Schünemann**, Robert Bosch GmbH, Stuttgart	**Efficient Thermal Management – Key Technology for Cost-Optimized Electric Vehicles** U. C. **Blessing**, MAHLE Thermal and Fluid Systems, Stuttgart
08:30	**Pass-Car Propulsion Options in EU for 2035 Considering LCA Scenarios** N. **Alt**, FEV, Aachen	**Innovative H_2-DI Injector with Cycle-Specific Injection Patterns for Next-Generation Light Aircraft Propulsion** C. **Reitmayr**, Institute of Powertrain and Automotive Technology (IFA), Vienna University of Technology; O. **Weber**, Schaeffler Technologies AG & Co. KG, Herzogenaurach	**Holistic Approach for Thermal Energy Management of Battery Electric Vehicles** H. **Chakida**, DENSO CORPORATION, Kariya, Japan; M. **Biglia**, DENSO THERMAL SYSTEMS Spa, Poirino **Compact Double-Sided Cooling for High-Current-Density 800V SiC Power Module from BorgWarner** M. **Strassburg**, BorgWarner, Nuremberg
09:00	**BEV2REEV – A Scalable Powertrain Platform Concept** A. **Fandakov**, IAV GmbH, Berlin	**Understanding Lubricant Induced Pre-Ignition in Hydrogen Internal Combustion Engines** M. **Wieser**, AVL List GmbH, Graz	
09:30	**Coffee Break**		

	BATTERY & CHARGING MANAGEMENT Chairman: G. **Brasseur**, Graz University of Technology	COMMERCIAL VEHICLE FUEL CELL Chairman: A. **Kulzer**, University of Stuttgart	NONFOSSIL FUELS – EVALUATION Chairman: W. **Böhme**, ÖVK
10:00	**Charging Solutions for Battery Electric Trucks and Buses** D. **Liebig**, Shell Global Solutions (Germany) GmbH, Hamburg	**Holistic Optimization of Heavy Duty Trucks with Fuel Cell Hybrid Powertrains** T. **Stoll**, FKFS, Stuttgart	**Energy Storage Assessment Towards Lowest Life Cycle CO_2 Footprint** T. **Campenon**, OPmobility, Paris
10:30	**Advancing Dynamic Wireless Power Transfer: System Development and Infrastructure Optimization** S. **Yatsuzuka**, DENSO CORPORATION, Kariya, Japan; Y. **Honma**, Institute of Industrial Science, The University of Tokyo, Japan	**Fuel Cell Powered Commercial Vehicles – Solutions of the Next Generation Vehicles** R. **Döbereiner**, AVL List GmbH, Graz	**Hydrogen, Methanol or Ammonia, an Evaluation from Production to Energy Conversion** M. **Sens**, IAV GmbH, Berlin
11:00	**How Supreme BMS Compute Power Can Leverage End-User Experience and xEV Market Success – Presentation of Future Potential for Fast-Charging Applications Through Real-Time-Capable Implementation of Electro-Chemical Battery Models** C. **Weber**, Infineon Technologies AG, Neubiberg; M. **Göhring**, Mercedes-Benz AG, Stuttgart	**The Next Generation of Fuel Cell Drives: Breakthrough in Efficiency and Performance for Heavy-Duty Long-Haul Transport** J. **Blum**, cellcentric GmbH & Co. KG, Kirchheim unter Teck	**Methanol Economy Towards Carbon Neutrality** Y. **Shen**, Zhejiang Geely Holding Group Co., Ltd, Hangzhou, China
11:30	**TP Safety and Aging: Solutions for the Key Challenges of Today's Batteries from Design, Simulation and Testing** M. **Stapelbroek**, FEV, Aachen	**Fuel Cell Vehicle for Mining and Construction Environment** C. **Zinner**, HyCentA Research GmbH, Graz	**Unlocking the Potential of eFuels – Market Volumes & Success Factors in Existing Fleets** L. **Mauler**, Porsche Consulting GmbH, Frankfurt
12:00	**Lunch at Hofburg Conference Centre**		

FRIDAY, 16 May 2025, Afternoon

	HYBRID POWRTRAINS 2 Chairman: B. **Geringer**, ÖVK	LDV-H_2 ENGINE Chairman: U. **Grebe**, Vienna University of Technology	SOFTWARE (SDV) AND E-COMPONENTS Chairman: L. **Eckstein**, RWTH Aachen University
13:30	**The Hybridization of the Iconic Porsche 911** T. **Brandl**, Dr. Ing. h.c. F. Porsche AG, Weissach	**H_2 Engine Hybrid Powertrain – Attractive Solution for Future Light Commercial Vehicles** J. N. **Geiler**, Robert Bosch GmbH, Stuttgart; K. M. **Springer**, Ford-Werke GmbH, Cologne	**xONEsolutions: Redefining EV Powertrains with Future-Ready Architectures and Technologies for Maximum Cost Savings** K. **Wawra**, D. **Wollschläger**, hofer powertrain, Vienna
14:00	**The New Porsche 911 GTS T-Hybrid Six-Cylinder Boxer Engine** A. **Weyland**, Dr. Ing. h.c. F. Porsche AG, Weissach	**Development of Hydrogen Direct Injection System as Retrofit Solution for Diesel-Based Light Commercial Vehicles** F. C. **Pesce**, Dumarey Automotive Italia SpA, Torino	**4SDV: A Holistic Approach to Safety and Security in Software-Defined Vehicles** H. **Karaçali**, TTTech Auto, Izmir, Türkiye
14:30	**Lamborghini's New L411, Development of a Biturbo V8 Hybrid to Generate Pure NA Feeling** D. **Bizzarri**, Automobili Lamborghini S.p.A., Sant'Agata Bolognese	**Optimizing Emission Control System for a H_2-ICE Powertrain Concept for a Light-Commercial Vehicle to Meet Stringent Euro 7 Standards** C. **Chaillou**, Aramco Europe, Rueil-Malmaison	**Building a Scalable Software Platform for Electric Drive Systems** S. **Fischer**, CARIAD, Mönsheim; S. **Gruner**, CARIAD, Wolfsburg
15:00	**Coffee Break**		

PLENARY CLOSING SESSION

Chairman: H. **Eichlseder**,
Graz University of Technology

15:30	Todd **Anderson**, VP and Chief Technology Officer, PHINIA Inc., Auburn Hills, USA: **Sustainable Future Fuels - PHINIA's Strategy to Support Automotive Decarbonization**	Plenary Closing Session at FESTSAAL Live Broadcast at GALERIE	LIVE BROADCAST of the Plenary Closing Session
15:50	Holger **Klein**, Chief Executive Officer, ZF Group, Friedrichshafen: **Innovation as the Engine of Transformation: Toward a Zero Emission Future**		
16:10	Daniel Donghui **Li**, CEO and Legal Representative, Geely Holding Group, China: **Global Strategy of Geely for Automotive Products and Cooperations**		
16:30	Kai **Grünitz**, Member of the Board of Management of the Volkswagen Brand responsible for "Technical Development", Volkswagen AG, Wolfsburg: **Volkswagen in Transition – from "Käfer" to SDV**		
16:50	**Discussion of the lectures in this session**		
17:15	**CLOSING ADDRESS**		
17:30	**End of Programme**		
17:45	**Bus Transfer** from Heldenplatz (Hofburg Conference Centre) to Vienna Airport (Schwechat)		

Virtual Hall

Due to the large number of interesting and high-quality submissions, we are pleased to be able to present further videos in a virtual hall. These videos are only available to the participants online on the web platform during and after the Motor Symposium in addition to the lectures in three lecture halls in the Vienna Hofburg.

E-DRIVES & E-COMPONENTS

A Step Beyond Two, Next Generation Multi-Level Traction Inverter with Clean Wave Technology
H. **Nanjundaswamy**, BorgWarner, Auburn Hills, USA

Electric Motor Design for Circular Economy
S. **Mafrici**, Dumarey Automotive Italia SpA, Torino

Freudenberg Sealing Technologies – Thermal Barriers: A Range of Solutions to Ensure the Safety of Future Electric Vehicles
M. **Issoglio**, Freudenberg Sealing Technologies, Pinerolo

Active Reduction of Noise Emissions from Electric Drives
D. **Schubert**, MdynamiX AG, Munich

EMISSIONS & LEGISLATION

Optimizing Tire Wear Particle Emission Measurement: Insights from Outer Drum Testing with an Enclosed System
L. **Schubert**, Institute of Automotive Engineering (FTG), Graz University of Technology

New Methodological Approach for Determining Historical and Forecasting Future TTW Emissions from Country-Specific Vehicle Fleets
G. **Lischka**, Institute of Powertrain and Automotive Technology (IFA), Vienna University of Technology

Influence of Vehicle Mass on RDE Tailpipe Emissions from over 1000 Vehicles
N. **Molden**, Emissions Analytics, Oxford

ENERGY STORAGE

Optimal Configuration of a High-Pressure Hydrogen Tank
S. C. **Konradt**, Institute for Mobile Systems (IMS), Otto-von-Guericke University, Magdeburg

FC OPTIMIZATION

Advanced Radiator Design with Water Spray Injection to Enhance the Cooling Performance in FCEV
C. **Frühwirth**, Institute of Thermodynamics and Sustainable Propulsion Systems (ITnA), Graz University of Technology

Designing at the Limits – Specialized Vehicles with Fuel Cell Drive
B. **Lechner**, Virtual Vehicle Research GmbH, Graz

OPTIMIZATION ICE & HYBRID

Predictive Energy Management Strategy for Dominant-Electric Hybrid Electric Vehicles
S. **Metzler**, Mercedes-Benz AG, Stuttgart / Institute of Powertrain and Automotive Technology (IFA), Vienna University of Technology

Analysis of the Piston-Bore Interface with Regard to Friction, Combustion Anomalies and Oil Consumption on a Hydrogen Engine
P. **Grabner**, Institute of Thermodynamics and Sustainable Propulsion Systems (ITnA), Graz University of Technology
H. **Hick**, Institut für Maschinenelemente und Entwicklungsmethodik (IME), Technische Universität Graz