

AVL



PROGRAM

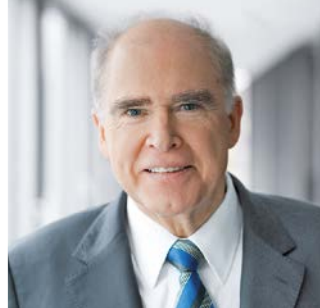
10th AVL INTERNATIONAL COMMERCIAL POWERTRAIN CONFERENCE

May 22nd – 23rd, 2019, Stadthalle Graz, Austria

Organized by AVL in cooperation with **SAE** *International*[™]



FOREWORD



We invite you to join us at the 10th AVL International Commercial Powertrain Conference – ICPC – a platform to discuss common challenges and opportunities of truck, agricultural and construction equipment OEMs, organized by AVL in cooperation with SAE International.

The conference will address the powertrain diversification the industry needs for meeting ever stringent environmental, legislative and economic targets in a fast-changing competitive environment.

The keynote session, with the roadmap to drive the future and the implications on logistics, environment, and economics sets the scene for the conference. Experts from the three powertrain industries will tell us what lies ahead in powertrain

development, what can still be achieved with combustion engines and transmissions to reduce CO₂, and what is the potential of vehicle and machine electrification to achieve zero emissions. Digitalization is the game changer, both on-road and off-road. The closing round table discussion will try to find answers if the commercial powertrain industry will continue with steady evolution or be threatened by disruption with severe implications on the companies' success, job security and the economy.

We are once again looking forward to an exciting event, an opportunity to meet and network with many representatives of the leading companies of the three powertrain industries including their strong supplier base. ICPC is known for interesting discussions both in the conference and the social events.

Dr. Marko Dekena
Executive Vice President
Off-Road Business Unit

Prof. Dr. h.c. Helmut List
Chairman and CEO

DI Rolf Dreisbach
Executive Vice President
On-Road Business Unit

GENERAL INFORMATION

Conference Venue:

Stadthalle, Messeplatz 1, A-8010 Graz

Conference Fee:

€ 1,590.– plus VAT, Students € 130.– plus VAT
Free of charge for members of the press
Fees include proceedings, two lunches and snacks, social evening events

Conference Language:

English (no simultaneous translation)

Proceedings:

The proceedings of the conference will be available for download after the conference.

Hotel Reservation:

Visit www.avl.com/icpc to book your accommodation.

Airrail:

By plane: Graz-Thalerhof, by train: Graz Main Station, by car: see map of Graz

Taxi:

Phone: +43 (316) 28 01

Phone: +43 (316) 878

Phone: +43 (316) 889

Visit to AVL Headquarters and

Welcome Reception:

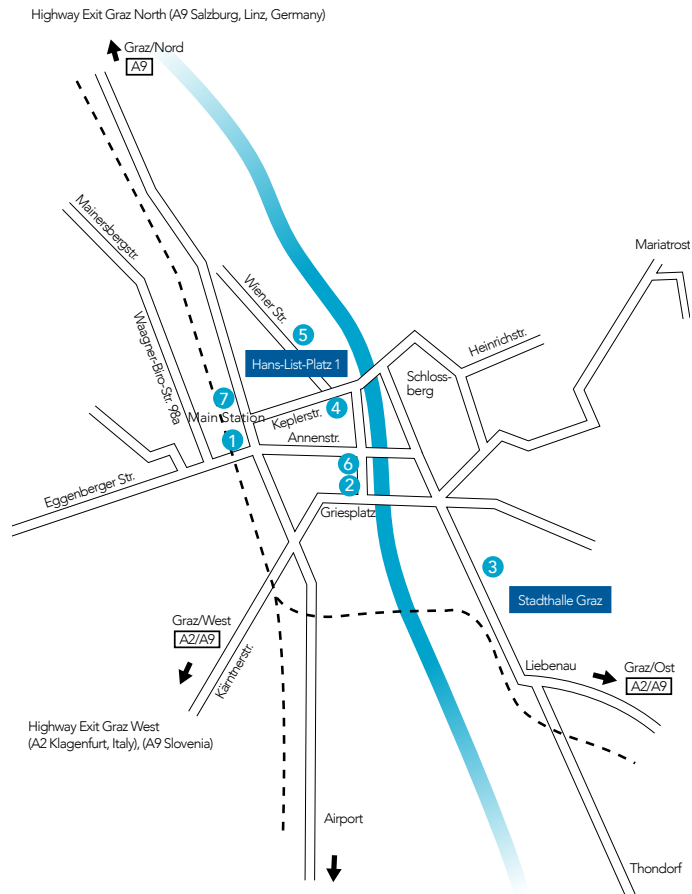
Tuesday, May 21st, 2019, 17:00 at AVL Headquarters – visit the AVL facilities during a guided tour. Afterwards the Welcome Reception will take place at the SKYBAR Graz. Shuttle bus service from AVL Headquarters to SKYBAR Graz and to conference hotels.

Social Evening:

Wednesday, May 22nd, 2019, 19:00
Enjoy a special experience at the hangar of Graz Airport.
Shuttle bus service will be available.

Hotel:

- ① Hotel Daniel
- ② Hotel Weitzer
- ③ Best Western Plus Amedia
- ④ Mercure Graz City
- ⑤ Lendhotel
- ⑥ Hotel Wiesler
- ⑦ Hotel Ibis



CONFERENCE PROGRAM – WEDNESDAY, MAY 22nd, 2019

Chair: Ulrich Walter	
09:00–09:15	Welcome and Introduction to the ICPC Dr. Marko Dekena, Executive Vice President, Off-Road Business Unit, AVL List GmbH

ON-ROAD AND OFF-ROAD INDUSTRY IN TURMOIL?	
09:15–10:00	Roadmap to Drive the Future – The Powertrain Diversification Matthias Horx, Founder of Germany's Think Tank for the Future, The Zukunftsinstitut
10:00–10:30	Technologies and Infrastructure Needed for Sustainable Logistics Prof. Dr. Helmut Zsifkovits, Chair of Industrial Logistics, University of Leoben
10:30–10:50	Break
10:50–11:20	What Is Needed to Ensure Efficient and Clean Road Transport? Dorothee Saar, Head of Transport and Air Quality, Deutsche Umwelthilfe e.V.
11:20–11:50	Economic Implications: Impact of E-Mobility on Supply Chain and Related Market Expectation Gerhard Stempfer, Manager Electrification, ZF Friedrichshafen AG
11:50–12:20	Panel Discussion
12:20–12:30	Official Opening of the Exhibition
12:30–14:00	Lunch Break including Possibility to Attend a Guided Tour through the Exhibition

Subject to change without notice.



INNOVATIVE ICE AND EAS SOLUTIONS Chair: Ulrich Walter		VEHICLE AND MACHINE ELECTRIFICATION Chair: Heimo Schreier, AVL List GmbH
14:00–14:30	Innovative EAS Technologies in Development for On-Road and Off-Road Applications Rolf Brück, Member of the Management Board, Continental Emitec GmbH	Profitable Zero-Emission Solutions for HD Trucks Dr. Michael Kordon, Skill Team Leader Falko Berg, Dr. Alexander Schenk, Martin Ackerl, William Resende, AVL List GmbH
14:30–15:00	Lowest CO₂ Emissions Despite Zero Impact NO_x Gernot Graf, Head of Development & Calibration Commercial Vehicle and Large Engine, AVL List GmbH	Commercial Vehicle Battery Solutions Richard Lively, Executive Director – Electrification Engineering, Cummins Inc.
15:00–15:30	The Future of Natural Gas Engines Pierpaolo Biffali, Head of Product Engineering, FPT Industrial	Tractor/Implement Systems – The Next Generation Dr.-Ing. Joachim Sobotzik, Electric Drive Engineering Services, John Deere European Technology Innovation Center, Craig Puetz, John Deere Global Tractor Engineering USA
15:30–16:00	Break	
16:00–16:30	Potentials for Friction Reduction with Commercial Vehicle Engines – Contribution of the Power Cell Unit Dr.-Ing. Andreas Pfeifer, Vice President Engine Systems and Components, Mahle GmbH, M.Sc. Tobias Funk, Dr.-Ing. Thomas Deuß, Dipl.-Ing. Holger Ehnis, Mahle International GmbH	MAN E-Mobility – The Holistic Approach Felix Kybart, Vice President Alternative Drives, MAN Truck & Bus AG
16:30–17:00	ICE Optimized for Off-Road Hybrid Powertrain Dr.-Ing. Markus Schwaderlapp, Senior Vice President Research and Development, Dr.-Ing. Paul Grzeschik, Deutz AG	The Smart eCVT Hybrid System for 2020+ Commercial Vehicle Application Dr. Zhiqiang Lin, Senior Director of New Energy Powertrain System, Song Zhang, Tao Chen, Zhengsong Mao, Guangxi Yuchai Machinery Co., LTD
17:00–17:30	Panel Discussion	Panel Discussion
17:30	End of Day 1 and Shuttle Transfer to the Hotels	
18:30	Shuttle Transfer from Hotel to AVL Social Evening at Graz Airport	
19:00	AVL Social Evening	

CONFERENCE PROGRAM – THURSDAY, MAY 23rd, 2019

CONTRIBUTIONS TO REDUCE CO₂ – ON-ROAD AND OFF-ROAD

Chair: Ulrich Walter

09:00–09:30	The Initiative of the AG Machinery Industry for CO₂ Emission Reduction Dr. Eberhard Nacke, Head of Product Strategy, Claas KGaAmbH
09:30–10:00	Long Haul Truck Powertrain Control for Low Emission and Fuel Consumption in Real Traffic Conditions Alois Danninger, Manager Engine Controls, AVL List GmbH
10:00–10:30	What's the Right Hybrid and Electric Vehicle Technology for Compact Construction Equipment? Simon Conway, New Technology Manager Advanced Engineering, Caterpillar UK
10:30–11:00	Panel discussion
11:00–11:30	Break



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the International Commercial
Powertrain Conference App





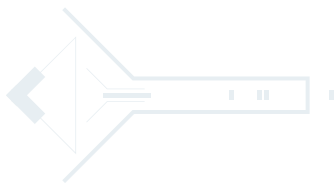
DIGITALIZATION – THE GAME CHANGER, ON-ROAD AND OFF-ROAD

11:30–12:00	Impacts of Digitalization on the AG Industry DI Dr. Markus Baldinger, Managing Director, Dr. Martin Follmer, Pöttinger Landtechnik GmbH
12:00–12:30	ADAS for Trucks – A Look into the Future Ozan Nalcioğlu, Alper Tekeli, Guvenc Barutcu, Berzah Ozan, Ford Otosan – Ford Otomotiv A.S.
12:30–13:00	Digital Twins – Prerequisites and Implications on CE Architectures and Platforms DI Dr. Thomas Fischinger, Digitalization Consultant, Wacker Neuson Beteiligungs GmbH
13:00–14:30	Lunch Break including Possibility to Attend a Guided Tour through the Exhibition

COMMERCIAL POWERTRAIN INDUSTRY: EVOLUTION OR DISRUPTION?

14:30–15:00	Powertrain Trends and Developments in the Commercial Vehicle Industry Dr. Carl Hergart, Director Powertrain and Advanced Engineering, Paccar Inc.
15:00–15:30	Value Creation in the Commercial Vehicle Industry Dr. Albert Neumann, Managing Director, Strategy Engineers
15:30–16:00	Round Table Discussion
16:00–16:10	Closing Remarks DI Rolf Dreisbach, Executive Vice President, On-Road Business Unit, AVL List GmbH
16:10	End of Conference

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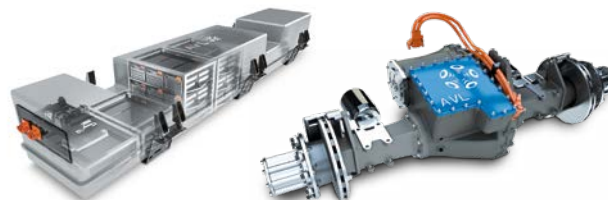


THE BEAUTY OF GRAZ

Since the Middle Ages, a town has been growing around the Schlossberg hill of which its inhabitants can be proud. In fact, it was the unique ensemble of architectural styles spanning from Gothic, Baroque, Renaissance, Art Nouveau to modernity that made UNESCO add Graz to its World Cultural Heritage list. Graz is also full of contrasts. This is particularly true of its cultural life. Contemporary art and architecture enrich the cultural scene as much as the classical culture: opera, theatre and festival of classical music. In 2003, Graz was an acclaimed Cultural Capital of Europe. The striking art centre “friendly alien” and the Island in the Mur were only two of the many great achievements of this year of celebration.

It is now official knowledge, what Graz people have known forever – Graz is a capital of culinary pleasures! The Styrian products and the region’s specialities, particularly the outstanding wines and the dark pumpkin seed oil, are the main carriers of this culinary identity. The Mediterranean ambience is all over: in picturesque beer gardens, on rustic farmers’ markets, in narrow alleys, on lively squares and in dreamy courtyards.

Photos:
© Graz Tourismus:
Harry Schiffer,
Markus Spenger,
Harry Schiffer



ABOUT AVL

AVL is the world's largest independent company for the development, simulation and testing of powertrain systems (hybrid, combustion engine, transmission, electric drive, batteries, fuel cell and control technology) for passenger cars, commercial vehicles, construction, large engines and their integration into the vehicle. The activities of the powertrain engineering division embrace all functions from concept definition all the way to production development. Supported by comprehensive in-house research, AVL's engineering specialists design and develop powertrains of all types and sizes for a world-wide clientele and carry out application-specific system integration to achieve optimum solutions.

The AVL-designed software tools represent state-of-the-art technology based on years of experience in engine and drivetrain development. These tools are not only used in-house, but also by leading engine and vehicle manufacturers across the world.

AVL provides its customers with instrumentation technology and test systems for the entire product development process right up to mass production. AVL's product range covers all test requirements for engines, drivetrains and vehicles. AVL is a manufacturer and system integrator of complete testbed systems, delivering technologically superior tools for specific tasks, which can be individually adapted to the needs of different groups of users.

Complementary skills and close interdisciplinary cooperation between its divisions are the key to AVL's unique problem solving potential. This is illustrated, for example, by the joint development of unique methodologies and software tools to assist the increasingly complex task of calibrating electronically controlled powertrains.



ABOUT AVL COMMERCIAL POWERTRAIN SYSTEMS

Two dedicated business units within AVL serve our commercial powertrain customers: On-road – light, medium and heavy-duty trucks and buses, and off-road – agricultural tractors and construction equipment.

AVL designs and develops the complete powertrain including:

- Low emission engines powered by Diesel or alternative fuels
- Hybrid or fully electric powertrains including electronic controls up to solutions for zero-emission driving
- All kinds of transmissions and axles to meet the requirements of the application, either on-road or off-road

AVL is strongly aware of and prepared for new challenges arising from future stringent emission and CO₂ reduction legislation for commercial on- and off-road vehicles.

AVL's focus lies on innovative and tailored solutions for all potential upcoming scenarios:

- For on-road trucks, up to zero-emission depending on the application requirements
- For the agricultural industry, AVL designs and develops complete vehicles and all the major components of agricultural tractors
- For construction equipment, cost effective solutions are needed





HELLER

HELLER solutions:
Knowing how it's done.

Sustained reliability meets next-generation technology

HELLER has established itself as a reliable partner to the automotive industry with the company's process expertise as much in demand as its know-how regarding innovative technologies. What is more, HELLER has expanded the process chain in crankcase manufacturing by CylinderBoreCoating (CBC) – a technology made by HELLER for the coating of the cylinder bores of crankcases using electric arc wire spraying.

HELLER manufacturing systems for powertrain, drive-line and chassis components ensure significantly reduced idle times – and hence maximum productivity and minimum per-piece costs. While these systems have put HELLER in a position among the top companies in the heavy-duty and light-duty powertrain segments, it is with next-generation technologies like CBC that the machine tool manufacturer puts its customers in the fast lane.



ICPC Sponsors:



CONFERENCE OFFICE:

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