

PROGRAMME

40th INTERNATIONAL VIENNA MOTOR SYMPOSIUM

- New Otto and Diesel Engines
- Innovative Engines / Components
- Future Fuels
- Low Emission / Emission Concepts
- Electric Drives / Hybrid
- Fuel Cell / Future Powertrain Concepts
- Autonomous Driving
- View to the Future

Exhibition of New Engines and Components Cultural and Social Programme

Wednesday, 15 May 2019, 18.00 – approx. 21.00 hrs.

Reception and Opening of the Exhibition

Thursday, 16 May 2019, 7.30 - 18.30 hrs.

Friday, 17 May 2019, 8.00 – 17.45 hrs.

Congress Center Hofburg Vienna

Heldenplatz

1014 Vienna, Austria

**Chairman: Univ.-Prof. Dr. B. Geringer
Univ.-Prof. Dr. H. P. Lenz**

AVL



DRIVING INNOVATION

www.avl.com

40th INTERNATIONAL VIENNA MOTOR SYMPOSIUM 15 – 17 May 2019

General Information	Page 1
Programme (Lectures)	Page 3
Poster Presentations	Page 11
Social Programme	Page 13
Technical Information	(in sequence)

- AVL List GmbH, Graz
- KS Engineers, Graz
- Magna International Europe GmbH, Vienna
- Garrett – Advancing Motion, Rolle
- Nemak Europe GmbH, Frankfurt/Main
- Schaeffler AG, Herzogenaurach
- Volkswagen AG, Wolfsburg

**WE ARE PLEASED TO INVITE YOU TO PARTICIPATE IN THE
40th INTERNATIONAL VIENNA MOTOR SYMPOSIUM
AND KINDLY REQUEST YOU TO TAKE INTO CONSIDERATION
THE FOLLOWING GENERAL INFORMATION:**

NEW

Wednesday, 15 May 2019, 18.00 – approx. 21.00 hrs.:

Reception and Opening of the Exhibition

(We kindly ask to register online.)

Registration for all symposium's days possible.

Lecture Duration:

20 minutes each, followed by 10 minutes discussion.

Language of Lectures:

German and English (simultaneous translation).

Conference Papers:

- Complete collected edition of all lectures on USB stick (German/English) or in paper version (VDI-books) and on USB stick (German/English) for choice.
- Lists of participants and exhibitors.

The conference papers will be distributed to participants at the Registration Desk.

Congress Venue:

Congress Center Hofburg Vienna, Heldenplatz, 1014 Vienna, Austria

Telephone +43/1/536 44/223 to 225 (only in use during the symposium)

Telefax +43/1/536 44/226 (only in use during the symposium)

Bus Service:

Friday, 17 May 2019, 18.00 hrs. (at the end of the symposium):

Congress Center Hofburg to Vienna Airport (Schwechat).

Arrival Vienna Airport approx. 18.40 hrs.

Please specify the bus transfer when you register.

Buses will be marked „Wiener Motorensymposium“.

Organization of the Symposium:

Austrian Society of Automotive Engineers (ÖVK)

Elisabethstrasse 26, 1010 Vienna, Austria

Univ.-Prof. Dr. B. **Geringer**, President of the Austrian Society of Automotive Engineers (ÖVK) and Chairman of the Institute for Powertrains and Automotive Technology,

Vienna University of Technology, Getreidemarkt 9, 1060 Vienna, Austria

Univ.-Prof. Dr. H. P. **Lenz**, Honorary President of the Austrian Society of Automotive Engineers (ÖVK)

Telephone +43/1/585 27 41 /20 Mrs B. Lampl

/30 Mrs A. Neider

/70 Mr R. Preiml

/40 Mrs U. Riegler

Telefax +43/1/585 27 41/99

www.vienna-motorsymposium.com

E-Mail: info@oevk.at

Registration:

The registration details for the online registration can be found on www.vienna-motorsymposium.com.

Please register online at:

Austropa Interconvention, Lassallestrasse 3, 1020 Vienna, Austria,
Telephone +43/1/588 00/516, Telefax +43/1/588 00/520,
E-Mail: motoren2019@vb-mice.at

Registration Fee: € 2.388,- incl. 20% VAT

Registration Fee ÖVK Membership: € 2.304,- incl. 20% VAT

Austropa Interconvention will confirm receipt of the online registration immediately, but this is not the authorization to participate at the symposium.

A confirmation of registration or other information will follow in a few days. Vouchers, as ordered, as well as tickets of the Vienna State Opera, Vienna Volksoper, Raimundtheater and Ronacher will be distributed at the Austropa Interconvention Counter at the Congress Center Hofburg Vienna on Wednesday, 15 May 2019, 18.00 – 21.00 hrs., Thursday, 16 May 2019, 7.30 – 18.30 hrs., and on Friday, 17 May 2019, 8.00 – 14.00 hrs. Starting times of performances may be obtained at the counter of Austropa Interconvention.

Cancellation:

Cancellations must be made in writing to Austropa Interconvention.

E-Mail: motoren2019@vb-mice.at

Registration:

For **cancellation after 5 April 2019**, we are obliged to request full payment of complete registration fees, as all orders will have been placed.

Hotel:

For cancellation of hotel reservation between **5 April 2019 and 3 May 2019** a charge equivalent to the price of the first night at the hotel will be made. For cancellation after **3 May 2019** or non-occupancy of reserved rooms, the whole amount of the invoice will be charged from the credit card.

Evening Programme:

No reimbursement of tickets booked for the Vienna State Opera, Vienna Volksoper, Raimundtheater and Ronacher can be guaranteed.

Payment:

In order to guarantee the reservation, the invoice has to be settled within 2 weeks.

Method of payment as indicated on the confirmation of participation/invoice issued by Austropa Interconvention.

Student Registration:

For the 40th Vienna International Motor Symposium we offer Austrian and foreign students a limited number of free student places. Certain conditions must be met if you wish to participate in the Symposium. For more detailed information, please visit our home page www.vienna-motorsymposium.com where you will find the application form. The period for submitting applications will end on **25 February 2019**.

NEW 2019

Wednesday, 15 May 2019, 18:00–21:00 hrs.

Reception & Opening of the Exhibition
Registration possible

NEW 2019

FESTSAAL

ZEREMONIENSAAL

Thursday, 16 May 2019, Morning



REGISTRATION

OFFICIAL OPENING

Univ.-Prof. Dr. B. Geringer, Vienna University of Technology

PLENARY OPENING SESSION

Chairman: Univ.-Prof. Dr. B. Geringer, Vienna University of Technology

Dr. Volkmar **Denner**,

Chairman of the Board of Management, Robert Bosch GmbH, Stuttgart:
Beyond the Hood – Rethinking Mobility

Keiji **Kaita**,

Executive General Manager, Powertrain Company,
Toyota Motor Corporation, Aichi, Japan:

**Diversified Electrification – Key for Toyota’s Challenge
towards Sustainable Society**

Henrik **Green**,

Senior Vice President Research & Development,
Volvo Car Group, Gothenburg:

Attractive Cars for a Changing Society – Volvo Cars R&D Strategy

Dr. Frank **Welsch**,

Member of the Board of Management Volkswagen Brand,
Volkswagen AG, Wolfsburg:

ID. Volkswagen – Simply Electric

Discussion of the lectures in this session

07:30

08:30

08:45

09:05

09:25

09:45

10:05

10:30

Coffee Break

Thursday, 16 May 2019, Morning

SESSION: HYBRID

Chairman: Assoc. Prof. Dr. P. Hofmann,
Vienna University of Technology

Dipl.-Ing. K. **Blumenröder**, Dr. rer. nat. K. **Bennewitz**,
Dr.-Ing. M. **Zillmer**, A. **Mann** MSc, T. **Voeltz** MSc,
Volkswagen AG, Wolfsburg;
**The 48V Mild Hybrid Powertrain of the Volkswagen Golf:
Design and Control**

Dipl.-Ing. T. **Gödecke**, Dipl.-Ing. F. **Ascher**, D. **Dickgießer** MSc,
L. **Engbroks** MSc, T. **Schürmann** MSc, R. **Voigtländer** MSc,
Daimler AG, Stuttgart;
EQ Power Plug-In Hybrid – Electrified from A to S

Dipl.-Ing. S. **Juraschek**, Dr.-Ing. F. **Preuss**, Dr.-Ing. A. **Wilde**,
Dipl.-Ing. K. **Lorenz**, BMW Group, Munich;
**BMW Group Boosts Electromobility.
Wide Plug-In Hybrid Portfolio to Meet Customer Needs.**

Lunch at Congress Center

11:15

Dipl.-Ing. Dr. R. **Aufischer**, Dr. B. **Esmael**,
Dipl.-Ing. G. **Hager**, Dipl.-Ing. K. **Hamdard**,
Miba Bearing Group, Miba Gleitlager Austria GmbH, Laakirchen;
Ao. Univ.-Prof. Dipl.-Ing. Dr. M. **Engelmayr**,
Dipl.-Ing. (FH) G. **Taucher**,
Ao. Univ.-Prof. Dipl.-Ing. Dr. A. **Wimmer**, LEC GmbH, Graz;
Intelligent Bearings for Engine Development and Validation

11:45

Dipl.-Ing. R. **Brück**, Dipl.-Ing. S. **Schepers**,
Continental Emitec GmbH, Lohmar;
Dr.-Ing. J. **Ehrhard**, Continental Automotive GmbH, Regensburg;
**Turbocharger-Catalyst: Innovative Combination of Turbo-
charger- and Catalyst-Technology**

12:15

R. **Williams**, Shell, London; J. **Andersson**, Ricardo UK,
Shoreham-by-Sea; Dr. H. **Hamje**, Concawe, Brussels;
P. **Ziman**, PHS Consulting, Chester;
Dr. K. **Kar**, ExxonMobil, Paulsboro, USA;
C. **Fittavolini**, L. **Pellegrini**, Eni, San Donato Milanese;
Dr. G. **Gunter**, Phillips 66, Bartlesville, USA;
Dr. F. **Oliva**, Repsol, Madrid;
Dr. J. **Rogerson**, INCIPI Ltd., Oxford;
**Emissions Control Performance of Euro 6b to Euro 6d-TEMP
Diesel Cars within and outside of RDE Conditions**

12:45

Lunch at Congress Center

Thursday, 16 May 2019, Afternoon

SESSION: NEW SPARK IGNITION ENGINES

Chairman: Univ.-Prof. Dr. B. **Geringer**,
Vienna University of Technology

Dipl.-Ing. T. **Wasserbäch**, Dipl.-Ing. T. **Brandl**,
Dipl.-Ing. (FH) M. **Wessels**, Dr.-Ing. M. **Martiny**,
Dr.-Ing. R. **Schmidt**, Dr. Ing. h.c. F. Porsche AG, Weissach:
The 6-Cylinder Boxerengines in the New Porsche 911

N. **Turner**, N. **Hinton**, D. **Richardson**, J. **Geddes**,
Jaguar Land Rover, Coventry;
R. **Osborne**, A. **Lane**, Ricardo UK Ltd, Shoreham-by-Sea;
J. **Gidney**, J. **Cleeton**, Johnson Matthey, Royston;
P. **Atkins**, R. **Morgan**, University of Brighton:
**A New Generation Lean Gasoline Engine for Reduced CO₂
in an Electrified World**

B. **Lehman**, K. **Luchansky**, C. **Mariott**, S. **Shin**,
GM Global Propulsion Systems, Pontiac, USA:
The New 2.7L Turbo Engine of GM

Dr. M. **Alt**, Dr. N. **Fuhrmann**, Dipl.-Ing. O. **Böpple**,
Dipl.-Ing. L. **Cloos**, Opel Automobile GmbH, Rüsselsheim:
**The Road to Mainstream Availability of Electrified Combustion
Engines: Opel Goes Electric**

Coffee Break

14:30

PARALLEL SESSION: ELECTRIC DRIVES

Chairman: Univ.-Prof. Dr. G. **Brasseur**,
Graz University of Technology

M. **Tobin**, M. **Robinson**, S. **Hawkins**, S. **Tarnowsky**,
GM Global Propulsion Systems, Pontiac, USA:
**Real World Customer Driving and Charging Behavior with
GM Electric Vehicles**

Dipl.-Ing. K. **Blumenröder**, Dr. rer. nat. K. **Bennewitz**,
Dipl.-Ing. P. **Lück**, Dr.-Ing. J. **Tousen**,
Volkswagen AG, Wolfsburg:
Volkswagen's New Modular e-drive Kit

J. **Schenk**, et al.,
Daimler AG, Stuttgart:
Mercedes Going Electric – The Example of EQ

Dr. W. **Tober**, Dipl.-Ing. T. **Bruckmüller**, Dipl.-Ing. D. **Fasthuber**,
Vienna University of Technology:
**The Consequences of the Expansion of Charging Infrastructure
for Battery Electric Vehicles to the Energy Supply by 2030 Using
the Example of Austria**

Coffee Break

15:30

16:00

16:30

Thursday, 16 May 2019, Afternoon

SESSION: LOW EMISSION

Chairman: Univ.-Prof. Dr. H. **Eichlseder**,
Graz University of Technology

Dr. techn. W. F. **Ploock**, Dr.-Ing. G. **Hoffmann**, J. G. **Spakowski** MSc,
Dr.-Ing. G. **Dober**, Dipl.-Ing. B. **Gomot**, Dr. rer. nat. H. **Huetser**,
Delphi Technologies, Bascharage:
**Delphi Technologies Next Generation GDI-System –
Improved Emissions and Efficiency with Higher Pressure**

Dr.-Ing. A. **Kufferath**, Dipl.-Ing. D. **Naber**, Dr.-Ing. M. **Krüger**,
Robert Bosch GmbH, Stuttgart;
Ao. Univ.-Prof. Dr. S. **Hausberger**, Dipl.-Ing. S. **Lipp**,
Graz University of Technology;
Dipl.-Ing. H. **Steven**, HS Data Analysis and Consultancy, Heinsberg:
**EU6d – Analysis of the Boundary Conditions and Evaluation of
the Impact on Emissions Using the Example of the Advanced
Diesel Powertrain**

Dr. J. **Demuynck**, C. **Favre** MSc, D. **Bosteels** MSc MBA,
AEOC, Brussels; G. **Randlshofer**, IPA, Munich;
Dipl.-Ing. F. **Bunar**, Dipl.-Ing. J. **Spitta**, Dipl.-Ing. O. **Friedrichs**,
A. **Kuhr** MEng, Dr.-Ing. M. **Brauer**, IAV GmbH, Berlin:
**Integrated Diesel System Achieving Ultra-Low Urban NO_x
Emissions on the Road**

End of Programme

20:00 hrs.

**Reception given by the Mayor of Vienna
at the Vienna City Hall.
Please bring your invitation.**

(see Social Programme and "Separate Brochure")

17:00

PARALLEL SESSION: FUEL CELL

Chairman: Univ.-Prof. Dr. S. **Pischinger**,
RWTH Aachen University

Dipl.-Ing. J. **Rechberger**, Dipl.-Ing. M. **Brendel**,
Dipl.-Wirt.Ing. F. **Berg**, J. **Rubio** PEng,
AVL List GmbH, Graz:
**Challenges in the Development of Fuel Cell Systems
and Stacks**

Prof. Dr. rer. nat. C. **Mohrdieck**, Dipl.-Ing. M. **Handgrättinger**,
Dipl.-Ing. G. **Hornburg**,
Daimler-Konzern, NuCellSys GmbH,
Kirchheim unter Teck/Nabern:
**Modular Fuel Cell Engines for Passenger and Commercial
Vehicles as well as for Stationary Applications**

C. E. **Freese** MS, Dipl.-Ing. M. **Bork**,
W. H. **Pettit** BS, D. **Masten** PhD,
General Motors, Pontiac / Rochester, USA:
Fuel Cell and Battery Propulsion System – the Balance

End of Programme

18:30

Friday, 17 May 2019, Morning

SESSION: NEW COMPRESSION IGNITION ENGINESChairman: Univ.-Prof. Dr. B. **Geringer**,

Vienna University of Technology

Dipl.-Ing. B. **Lindemann**, Dipl.-Ing. M. **Ehrly**,
 Dr.-Ing. J. **Schaub**, Dr. L. **Robb**, Dr.-Ing. M. **Schönen**,
 FEV Europe GmbH, Aachen:

**White Eco Diesel Powertrain with Pre-Turbine Exhaust
 Aftertreatment and Mild-Hybrid Concept for Lowest NO_x Emission
 under Urban Driving Condition**

D. **Choi** PhD, Y.-S. **Kang** MS, I.-C. **Cheong** MS,
 H.-K. **Kang** MS, Y.-R. **Chung** MS, J.-K. **Lee** MS,
 Hyundai Motor Group, Namyang, South Korea:

**The New Hyundai In-Line 4-Cylinder 2.2L Diesel Engine –
 Smartstream D2.2 FR**

Dr. N. **Ardey**, Dipl.-Ing. M. **Schober**, Dipl.-Ing. (FH) T. **Reuss**,
 Dipl.-Ing. (TU) M. **Deblatze**, Dipl.-Ing. J. **Helbig**,
 Dipl.-Ing. (FH) A. **Wetzel**, Dipl.-Ing. (FH) J. **Haak**,
 AUDI AG, Ingolstadt / Neckarsulm:

**The New Generation of the Audi 3.0l V6-TDI Gen.3 Engine
 with Electric Compressor**

Coffee Break

08:00

T. **Tabata**, H. **Shibata**, H. **Katsurahara**, Y. **Konishi**,
 DENSO CORPORATION, Aichi, Japan:
**Evolution of Versatile Gasoline ICE Core System, Considering
 Future Electrification**

08:30

Dr. G. **Fraidl**, Dipl.-Ing. (FH) M. **Brunner**, Dr. P. **Kapus**,
 Dipl.-Ing. W. **Schöffmann**, Dr. H. **Sorger**, Dipl.-Ing. (FH) G. **Teuschl**,
 Dipl.-Ing. M. **Weissback**, AVL List GmbH, Graz:
ICE 4.x – Implementation as Modular Hybridization

09:00

Dr. H. **Sandquist**,
 CEVT Powertrain Engineering, Gothenburg;
 S. **Li** MSc,
 GEEELY Powertrain Research Institute, Cixi, China:
Modular Hybrid Powertrain Family for Global Application

09:30

Coffee Break

Friday, 17 May 2019, Morning

SESSION: FUELS

Chairman: Univ.-Prof. Dr. S. **Pischinger**,
RWTH Aachen University

Dr. O. **Scharrer**, Dr. M. **Warth**, Dr. P. **Wieske**,
MAHLE International GmbH, Stuttgart;
Dipl.-Ing. D. **Schwarzenthal**, Dipl.-Ing. K. **Dums**,
Dipl.-Ing. T. **Wasserbäch**, Dr. Ing. h.c.F. Porsche AG, Weissach;
Fun to Drive without Compromise thanks to Synthetic FuelBlend

Dr.-Ing. W. **Willems**, Ford Werke GmbH, Aachen;
Dr.-Ing. J. **Weber**, DENSO AUTOMOTIVE Deutschland GmbH, Wegberg;
Dipl.-Ing. M. **Pannwitz**, IAV GmbH, Berlin;
Dipl.-Ing. K. **Gaukel**, Technical University of Munich;
Dipl.-Ing. M. **Zubel**, RWTH Aachen University;
**DME – Sustainable Fuel for Compression Ignition Engines for
Passenger Car and Heavy Duty Applications**

Dr. U. **Kramer**, FORD, Cologne; S. **Stollenwerk**, innogy, Essen;
F. **Ortloff**, DVGW, Karlsruhe; Dr. X. **Sava**, BASF, Ludwigshafen;
Dr. A. **Janssen**, Shell, Hamburg; S. **Eppler**, Robert Bosch, Ludwigsburg;
H. **Schüle**, Continental, Regensburg; A. **Döhler**, Opel, Rüsselsheim;
R. **Otten**, Audi, Ingolstadt; Dr. M. **Lohrmann**, VW AG, Wolfsburg;
Dr. L. **Menger**, BMW, Munich; S. **Barth**, Honda R&D Europe, Offenbach;
W. **Kübler**, MAN, Nuremberg; R. **Thee**, FVV, Frankfurt;
**Climate-Neutral Driving in 2050: Options for the Complete
Defossilization of the Transport Sector. Considerations Based on
Results of the FVW Fuel Study 2018**

H. **Won**, A. **Bouet**, V. **Manente**,
Aramco Overseas Company B.V., Rueil-Malmaison;
J. **Kermani**, F. **Duffour**, IFP Energies nouvelles, Rueil-Malmaison;
Reduce CO₂ Footprint of a Euro6d Compliant Passenger Vehicle

Lunch at Congress Center

10:15

Dr. K. **Arens**, T. **Weiss**,
iwis motorsysteme GmbH & Co KG, Munich;
Dr. H. **Sorger**, Dr. W. **Schöffmann**, Dr. S. **Lösch**,
Dr. W. **Unzeitig**, AVL List GmbH, Graz;
Dual Mode VCS – The Modular VCR System

10:45

M. S. **Choi** PhD, Y. H. **Kwak**,
Hyundai Motor Co R&D Center, Namyang, South Korea;
D. B. **Roth**, D. **Jakiela**, J. **Song** PhD,
BorgWarner Ithaca Tech Center, Ithaca, USA;
**Investigation of Technologies to Improve Fuel Efficiency in
Turbo GDI Engine: CDA, Miller-Cycle with Valve Event, Water
Injection, LP EGR and High Compression Ratio**

11:15

Dr.-Ing. J. **Scharf**, Dr.-Ing. M. **Thewes**, Dr.-Ing. P. **Adomeit**,
Dr.-Ing. T. **Uhlmann**, Dr.-Ing. J. **Seibel**, Dr.-Ing. B. **Franzke**,
Dr.-Ing. A. **Balazs**, FEV Europe GmbH, Aachen;
Dr.-Ing. H. **Baumgarten**, FEV Group GmbH, Aachen;
200 kW/t at Lambda = 1

11:45

Dipl.-Ing. M. **Kratzsch**, Dipl.-Ing. W. **Wukisiewitsch**,
Dipl.-Ing. M. **Sens**, Dr.-Ing. M. **Brauer**, Dr. R. **Tröger**,
IAV GmbH, Berlin;
The Path to CO₂-Neutral Mobility in 2050

Lunch at Congress Center

12:15

Friday, 17 May 2019, Afternoon

SESSION: HEAVY DUTY VEHICLES

Chairman: Univ.-Prof. Dr. W. **Eichseder**,
Montanuniversitaet Leoben

Dipl.-Ing. M. **Späth**, Dipl.-Ing. J. **Holtweck**, Dipl.-Ing. W. **Vogel**,
MAN Truck & Bus AG, Nuremberg:
The New 9 l-Six Cylinder Engines D15 and E18 by MAN

V. **Verdino**, P. **Lavazza**, D. **Rampone**, L. **Garzarella**,
A. **Mogavero**, J. **Barta**, J. **Catalogna**, C. **Marlett**,
General Motors GPS, Torino / Pontiac / Milford, USA;
M. **Umierski**, FEV Europe GmbH, Aachen:
**The New General Motors L6 3.0 Liter Duramax Diesel Engine
for the Next Generation Full Size Truck Pick Up**

C. **Dicken**, K. **Philibert-Palmer**, D. **Mumford**,
Westport Fuel Systems, Vancouver, Canada;
M. **Harper**, M. **Fowles**, Delphi Technologies, London:
**The Innovative Westport HPDI 2.0 Natural Gas Injection System –
Delivering Well to Wheel CO₂ Savings in Heavy Duty Commercial
Vehicles Fuelled by Liquefied Natural Gas**

Coffee Break

14:00

PARALLEL SESSION: AUTONOMOUS DRIVING

Chairman: Univ.-Prof. Dr. L. **Eckstein**,
RWTH Aachen University

Dr. S. **Poledna**, Dr. W. **Steiner**,
TTTech Auto AG, Vienna:
**Challenges for Highly Automated Driving –
Requirements on the Powertrain**

Dipl.-Ing. F. **Eichter**,
Volkswagen AG, Wolfsburg:
**Autonomous Driving – Technology Leap from Level 2 to
Level 3 and 4**

Dr. P. **Schöggel**, Dr. M. **Stolz**, Dipl.-Ing.(FH) R. **Vögl**,
Dipl.-Ing. E. **Ramschak**,
AVL List GmbH, Graz:
**Autonomous Driving – Customer Expectations, Challenges
and Solutions**

Coffee Break

14:30

15:00

15:30

Friday, 17 May 2019, Afternoon

PLENARY CLOSING SESSION: VIEW TO THE FUTURE

Chairman: Univ.-Prof. Dr. B. **Geringer**, Vienna University of Technology

Dr. Andreas **Tostmann**,
Volkswagen Brand Board Member for Production,
Volkswagen AG, Wolfsburg;

Transformation – The Road to Future Mobility

Dipl.-Ing. Günther **Apfalter**,
President Magna Europe & Magna Steyr,
Magna International Europe GmbH, Vienna:
Future Mobility – A New Business Model?

Hubertus **Troska**,
Member of the Board of Management of Daimler AG,
Responsible for Greater China, Beijing, China:
The Dynamic China Market

Discussion of the lectures in this session

CLOSING ADDRESS

Univ.-Prof. Dr. B. **Geringer**, Vienna University of Technology

End of Programme

16:00
16:20
16:40
17:00
17:30
17:45

18:00 hrs.

**Bus Transfer from Heldenplatz (Congress Center Hofburg)
to Vienna Airport (Schwechat)**

POSTER PRESENTATIONS

Dipl.-Ing. Dr. F. **Zahradnik**,
Austro Engine GmbH, Wiener Neustadt:
Innovative Propulsion System for General Aviation

M. **Schreiber** MSc, Dipl.-Ing. R. **Henneberger**,
D. **Schubert** MSc, Dr.-Ing. S. **Hecker**, Dr.-Ing. S. **Sentpali**,
Munich University of Applied Sciences:
Active Sound Generation Using Electrical Drives

L. **Konstantinoff** MSc, M. **Pillei** MSc, DDipl.-Ing. Dr. L. **Möltner**,
Management Center Innsbruck;
D. **Mairegger** MSc, Dipl.-Ing. Dr. G. **Herdin**, T. **Steiner** MSc, M. **Joham** BSc,
PGES GmbH, Jenbach:
**Rapid Prototyping – A Tool for Targeted Combustion Process Development
in Stationary Gas Engines**

Dr. T. **Tingelöf**, Dr. J. **Dombrovskis**, K. **Samuelsson** MSc,
PowerCell Sweden AB, Gothenburg;
Dr. L. **Jörissen**, Zentrum für Sonnenenergie- und Wasserstoff-Forschung
Baden-Württemberg (ZSW), Ulm:
World Leading Fuel Cell Stack Hardware with a European Supplier Base



AUTOMOTIVE TESTING

OUR CORE COMPETENCIES: we supply testing equipment for components and entire systems—all from a single source, such as test beds, complete facilities, building services or media supplies. Consistency in project handling ensures the best possible solutions for you, the customer. Passion, long-standing experience and further development are our tools.

www.ksengineers.at

It's only
impossible
until it isn't.

From inspiration to design. From
manufacturing to the open road.
We turn science fiction thinking
into automotive reality.



Social Programme

(For details see "Separate Brochure")

NEW

Wednesday, 15 May 2019, 18.00 – approx. 21.00 hrs.:

Reception and Opening of the Exhibition
Registration for all symposium's days possible.

Thursday, 16 May 2019

- 1 9.15 – approx. 12.30 / 12.45 hrs.: Half-day tour "Medieval Vienna"**
Meeting Point: 9.15 hrs., Entrance Congress Center Hofburg, Heldenplatz.
- 2 9.15 – approx. 12.45 hrs.: Half-day tour "Mozart, Beethoven and Schubert – Working and Living in Vienna"**
Meeting Point: 9.15 hrs., Entrance Congress Center Hofburg, Heldenplatz
- 3 20.00 hrs.: Reception hosted by the Mayor of Vienna in the City Hall**
Please make sure to register and bring the invitation that will be handed over at the registration desk to those participants who registered. (No extra charge).

Friday, 17 May 2019

- 1 9.15 – approx. 12.45 hrs.: Half-day tour "Famous Tombs and the 'Luegerkirche' at Wiener Zentralfriedhof (Vienna Central Cemetery)"**
Meeting Point: 9.15 hrs., Entrance Congress Center Hofburg, Heldenplatz

Evening Programme

(see also "Separate Brochure")

Friday, 17 May 2019

- 2 Evening: Ballet Performance at the Vienna State Opera "Le Corsaire"**
(music by Adolphe Adam – choreography by Manuel Legris) (Tentative schedule)
- 3 Evening: Performance at the Vienna Volksoper "Wiener Operetten-Melange"**
(highlights from the operetta repertoire) (Tentative schedule)
- 4 Evening: Musical at the Raimundtheater "I am from Austria"**
(Musical with greatest hits by Rainhard Fendrich) (Tentative schedule)
- 5 Evening: Musical at the Ronacher "Bodyguard" by Alexande Dinelaris**
(based on the film of the same name) (Tentative schedule)

Saturday, 18 May 2019

- 1 Evening: Performance at the Vienna State Opera "Il Barbiere di Siviglia" by Gioachino Rossini (on request)** (Tentative schedule)
- 2 Evening: Musical at the Raimundtheater "I am from Austria"**
(Musical with greatest hits by Rainhard Fendrich) (Tentative schedule)
- 3 Evening: Musical at the Ronacher "Bodyguard" by Alexander Dinelaris**
(after the film of the same name) (Tentative schedule)

Starting times of performances at the Vienna State Opera, Vienna Volksoper, Raimundtheater and Ronacher may be obtained at the counter of Austropa Interconvention.

Please note that participation is limited. Tickets will be reserved on a first come first serve basis. If the requested price category is not available, we shall – if possible – reserve tickets in the next lower or higher price category. Prices as indicated include an advance booking fee.

FUTURE IS IN OUR NATURE



Turbo
Technology



Electric &
Hybrid



Connected
Vehicle



Forward thinking and engineering leadership are in our DNA. We are not a typical automotive supplier. We are innovators and developers of turbo technology, electric products and connected vehicles that will be a driving force for advancing and enabling the cars of tomorrow.

Garrett

ADVANCING MOTION



Driving Innovation with Lightweighting Solutions





We are shaping mobility for tomorrow

How will people travel in the future, and how will goods be transported? What resources will we use, and how many will we need? The passenger and freight traffic sector is developing rapidly, and we provide the impetus for innovation and movement. We develop components and systems for internal combustion engines that operate more cleanly and more efficiently than ever before. We are also pushing forward technologies that are bringing hybrid vehicles and alternative drives into a new dimension – for private, corporate, and public use. The challenges are great. We deliver the solutions. www.schaeffler-mobility.com

SCHAEFFLER

Heritage meets future.



Countdown to a new era.
With the ID., Volkswagen is moving
towards the automotive future.



Volkswagen