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
DRIVING INNOVATION
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.
Thursday, 16 May 2019, Morning

REGISTRATION 07:30

OFFICIAL OPENING 08:30

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 10:05

Coffee Break 10:30
Thursday, 16 May 2019, Morning

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

Dipl.-Ing. K. Blumeneröder, Dr. rer. nat. K. Bennewitz, Dr.-Ing. M. Zillner, 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.

**PARALLEL SESSION: COMPONENTS / EMISSION CONCEPTS**
Chairman: Univ.-Prof. Dr. W. Eichlseder, Montanuniversitaet Leoben

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

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 Turbocharger- and Catalyst-Technology

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. Pittavolini, L. Pellegrini, Eni, San Donato Milanese; Dr. G. Gunter, Phillips 66, Bartlesville, USA; Dr. F. Oliva, Repsol, Madrid; Dr. J. Rogerson, INCIBI Ltd., Oxford: 
Emissions Control Performance of Euro 6b to Euro 6d-TEMP Diesel Cars within and outside of RDE Conditions

Lunch at Congress Center
# Thursday, 16 May 2019, Afternoon

## SESSION: NEW SPARK IGNITION ENGINES

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

- **14:30** 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*

- **15:00** 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*


- **16:00** 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*

## PARALLEL SESSION: ELECTRIC DRIVES

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


- **15:00** 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*


- **16:00** 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*
Thursday, 16 May 2019, Afternoon

**SESSION: NEW SPARK IGNITION ENGINES**
Chairman: Univ.-Prof. Dr. B. Geringer, Vienna University of Technology
Chairman: Univ.-Prof. Dr. G. Brasseur, Graz University of Technology
Dipl.-Ing. T. Wasserbäch, Dipl.-Ing. T. Brandl, 14:30
M. Tobin, M. Robinson, S. Hawkins, Tarnowsky, Dipl.-Ing. (FH) M. Wessels, Dr.-Ing. M. Martiny, 15:00
Dipl.-Ing. K. Blumenröder, Dr. rer. nat. K. Bennewitz, Dipl.-Ing. P. Lück, Dr.-Ing. J. Tousen, R. Osborne, A. Ricardo UK Ltd, Shoreham-by-Sea; 15:30
Dipl.-Ing. L. Cloos, Opel Automobile GmbH, Rüsselsheim, 16:00
Vienna University of Technology:
Dipl.-Ing. L. Cloos

**PARALLEL SESSION: ELECTRIC DRIVES**
Chairman: Univ.-Prof. Dr. M. Handgrätänger, 14:30
Dr.-Ing. A. Kufferath, Dipl.-Ing. D. Naber, Dr.-Ing. M. Krüger, Dr.-Ing. S. Lipp, Dipl.-Ing. H. Steven, Ao. Univ.-Prof. Dr. S. Hauserberger, Dipl.-Ing. R. Dober, Dipl.-Ing. B. Gomot, Dr. rer. nat. H. Hueter, Dipl.-Ing. W. Piock, Dr.-Ing. G. Hoffmann, Dipl.-Ing. T. Spakowski, MSc, Spakowski, 15:00
Dipl.-Ing. J. Rechberger, Dipl.-Ing. M. Brendel, Dipl.-Ing. F. Berg, J. Rubio PENG, AVL List GmbH Graz, 15:30
Dipl.-Ing. J. Reichberger, Dipl.-Ing. M. Brendel, Dipl.-Ing. F. Berg, J. Rubio PENG, AVL List GmbH Graz, 16:00
Vienna University of Technology:
Dipl.-Ing. L. Cloos

**SESSION: LOW EMISSION**
Chairman: Univ.-Prof. Dr. H. Eichlseder, Graz University of Technology
Chairman: Univ.-Prof. Dr. S. Pischinger, Graz University of Technology
Dr. techn. W. F. Piock, Dipl.-Ing. G. Hoffmann, J. G. Spakowski MSc, Spakowski, 17:00
Prof. Dr. rer. nat. C. Mohrleid, Dipl.-Ing. M. Handgrätänger, 18:00
C. E. Freese MS, Dipl.-Ing. M. Bork, W. H. Pettit BS, D. Master PhD, General Motors, Pontiac / Rochester, USA; 18:30
End of Programme
SESSION: NEW COMPRESSION IGNITION ENGINES  
Chairman: 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 NOx 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. Deblaize, 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

PARALLEL SESSION: FUTURE POWERTRAIN CONCEPTS  
Chairman: Univ.-Prof. Dr. H. Eichlseder,  
Graz University of Technology

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

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

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

Coffee Break 09:30
Friday, 17 May 2019, Morning

SESSION: NEW COMPRESSION IGNITION ENGINES
PARALLEL SESSION: FUTURE POWERTRAIN CONCEPTS
Chairman: Univ.-Prof. Dr. B. Geringer, Vienna University of Technology
Chairman: Univ.-Prof. Dr. H. Eichlseder, Graz University of Technology

08:00
T. Shibata, H. Dr.-Ing. J. Schönen, DENSO CORPORATION, Aichi, Japan:
"White Eco Diesel Powertrain with Pre-Turbine Exhaust Aftertreatment and Mild-Hybrid Concept for Lowest NOx Emission under Urban Driving Condition"

08:30
Dipl.-Ing. W. Schöffmann, Dipl.-Ing. (FH) G. Sorger, Dipl.-Ing. (FH) T. Reuss, Hyundai Motor Group, Namyang, South Korea:
"The New Hyundai In-line 4-Cylinder 2.2L Diesel Engine – Smartstream D2.2 FR"

09:00
Dipl.-Ing. (TU) M. Deblaize, Dipl.-Ing. J. Helbig, S. MSc, Dipl.-Ing. (FH) A. Wetzel, Haak, Modular Hybrid Powertrain Family for Global Application
"The New Generation of the Audi 3.0l V6-TDI Gen.3 Engine with Electric Compressor"

Coffee Break

Coffee Break 09:30

10:15
W. Dr. K. Arens, T. Weiss, Dr. O. Scharrer, Dr. M. Scharrer, MAHLE International GmbH, Stuttgart;
DAWIS motorsysteme GmbH & Co KG, Munich;
Dipl.-Ing. D. Schwarzenthal, Dr. Ing. h.c. F. Porsche AG, Weisach;
Dipl.-Ing. K. Dums, Dipl.-Ing. M. Weissbäck, Hyundai Motor Group, Namyang, South Korea;
Dipl.-Ing. M. Deblaize, Dipl.-Ing. J. Helbig, S. MSc, Dipl.-Ing. (FH) A. Wetzel, Haak, Modular Hybrid Powertrain Family for Global Application
"Fun to Drive without Compromise thanks to Synthetic Fuel Blend"

10:45
M. S. Choi Ph.D, Y. H. Kwak, MAHLE Powertrain GmbH, Aachen;
Dipl.-Ing. D. Schwarzenthal, Dr. Ing. h.c. F. Porsche AG, Weisach;
"Dr. H. Brunner, D. Choi PhD, Y.-S. Kang, MS, I.-C. Cheong, "KAPUS Kapus, H.-K. MS, Y.-R. Kang, Chung MS, J.-K. Lee, Hyundai Motor Group, Namyang, South Korea:
"The New Hyundai In-line 4-Cylinder 2.2L Diesel Engine – Smartstream D2.2 FR"

11:15
Dipl.-Ing. M. Pannitz, IAV GmbH, Berlin;
Dipl.-Ing. K. Gautel, Technical University of Munich;
Dipl.-Ing. K. Zuebel, RWTH Aachen University;
Dipl.-Ing. M. Zubel, RWTH Aachen University;
"Fun to Drive without Compromise thanks to Synthetic Fuel Blend"

11:45
M. S. Choi Ph.D, Y. H. Kwak, MAHLE Powertrain GmbH, Aachen;
Dipl.-Ing. D. Schwarzenthal, Dr. Ing. h.c. F. Porsche AG, Weisach;
"Dr. H. Brunner, D. Choi PhD, Y.-S. Kang, MS, I.-C. Cheong, "KAPUS Kapus, H.-K. MS, Y.-R. Kang, Chung MS, J.-K. Lee, Hyundai Motor Group, Namyang, South Korea:
"The New Hyundai In-line 4-Cylinder 2.2L Diesel Engine – Smartstream D2.2 FR"

200 kW/l at Lambda = 1

Dr. U. Kramer, FORD, Cologne; S. Dr.-Ing. J. Scharf, Dr. M. Thewes, Dr.-Ing. P. Adomeit, Dr.-Ing. A. Baiz, Dr. B. Franke, MAHLE Powertrain GmbH, Aachen;
Dr. W. Willems, Ford Werke GmbH, Aachen;
"Fun to Drive without Compromise thanks to Synthetic Fuel Blend"

Dr. H. Schönen, DENSO CORPORATION, Aichi, Japan:
"White Eco Diesel Powertrain with Pre-Turbine Exhaust Aftertreatment and Mild-Hybrid Concept for Lowest NOx Emission under Urban Driving Condition"

Dr. H. Won, A. Bouet, V. Manente, Aramco Overseas Company B.V., Rueil-Malmaison;
J. Kerkmann, F. Duffour, IFP Energies nouvelles, Rueil-Malmaison;
"Defossilization of the Transport Sector. Considerations Based on Results of the FY Fuel Study 2018"

H. K. Kramer, J. Thee, R. Adomeit, Dr. F. Ortloff, F. Willems, Ford Werke GmbH, Aachen;
"Fun to Drive without Compromise thanks to Synthetic Fuel Blend"

Dr. P. Kramer, FORD, Cologne; S. Dr.-Ing. J. Scharf, Dr. M. Thewes, Dr.-Ing. P. Adomeit, Dr.-Ing. A. Baiz, Dr. B. Franke, MAHLE Powertrain GmbH, Aachen;
Dr. W. Willems, Ford Werke GmbH, Aachen;
"Fun to Drive without Compromise thanks to Synthetic Fuel Blend"

Dr. H. Schönen, DENSO CORPORATION, Aichi, Japan:
"White Eco Diesel Powertrain with Pre-Turbine Exhaust Aftertreatment and Mild-Hybrid Concept for Lowest NOx Emission under Urban Driving Condition"

Dr. H. Won, A. Bouet, V. Manente, Aramco Overseas Company B.V., Rueil-Malmaison;
J. Kerkmann, F. Duffour, IFP Energies nouvelles, Rueil-Malmaison;
"Defossilization of the Transport Sector. Considerations Based on Results of the FY Fuel Study 2018"

8
**SESSION: HEAVY DUTY VEHICLES**

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

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

  - 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*

  - 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 Liquified Natural Gas*

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

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

---

Coffee Break

15:30
## PLENUM CLOSING SESSION: VIEW TO THE FUTURE
Chairman: Univ.-Prof. Dr. B. **Geringer**, Vienna University of Technology

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
</table>
| 16:00 | Dr. Andreas **Tostmann**  
Volkswagen Brand Board Member for Production, 
Volkswagen AG, Wolfsburg: | Transformation – The Road to Future Mobility |
| 16:20 | Dipl.-Ing. Günther **Apfalter**,  
President Magna Europe & Magna Steyr,  
Magna International Europe GmbH, Vienna: | Future Mobility – A New Business Model? |
| 16:40 | Hubertus **Troska**,  
Member of the Board of Management of Daimler AG,  
Responsible for Greater China, Beijing, China: | The Dynamic China Market |
| 17:00 | Discussion of the lectures in this session |
| 17:30 | CLOSING ADDRESS  
Univ.-Prof. Dr. B. **Geringer**, Vienna University of Technology |

**End of Programme** 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. Mairregger 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. Tingleöf, 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](http://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.
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.
Driving Innovation with Lightweighting Solutions
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
Heritage meets future.

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

The pictured vehicle is not for sale yet and therefore is not subject to rule 1999/94/EC. Symbol picture.