### ATZ live

# chassis tech plus

8th International Munich Chassis Symposium 20 and 21 June 2017 | Munich | Germany



INNOVATIVE CHASSIS SYSTEMS

Solutions for autonomous driving

**NEW DEVELOPMENTS** 

Challenges for simulation and testing

**EFFICIENT SOLUTIONS** 

CO<sub>2</sub>, comfort and customer focus

/// PLENARY LECTURES VOlkswagen | AUDI | Robert Bosch | ITK Engineering | Roland Berger | Opel | Continental Reifen |
/// ONE FOR ALL | Four congresses in one event



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#### tire.wheel.tech section

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# chassis tech plus





#### WELCOME

The development of highly and fully automatic driving and the increasing electrification of the powertrain now face chassis development with new challenges too. Innovative chassis systems have to provide solutions for automated driving. The efficient chassis of the future also has to keep an eye on  $\rm CO_2$  targets, comfort and customer focus at all times. A modern chassis has to provide for this in the form of innovations while taking the physical and mechanical interdependencies into account. Confronting these new developments is a challenge for simulation and testing.

To allow an exchange of experience and a constructive discussion of current topics, the 8th International Munich Chassis Symposium chassis.tech plus to be held on 20 and 21 June 2017 will bring together numerous experts from all over the world to discuss chassis, steering, brakes and tires/wheels.

At the symposium, well-known keynote speakers will offer a comprehensive overview of new approaches for solving these challenges. Speakers from industry and research will deal with current developments in the four parallel strands for chassis, steering, brakes and tires/wheels. The lecture program will be rounded off by interdisciplinary sections at the beginning and end of the event.

We are happy to welcome you to the hotel "Bayrischer Hof" in the heart of Munich and hope you will enjoy this thought-provoking event.

Prof. Dr. Peter E. Pfeffer

Munich University of Applied Sciences Scientific Director of the Symposium

1st day

2nd day

Interdisciplinary section chassis.tech plus
– in two parallel strands in the afternoon –

chassis.tech section

steering.tech section brake.tech section

tire.wheel.tech section

Interdisciplinary section chassis.tech plus

Trade exhibition

chassis.tech steering.tech brake.tech tire.wheel.tech

#### >> CHASSIS.TECH PLUS SECTION

Festsaal

#### Moderator:

Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Munich University of Applied Sciences

8:00 Registration

#### 9:15 Welcome and opening

Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ | ATZelektronik | Iwd lightweight.design; Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Munich University of Applied Sciences

#### **KEYNOTE LECTURES I**

### 9:30 The chassis as game changer for automated and electrified driving

Prof. Dr. Stefan Gies, Head of Chassis Engineering, Dr. L. Liesner, Volkswagen AG

#### 10:00 The chassis of the all-new AUDI A8

Carsten Jablonowski, Team Leader Chassis Characteristics A8, Dr. C. Schimmel, V. Underberg, AUDI AG

### 10:30 Future brake system architectures for automated driving

Dr. Edwin Liebemann, Senior Vice President Engineering – Active Safety, Dr. A. Kunz, Dr. M. Kunz, Dr. S. Strengert, Robert Bosch GmbH

11:00 **Opening of the accompanying trade exhibition** and refreshment break in the exhibition area

#### **KEYNOTE LECTURES II**

### 11:30 Automotive security is not even a feature – how can we afford that?

Dr. Sebastian Labitzke, Head of Competence Center Security, ITK Engineering GmbH

### 12:00 Acceptance and market for ADAS and automated driving systems

Dr. Wolfgang Bernhart, Senior Partner Automotive, M. Yoon, Roland Berger GmbH

12:30 Lunch in the exhibition area

#### >> PARALLEL STRAND I

Festsaal

#### >> PARALLEL STRAND II

Palaishalle

#### Moderator:

Stefan Resch, Corporate Strategy & Innovation, TÜV SÜD AG

#### **NEW CHASSIS**

14:00 Business athlete – exciting driving dynamics for the all-new BMW 5 series

> Christof Lischka, Vice President Driving Dynamics/ Requirements, Concepts, Integration, BMW Group

14:30 Compact rear suspension and chassis for next-generation minivan

> Joshua Johnson, Principal Engineer Chassis Design, Adam Goellner, Sr. Engineer Vehicle Performance Engineering, D. Horton, K. Rhoades, E. Payne, K. Malarik, S. Bradner, M. Hoersten, B. Johnson, Honda R&D Americas, USA

15:00 From i30 to i30: an evolutionary journey for Hyundai C-seg bestseller

> Axel Honisch, Head of Vehicle Test and Development Dept., Hyundai Motor Europe Technical Center GmbH

15:30 Refreshment break in the exhibition area

#### CHASSIS COMPONENTS AND HISTORICAL ASPECTS

16:00 mSTARS -

modular semi-trailing arm rear suspension

Knut Heidsieck, Manager Car Chassis Systems Dielingen, K. Wallgren, A. Hägele, ZF Friedrichshafen AG

16:30 Composite chassis components

Alberto Girelli Consolaro, Project Leader Leaf and Composite Coil Springs, N. Zandbergen, Dr. P. Zandbergen, Dr. F. Wolf-Monheim, F. Italiano, Ford Research and Innovation Center Aachen

17:00 Mubea chassis springs – development of GFRP leaf springs for best-in-class lightweight design and functional performance

Dr. Jochen Asbeck, Managing Director Chassis Technologies, Dr. J. Neubrand, T. Schrüllkamp, Dr. J. Stimpfl, Mubea-Fahrwerksfedern GmbH

17:30 Stimulus address | Supporting elements from the chassis to the self-supporting body and back to the driving module Eric Eckermann, Manager, AutoHistorica

#### Moderator:

Dr. Veit Held. Senior Manager Advanced Engineering Chassis and Chassis Control Systems, Adam Opel AG

#### VIRTUAL DEVELOPMENT METHODS

- 14:00 Explicit model predictive control of semi-active suspension systems using artificial neural networks Ronnie Dessort, Simulation Consultant, Dr. C. Chucholowski, TESIS DYNAware GmbH
- 14:30 Using virtual prototypes for a cross-domain increase in efficiency in the development process Martin Elbs, General Manager Business Development, IPG Automotive GmbH
- 15:00 Optimizing passive vehicle dynamics for active safety and autonomous driving Marco Fainello, Chief Technical Officer, Danisi Engineering S.r.I., Italy
- 15:30 Refreshment break in the exhibition area

#### **OBJECTIVE ASSESSMENTS**

16:00 Objective assessment of the dynamic system behavior of multi-chamber air springs

Emre Boyraz, Chassis Mechatronic Systems, Dr. C. Kandler, M. Gantikow, Dr. Ing. h.c. F. Porsche AG; Prof. Dr. Dr. D. Schramm, Chair of Mechatronics, University of Duisburg-Essen

Subjective testing of a torque vectoring approach based on driving characteristics in the driving simulator

> Alexander Fridrich, Research Assistant, M.-T. Nguyen, Prof. Dr. J. Wiedemann, Institute of Internal Combustion Engines and Automotive Engineering (IVK), University of Stuttgart; J. Neubeck, Research Institute of Automotive Engineering and Vehicle Engines Stuttgart (FKFS)

- 17:00 Objectification of steering feel and application in the context of virtual steering feel tuning Dr. Stefan Grüner, Manager Advance Engineering Control Engineering, T. Werner, B. Käpernick, Robert Bosch Automotive Steering GmbH
- 17:30 Model-based safety validation of the automated driving function highway pilot Halil Beglerovic, Research Engineer, Dr. A. Leitner, Dr. H.-M. Koegeler, Dr. J. Holzinger, R. Hettel, AVL List GmbH, Austria

**Evening reception in Munich Ratskeller** 

from 18:30 Enjoy interesting conversations with colleagues and speakers in a pleasant atmosphere.

### >> CHASSIS.TECH SECTION

Festsaal

### >> STEERING.TECH SECTION

Palaishalle

#### Moderator:

Prof. Bernhard Schick, Faculty of Mechanical Engineering, Kempten University of Applied Sciences

#### **DEVELOPMENT METHODS**

### 8:30 The basis for a process chain for functional component data

Michael Baumann, Durability Load Simulation, Dr. Christoph Böhm, Manager Chassis Components System, Daimler AG

### 9:00 On the design of actuators and control systems in early development stages

Amir Zare, PhD Student Vehicle Dynamics Preliminary Design, L. Rath-Maia, Dr. M. Zimmermann, BMW Group; Prof. Dr. K. Michels, Department of System Dynamics and Control Systems, University of Bremen

## 9:30 Process design for a companywide geometrical integration of manufacturing issues in the early development phases based on the example of automotive suspension

Bastian Leistner, PhD Student Chassis Manufacturing Process Optimisation, Prof. Dr. R. Mayer, Vehicle System Design, Faculty of Mechanical Engineering, Chemnitz University of Technology; D. Berkan, BMW Group

10:00 Refreshment break in the exhibition area

#### Moderator:

Martin Schwarz, Process Responsible Driving Dynamics, BMW Group

#### DRIVING COMFORT

### 10:30 Experimental comparison of the analysis methods for vibration transmission in the chassis

Christian Schubert, Research Assistant, M. Jaensch, S. Pries, Dr. K. Caliskan, Dr. R. Henze, Prof. Dr. F. Küçükay, Institute of Automotive Engineering (IfF), Technical University of Braunschweig

#### 11:00 Effect of friction reduction of magneto-rheological semi-active damper on ride comfort and vehicle dynamics

Kentaro Komori, Assistant Chief Engineer, D. Endo, G. Fujimoto, T. Tsukamoto, Honda R&D Co., Ltd. Automobile R&D Center, Japan

### 11:30 A development of the chassis design and R&H performance analysis tool based on EXCEL

Young Deuk Kim, Senior Research Engineer, H. K. Jung, M. W. Kang, H. S. Cho, Hyundai Motor Company, South Korea; Prof. S. S. Kim, Kookmin University, Graduate School of Automotive Engineering, South Korea

#### Moderator:

Alexander Gaedke, Vice President Engineering, Robert Bosch Automotive Steering GmbH

#### STEERING SYSTEMS AND FUNCTIONS

#### 8:30 The new Audi dynamic all-wheel steering

Dr. Anton Obermüller, Project Manager Dynamic-all-Wheel Steering, Dr. K. Diepold, Dr. C. Schimmel, I. Scharfenbaum, Dr. J. Schuller, Dr. R. Schwarz, AUDI AG

### 9:00 Development of electric power assisted steering (EPAS) for global emerging markets such as India

Anand Mule, Chassis System, Engineering Research Center, S. Matsagar, J. K. Sinha, Tata Technologies Limited, India; S. Salunkhe, Tata Motors Limited, India

#### 9:30 The choice of hand positions on the steering wheel

Christian Strümpler, Teamleader HMI / Human Factors, EMEA Core Engineering & Research, TAKATA AG

10:00 Refreshment break in the exhibition area

#### Moderator:

Dirk Ferge, Senior Manager Technical Marketing, JTEKT Europe

#### VIRTUAL DEVELOPMENT METHODS

### 10:30 Systematic model-based vibration analysis of a controlled electric power steering system

Prof. Dr. Gerd Wittler, Professor of Control Engineering and Simulation, Faculty of Mechatronics and Electrical Engineering, University of Applied Sciences Esslingen; M. Haßenberg, Prof. Dr. H. Henrichfreise, Cologne Laboratory of Mechatronics (CLM), Cologne University of Applied Sciences; H. Briese, DMecS Development of Mechatronic Systems GmbH & Co. KG

### 11:00 Virtual verification of passenger vehicle steering systems

Dr. Matthijs Klomp, Technical Expert – Vehicle Dynamics CAE, M. Ljungberg, Volvo Car Group, Sweden; M. Attinger, S. Hoesli, T. Kratzer, Robert Bosch Automotive Steering GmbH

### 11:30 Steering system models – an efficient approach for parameter identification and steering system optimization

Dr. Jinhuai Lin, Chief Engineer Vehicle Dynamics, T. Kloos, Prof. Dr. P. Pfeffer, MdynamiX AG

12:00 Lunch in the exhibition area

>> BRAKE.TECH SECTION

Königssaal

### >> TIRE.WHEEL.TECH SECTION

Fürstensalon

#### Moderator:

Karl Friedrich Wörsdörfer, Vice President Product Development Hydraulic Brake Systems, Continental Teves AG & Co. oHG

#### HIGH-PERFORMANCE BRAKES AND TEST METHODS

8:30 Regenerative braking during high-performance driving in super-sports vehicles

Jorge Alberto Jáuregui, ESP Application Expert in Sports Vehicles, Bosch Engineering GmbH

9:00 Simplified thermo-elastic modeling of high-performance brakes

Prof. Dr. Giampiero Mastinu, Prof. M. Gobbi, Department of Mechanical Engineering, Politecnico di Milano, Italy; C. Cantoni, R. Passoni, Brembo S.p.A., Italy

9:30 Future braking tests for the Periodical Technical Inspection (PTI) – Is the braking effect test still up to date?

Burkhard Müller, Project Engineer Predevelopment of Testing Technologies, Marco Stiller, Vice Head, R. Frankenstein, P. Kalms, Central Agency for PTI / FSD Fahrzeugsystemdaten GmbH

10:00 Refreshment break in the exhibition area

#### Moderator:

Jan Münchhoff, Head of Project Management Chassis A6/A7/A8, AUDI AG

#### BRAKE WEAR PARTICLE EMISSIONS AND MATERIALS

10:30 Development of a commonized methodology for measuring brake wear particles – current status within the PMP IWG

Theodoros Grigoratos, Environmental Chemist – Researcher, G. Martini, Joint Research Centre (JRC), European Commission (EC), Italy

11:00 Options for investigating brake particle emissions on a brake dynamometer

Dr. Sebastian Gramstat, NVH Project Engineer, R. Waninger, Dr. D. Lugovyy, M. Schröder, AUDI AG

11:30 Thermal spray ceramic coatings as friction surfaces of brake rotors

Septimiu Popa, Scientific Employee, Prof. Dr. Dr. R. Gadow, Prof. Dr. A. Killinger, Institute for Manufacturing Technologies of Ceramic Components and Composites (IFKB), University of Stuttgart

12:00 Lunch in the exhibition area

#### Moderator:

Victor Underberg, Head of Application Chassis Characteristics, Driving Dynamics/-Comfort, AUDI AG

#### DEVELOPMENTAL AIMS AND OBJECTIFICATION

8:30 Passenger car vs. truck tires – different development priorities
Stephan Brückner, OE Account Manager, TBR Tyres, Hankook Tire Europe GmbH

9:00 Prediction of driver's handling assessment using a general regression neural network
Dr. Saskia Monsma, Research Associate and Senior Lecturer, HAN University of Applied Sciences, The Netherlands

9:30 Application of objective vehicle dynamics methods in the tire development process Christian Cramer, Test Method Development & Vehicle Dynamics, Prof. Dr. B. Wies, Continental Reifen Deutschland GmbH

10:00 Refreshment break in the exhibition area

#### Moderator:

Stefan Bender, OE Account Manager, Hankook Tire Europe GmbH

#### TIRE TESTING AND SIMULATION

10:30 Tire modelling for accurate anti-lock braking system simulations

Carlo Lugaro, Senior Application Engineer, W. Versteden, J. Schüling, TASS International, The Netherlands; B. Wassertheurer, F. Niedermeier, BMW AG

11:00 Decoupling the physical effects of transient tire behavior based on optical measurements of carcass deformation

Pavel Sarkisov, PhD Candidate, Prof. Dr. G. Prokop, J. Kubenz, Chair of Automotive Engineering, TU Dresden; Dr. S. Popov, Chair of Wheeled Vehicles, Bauman Moscow State Technical University, Russia

11:30 Influence of testing surface on tire lateral force characteristics

Christian Ludwig, Sen. Engineer Chassis, Engineering Design, Hyundai Motor Europe Technical Center GmbH; C. S. Kim, Hyundai Motor Company, South Korea

12:00 Lunch in the exhibition area

### >> CHASSIS.TECH SECTION

Festsaal

### >> STEERING.TECH SECTION

Palaishalle

#### Moderator:

Daniel Wegener, Senior Manager Chassis, Institute for Automotive Engineering (ika), RWTH Aachen University

#### CHASSIS CONTROL SYSTEMS

13:30 **SKYACTIV TECHNOLOGY to enhance "Jinba Ittai"**Tohru Yoshioka, Deputy General Manager
Integrated Control System Development Division,
Mazda Motor Corporation, Japan

 New torque vectoring functions for modular electrical propulsion
 Rob Kraaijeveld, Senior Chassis Specialist,
 M. Dorn, K. Wolff, FEV Europe GmbH

14:30 **Controller concept for automated lateral control**Felix Tigges, Research Assistant, F. Krauns,
A. Hafner, Dr. R. Henze, Prof. Dr. F. Küçükay,
Institute of Automotive Engineering (IfF),
Technical University of Braunschweig

15:00 Refreshment break in the exhibition area

#### Moderator:

Frank Esser, Supervisor Advanced driving attribute Methods & Tools, Ford-Werke GmbH

#### STEERING FEEL

13:30 The new Hyundai i30's steering feel – integrated performance development by HiL tests and DoE Alessandro Contini, Engineer Steering & Suspension, T. Schöning, Hyundai Motor Europe Technical Center GmbH

14:00 Model-based online optimisation of EPS controller using HiL test benches

Christian Wagner, Research Assistant, M. Flormann, T. Meister, Dr. R. Henze, Prof. Dr. F. Küçükay, Institute of Automotive Engineering (IfF), Technical University of Braunschweig

Evaluation of the robustness of an EPS control system in an early stage of the product development life cycle
 Paul Milbaier, Systems Engineer Systems
 Engineering Wheel to Wheel, Dr. S. Grüner,
 M. Heger, A. Gaedke, Robert Bosch Automotive
 Steering GmbH

15:00 Refreshment break in the exhibition area

#### >> CHASSIS.TECH PLUS SECTION

Festsaal

#### Moderator:

Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Munich University of Applied Sciences

#### KEYNOTE LECTURES III

15:30 Modularization of vehicle control systems based on the application of object-oriented design principles
Dr. Veit Held, Senior Manager Advanced Engineering Chassis and Chassis Control Systems,
Dr. A. Heitmann, Adam Opel AG

Tires & system solutions for the cars of the future Prof. Dr. Burkhard Wies, Vice President Tire Line Development, Dr. H. Lange, Dr. T. Yilkiran, Continental Reifen Deutschland GmbH

16:30 Closing remarks

Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Munich University of Applied Sciences; Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ | ATZelektronik | Iwd lightweight.design

### >> BRAKE.TECH SECTION

Königssaal

### >> TIRE.WHEEL.TECH SECTION

Fürstensalon

#### Moderator:

Prof. Dr. Ralph Mayer, Professorship Vehicle System Design, Faculty of Mechanical Engineering, Chemnitz University of Technology

#### **BRAKE SYSTEMS OF THE FUTURE**

13:30 A new wheel-brake concept in the context of mobility trends
Paul Linhoff, Head of Chassis & Brake Systems, Continental Teves AG & Co. oHG

### 14:00 Downsizing potential of wheel brakes in electric vehicles

Daniel Wagner, Research Associate, Prof. Dr. M. Lienkamp, Chair of Automotive Technology (FTM), Technical University of Munich; Dr. J. Hoffmann, Continental Teves AG & Co. oHG

### 14:30 Integrated Power Brake: modular set extension for highly automated driving

Urs Bauer, System Development Integrated Power Brake, Dr. T. Maucher, M. Brand, Robert Bosch GmbH

15:00 Refreshment break in the exhibition area

#### Moderator:

Stefan Dittmar, Team Leader Wheels, Business Unit Tires/Wheels, TÜV SÜD Product Service GmbH

#### WHEEL TECHNOLOGIES AND TRENDS

### 13:30 Possible contributions of the wheel regarding CO<sub>2</sub> emissions or how to increase the range of electrically powered vehicles

Dr. Detlef Kube, Head of Technic Automotive & Accessory, H. J. Klamann, M. Timm, UNIWHEELS Automotive (Germany) GmbH

### 14:00 Influence of rotating wheels on the vehicle dynamics of passenger cars

Maximilian Georg Reisner, PhD Candidate Development Rear Axle, Prof. Dr. G. Prokop, Chair of Automotive Engineering, TU Dresden; R. Clauss, AUDI AG

ThyssenKrupp Carbon Components GmbH

14:30 Carbon wheels conquer the market – benefit, state of the art, foresight Dr. Jens Werner, CEO,

15:00 Refreshment break in the exhibition area



### 8TH INTERNATIONAL MUNICH CHASSIS SYMPOSIUM

#### One for All - Four Congresses in One Event

The International Munich Chassis Symposium is the key international meeting place for the chassis community in the fields of the chassis, steering, brakes and wheels/tires.

The **1st day** will be taken up by the interdisciplinary section **chassis.tech plus** with two parallel sessions of lectures in the afternoon. The symposium will focus on overriding issues relating to chassis systems and vehicle dynamics before dividing up

on the **2nd day** into the following four parallel sections concentrating on the chassis, steering, brakes and wheels/tires:

chassis.tech steering.tech brake.tech tire.wheel.tech

In the afternoon, the parallel sections will merge together again for the interdisciplinary section **chassis.tech plus**.

This year, the content focuses on current trends, developments and solutions for automated and highly automated driving. Of course, the latest developments and methods of chassis design will also be presented.

Participants can move freely between the four parallel sections at any time. The individual parallel sections scheduled for the second day – **chassis.tech**, **steering.tech**, **brake.tech**, **tire.wheel.tech** – can be booked separately at a reduced registration fee.

For the whole duration of the event, the **accompanying trade exhibition** will allow you to gather information on innovative products and services offered in the field of chassis development.

#### **PARTICIPANTS**

- · Manufacturers of passenger cars and commercial vehicles and their suppliers
- · Development service providers
- · Universities and research institutes
- · Manufacturers of measuring, testing and simulation systems
- · Authorities, associations and testing institutes

#### EVENING RECEPTION IN MUNICH RATSKELLER

Tuesday 20 June 2017 | from 18:30 in Munich Ratskeller Marienplatz 8 | 80331 Munich

Experience a cosy evening in the traditional Ratskeller. We are happy to invite you to attend an evening of stimulating conversation with colleagues and to offer you the chance to enjoy Bavarian culinary delicacies.

The foundation stone of the Ratskeller was laid on 25 August 1867. However, the first landlord and landlady did not move into the premises of the new town hall until 1 August 1874, the date when the city council started its activities there.

In accordance with the Romantic spirit of the age, Georg von Hauberisser designed the edifice as well as the furnishings of the Ratskeller in the 16th-century Gothic style. Munich painters such as Heinrich Schlitt and Josef Rösl designed the various vaults.

The Ratskeller, established ever since then as a place of civic hospitality, extends a hearty welcome with its typical Bavarian charm.

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The International Association for Vehicle System Dynamics founded in 1977 is an open non-commercial community of persons and organizations of different countries engaged in scientific research and development in the field of Vehicle Dynamics and related fields in order to promote the free and informal exchange of ideas and results.









#### **EXHIBITION**

#### Tuesday 20 June 2017 and Wednesday 21 June 2017

An accompanying trade exhibition will be taking place again in the foyers of the function rooms on Tuesday 20 June and Wednesday 21 June. In numerous booths, manufacturers and suppliers of the automotive industry will present the latest developments in chassis technology to the specialist audience.

#### List of exhibitors attending chassis.tech plus 2017

As of February 2017

A2Mac1 | AVL List GmbH | Bertrandt AG | Dassault Systèmes Deutschland GmbH | Georg Fischer Automotive AG | IAMT Engineering GmbH & Co. KG | IAV GmbH | IMS Gear SE & Co. KGaA | IPG Automotive GmbH | Munich University of Applied Sciences | Polytec GmbH | Renesas Electronics Europe GmbH | Saint-Gobain | Springer Professional | Springer Vieweg | TASS International | TBJ / Anthony Best Dynamics Ltd. (ABD) | TESIS DYNAware | TÜV SÜD AG | VI-grade GmbH

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#### ATZ WORLDWIDE



#### REGISTRATION FEE

### Participation in the entire symposium chassis.tech plus 20 and 21 June 2017 € 1,495.– plus VAT

This includes the conference documents, food and drinks during the breaks and the evening event on 20 June 2017.

#### Participation on one day only

20 June 2017 I in the section **chassis.tech plus** or 21 June 2017 I in one of the four parallel sections **chassis.tech**, **steering.tech**, **brake.tech**, **tire.wheel.tech** € 945.– plus VAT

This includes the conference documents, food and drinks during the breaks and the evening event on 20 June 2017.

Participants can change between the parallel sections at any time. The registration fee also includes admission to the accompanying trade exhibition.

**University members of the IAVSD** receive a 50 % discount on the registration fee.

#### Mode of payment

By bank transfer after invoice or by credit card (MasterCard, Visa).

#### LANGUAGES USED IN THE PRESENTATIONS

German and English with simultaneous interpreting (German – English / English – German)

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#### VENUE

Hotel Bayerischer Hof Promenadeplatz 2–6 | 80333 Munich | Germany

Phone +49 89 2120-0 www.bayerischerhof.de

#### HOTELS

The following hotels have room blocks at reduced prices for the participants. Please reserve by 8 May 2017 (Motel One) or 24 April 2017 (Novotel) and refer to "chassis.tech plus".

#### Motel One München Deutsches Museum

Rablstraße 2 | 81669 Munich
Phone +49 89 4445558-0
Fax +49 89 4445558-10
muenchen-deutschesmuseum@motel-one.com
www.motel-one.com/en/hotels/munich/

muenchen-deutsches-museum/
Single room with breakfast € 88.50
Double room with breakfast € 113.–

#### **Novotel München City**

Hochstraße 11 | 81669 Munich
Phone +49 89 66107-0
Fax +49 89 66107-999
H3280@accor.com
www.novotel.com/de/hotel-3280-novotel-muenchen-city/index.shtml
Single room with breakfast € 154.–
Double room with breakfast € 175.–

#### You can book other hotels in Munich via:

www.muenchen-tourist.de

#### CONDITIONS

No cancellation charge is due if registration is cancelled by 22 May 2017. Cancellations made after that date will incur a charge of 35 % of the registration fee. For cancellations made after 29 May 2017, the full registration fee is payable. Cancellations must be made in writing. The date of the postmark will determine whether the deadline has been met. If you are unable to attend, we will be happy to accept a substitute participant.

Should a speaker be unable to attend at short notice by reason of force majeure, illness, accident or other circumstances for which ATZlive cannot be held responsible, another qualified person will be appointed to the exclusion of any claim for compensation. Should the event be cancelled altogether, we will of course refund the registration fee.

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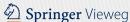
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### 8th International Munich Chassis Symposium

20 AND 21 JUNE 2017 I MUNICH I GERMANY

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