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CONFERENCES ON VEHICLE AND POWERTRAIN DEVELOPMENT

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chassis.tech plus 2023

4 congresses in one event

20 – 21 June 2023
Munich, Germany
or virtually via live stream

chassis.tech plus

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steering.tech
brake.tech
tire.wheel.tech

Hybrid event

Your choice:
Participate on site or virtually via live stream

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KEYNOTE LECTURES

Automobili Lamborghini S.p.A. / BMW M GmbH / Continental Reifen Deutschland GmbH / Maserati S.p.A. / Porsche Engineering Services, s.r.o. / Vector Consulting Services GmbH

TÜV SÜD

ONE FOR ALL

4 congresses in one event

chassis.tech plus

Tailor-made chassis systems –
Designing the steps from manual to autonomous driving for all chassis components

Integrated chassis systems –
Rethinking the optimization of architectures and modules for vehicles as part of a complete system

chassis.tech

Innovative chassis systems –
Using software tools, driving simulators, virtual tests, and road tests for optimum vehicle dynamics

steering.tech

Smart steering systems –
Meeting the challenges of steering feel, hand-over, take-over, and steer-by-wire

brake.tech

Modern brake systems –
Mastering brake technology, brake blending, and recuperation as well as environmental aspects in the development process

tire.wheel.tech

Reliable tire-wheel components –
Sustainably developing processes and methods for low-emission, lightweight, and energy-efficient products

14TH INTERNATIONAL MUNICH CHASSIS SYMPOSIUM

The choice is yours: attend on site or virtually via live streams of all sessions.

Prof. Dr. Peter E. Pfeffer
Hochschule München University of Applied Sciences
Scientific Director of the Symposium

Welcome

The megatrends of sustainability, electrification, and automation in the mobility sector are also having a major impact on the chassis system as a whole. Sophisticated and time-saving development processes and methods will be required if we are to meet the customers' diverging wishes for driving comfort, automated driving levels, and driving enjoyment. Practical solutions include driving simulator analyses, targeted road tests, evaluation by artificial intelligence, and more and more frequent virtual validation. All this will need to be supplemented by engineering measures to optimize NVH and reduce brake dust and tire wear.

The 14th International Munich Chassis Symposium chassis.tech plus brings together numerous experts in suspension systems, steering, brakes, tires/wheels, and automated driving for an exchange of ideas and experience. Innovative research and development activities will be presented for the first time and will form the basis for constructive discussions.

You can look forward to more than 50 wide-ranging papers, including keynote lectures by Franciscus van Meel (BMW M), Dr. Davide Danesin (Maserati), Prof. Dr. Christof Ebert (Vector Consulting Services), and Bernd Korte (Continental Tires) on the first day of the symposium, as well as the new module of interaction with the plenum. On the second day, Thomas Sprengel (Porsche Engineering Services) and Victor Underberg (Lamborghini) will present their keynote lectures.

We look forward to welcoming you to the Bayerischer Hof in the center of Munich or virtually via our live stream and hope you have an exciting and informative conference.

Stay at the cutting edge!

- Highly relevant technical papers presented by renowned speakers
- Networking in the international expert community
- Innovative products and services

One for all – 4 congresses in one event

The International Munich Chassis Symposium with its accompanying trade exhibition is the key worldwide meeting place for the chassis community in the fields of the chassis, steering, brakes, and tires/wheels.

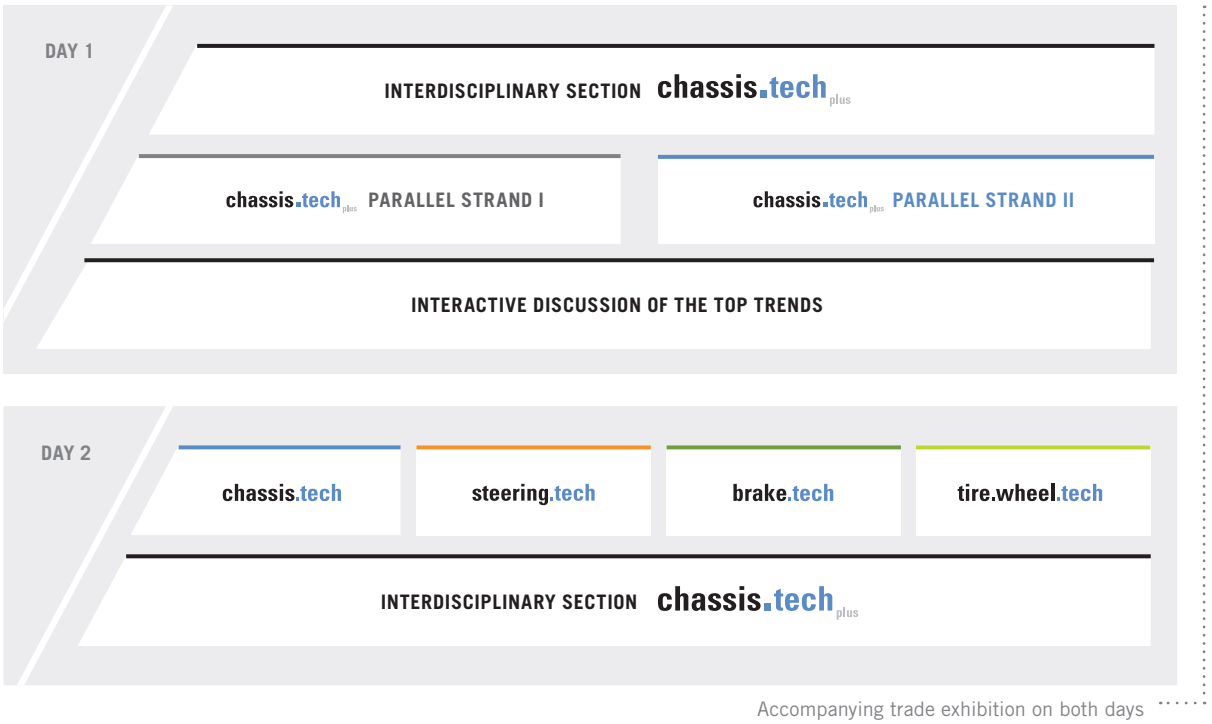
The 1st day will be taken up by the interdisciplinary section chassis.tech plus with two parallel sessions of lectures in the afternoon.

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 tires/wheels:

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

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

In 2023, the main focus of the symposium will be on current aspects of automated driving, taking into account engineering efficiency and cost-effectiveness. This will include driving characteristics and virtual product validation, vehicle dynamics design and control systems, safety and controllability in steer-by-wire systems, and feedback actuators and designs for steering feel, as well as the topics of efficiency, sustainability, and emissions measurement for brake systems, tire wear tests, and particle emissions.



Accompanying trade exhibition on both days

Accompanying exhibition

Throughout the entire conference, the accompanying exhibition will take place in the foyers on site and virtually in the digital event platform. Manufacturers and suppliers from the automotive industry will present innovative products and services in the field of chassis technology to the specialist audience.

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

chassis.tech plus 2023 as a hybrid event

The choice is yours: attend on site or virtually via live streams

The streaming package includes the keynote lectures and all lectures of the two parallel strands on the 1st day as well as the four parallel sections on the 2nd day as live streams.

The digital event platform offers you

- Q&A feature in the live streams
- 1:1 video chats with attendees, exhibitors, and speakers
- live polls
- your personal program overview
- a virtual exhibition
- all available conference documents in one place for download
- as well as other useful functions

Evening reception in Munich Ratskeller

Tuesday, 20-06-2023 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.

Prof. Dr. Peter E. Pfeffer
Hochschule München University of Applied Sciences

Scientific Director of the Symposium, Head of chassis.tech plus section

Dr. Alexander Heintzel
Editor-in-Chief ATZ | MTZ Group, Springer Nature

Michael Reichenbach
Vice Editor-in-Chief ATZ, Springer Nature

Our four Scientific Advisory Boards, which are made up of prominent experts in their respective fields, provide support during the planning phase of the conference and help to identify suitable topics.

chassis.tech

Martin Schwarz
BMW Group
Head of chassis.tech section

Egbert Bakker
Volvo Car Group, Sweden

Klaus Baltruschat
TÜV SÜD Product Service GmbH

Prof. Dr. Lutz Eckstein
RWTH Aachen University

Friedrich Eichler
Volkswagen de México, S.A. de C.V., Mexico

Dr. Christoph Elbers
ZF Group

Dr. Christian Hartweg
Opel Automobile GmbH

Prof. Hideo Inoue
Kanagawa Institute of Technology, Japan

Thomas Kutsche
ZF Group

Heinz Müllner
MAN Truck & Bus SE

Prof. Bernhard Schick
Kempten University of Applied Sciences

Timo Schöning
Hyundai Motor Europe Technical Center GmbH

steering.tech

Dr. Christoph Bittner
Dr. Ing. h. c. F. Porsche AG
Head of steering.tech section

Daniel Alt
Joyson Safety Systems Aschaffenburg GmbH

Thilo Bitzer
ZF Group

Prof. Dr. Dr. Hans-Hermann Braess
(Honorary Chairman)

Jennifer Endres
Robert Bosch Automotive Steering GmbH

Frank Esser
Ford-Werke GmbH

Dr. Robert Fuchs
JTEKT Corporation, Japan

Hans Joachim Kieserling
Mercedes-Benz AG

Bertram Möller
Nexteer Automotive Germany GmbH

Prof. Dr. Manfred Plöchl
TU Vienna, Austria

Kristof Polmans
thyssenkrupp Presta AG, Liechtenstein

Dr. Matthias Schölzel
BMW Group

Dr. Yasuji Shibahata
Hitachi Astemo, Ltd., Japan

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Alexander Gaedke
Robert Bosch GmbH
Head of brake.tech section

Moritz Bolay
Mercedes-Benz AG

Prof. Dr. Eberhard Drechsel
formerly Hochschule München University of Applied Sciences

Dr. Falk Hecker
Knorr-Bremse SfN GmbH

Tobias Linke
MAN Truck & Bus SE

Prof. Dr. Giampiero Mastinu
Politecnico di Milano, Italy

Prof. Dr. Ralph Mayer
TU Chemnitz

Alexander Prahst
Dr. Ing. h.c. F. Porsche AG

Dr. Albert Schlecht
AUDI AG

Dr. Ralf Stroph
BMW Group

Prof. Dr. Rüdiger Tiemann
htw saar

Dr. Thorsten Ullrich
Continental Automotive Technologies GmbH

tire.wheel.tech

Ralf Schweizer
AUDI AG
Head of tire.wheel.tech section

Stephane Bertoldi
Michelin Reifenwerke AG & Co. KGaA

Stefan Dittmar
TÜV SÜD Product Service GmbH

Ralf Duning
Maxion Wheels Holding GmbH

Prof. Dr. Frank Gauterin
Karlsruhe Institute of Technology (KIT)

Prof. Patrick Gruber
University of Surrey, UK

Klaus Krause
Hankook Tire Co. Ltd.

Prof. Dr. Günter Leister
tire.wheel.mobility solutions

Michael Staude
TÜV SÜD Product Service GmbH

Edwin van der Stad
Nexen Tire Europe s.r.o

Prof. Dr. Andreas Wagner
University of Stuttgart

Prof. Dr. Burkhard Wies
Continental Reifen Deutschland GmbH

Prof. Dr. Makoto Yamakado
Kanagawa Institute of Technology, Japan

Keynote lectures

In their keynote lectures, renowned speakers from the industry will provide forward-looking insights that go beyond the technical contents and illuminate the current issues from many different perspectives. In this way, the lectures, with their international focus, will be particularly important as a trend barometer for the conference.

TUESDAY, 20-06-2023 / MORNING / FESTSAAL

KEYNOTE

09:30

Franciscus van Meel
CEO, BMW M GmbH, Germany

On the way to high-performance electric mobility with integrated drivetrain and vehicle dynamics control

KEYNOTE

10:00

Dr. Davide Danesin
Granturismo Program Director, Maserati S.p.A., Italy

The new Maserati Granturismo: a new chassis for a multi-propulsion application

KEYNOTE

11:15

Prof. Dr. Christof Ebert
Managing Director, Vector Consulting Services GmbH, Germany

Automotive systems engineering

KEYNOTE

11:45

Bernd Korte
Vice President Research and Development Original Equipment Passenger and Light Truck Tires, Continental Reifen Deutschland GmbH, Germany

Opportunities and challenges of the sustainability megatrend for the tire industry

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WEDNESDAY, 21-06-2023 / AFTERNOON / FESTSAAL

KEYNOTE

15:15

Thomas Sprengel
Senior Manager, Chassis Development, Porsche Engineering Services, s.r.o., Czech Republic

Chassis development in China – overview and trends

KEYNOTE

15:45

Victor Underberg
Senior Manager, Whole Vehicle Development, Automobili Lamborghini S.p.A., Italy

Lamborghini sports car: evolution from ICE to PHEV

chassis.tech plus

08:00 **Registration at the check-in**

09:15 **Welcome and opening**
Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group, Springer Nature;
Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Hochschule München University of Applied Sciences

09:30 – 10:30, Plenary section – Festsaal

KEYNOTE LECTURES I

Moderation: Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Hochschule München University of Applied Sciences

09:30 KEYNOTE
On the way to high-performance electric mobility with integrated drivetrain and vehicle dynamics control
Franciscus van Meel, CEO, BMW M GmbH, Germany

10:00 KEYNOTE
The new Maserati Granturismo: a new chassis for a multi-propulsion application
Dr. Davide Danesin, Granturismo Program Director, Maserati S.p.A., Italy

10:30 Opening of the accompanying trade exhibition and refreshment break in the exhibition area

11:15 – 12:15, Plenary section – Festsaal

KEYNOTE LECTURES II

Moderation: Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Hochschule München University of Applied Sciences

11:15 KEYNOTE
Automotive systems engineering
Prof. Dr. Christof Ebert, Managing Director, Vector Consulting Services GmbH, Germany

11:45 KEYNOTE
Opportunities and challenges of the sustainability megatrend for the tire industry
Bernd Korte, Vice President Research and Development Original Equipment Passenger and Light Truck Tires, Continental Reifen Deutschland GmbH, Germany

12:15 – 12:45, Plenary section – Festsaal

INTERACTIVE CHOICE OF THE TOP TRENDS: MAKE A SUGGESTION!

12:45 Lunch in the exhibition area

PARALLEL STRAND I

14:00 – 15:30, Parallel strand I – Festsaal

FUTURE MOBILITY

Moderation: Martin Schwarz, Head of Axially Parallel Steering Gear and Rear Axle Steering, BMW Group

14:00 **Is micro-mobility the path towards electric corner modules?**
Dr. Hans-Jörg Feigel, Senior Vice President Strategy & Future Solutions, Continental Automotive Technologies GmbH, Germany

14:30 **EDAG CityBot – chassis and vehicle dynamics control of a multifunctional, autonomous robot vehicle**
Jonas Grötzinger, Senior Expert Vehicle Motion,
Dr. Dominic Jekel, Head of CoC Brake,
EDAG Engineering GmbH, Germany

15:00 **Shaping the future steering wheel – evaluation of current trends in steering wheel rim design**
Jonas Bott, Core Engineer,
Anne-Marie Zühlsdorff, HMI Specialist,
Joyson Safety Systems Aschaffenburg GmbH, Germany

PARALLEL STRAND II

14:00 – 15:30, Parallel strand II – Palaishalle

DRIVING SIMULATORS

Moderation: Heinz Müllner, Senior Vice President Engineering Truck, Head of Vehicle Architecture & Concepts, MAN Truck & Bus SE

14:00 **Comparison of the perception of damaged rear axle tie rods in the real vehicle and in the dynamic driving simulator based on subjective and physiological data**
Robert Schurmann, Doctoral Candidate, Simulation Wheel Guidance System, Volkswagen AG [in cooperation with Kempten University of Applied Sciences; Universität der Bundeswehr München], Germany

14:30 **Methods for conducting dynamic driving maneuvers on a handling roadway test system**
Daniel Zeitvogel, Academic Research Assistant, FKFS – Research Institute for Automotive Engineering and Powertrain Systems Stuttgart [in cooperation with IFS, University of Stuttgart], Germany

15:00 **HMI studies on the driving simulator to improve trust in ADAS systems among real-life drivers**
Nikolai Ebinger, Researcher Human Factors,
Virtual Vehicle Research GmbH, Austria
[in cooperation with VI-grade s.r.l., Italy]

15:30 Refreshment break with coffee and tea in the exhibition area

16:00 – 17:30, Parallel strand I – Festsaal

DRIVING PERFORMANCE AND VALIDATION

Moderation: Klaus Baltruschat, Strategic Account Manager, Head of Sales: Tires & Wheels, TÜV SÜD Product Service GmbH

16:00 **A method of tire and vehicle model validation for virtual ESC homologation**
Dr. Pavel Sarkisov, Group Leader, Vehicle Dynamics Simulation, TRE GmbH [in cooperation with Volkswagen AG], Germany

16:30 **An iterative test case sampling method to identify critical limits of ADAS/ADS in simulation**
Moritz Markofsky, PhD Candidate, ADAS System Integration, Porsche Engineering Services GmbH [in cooperation with University of Duisburg-Essen], Germany

17:00 **New Maserati Granturismo Folgore: from virtual simulator optimization to road performance**
Giuseppe Raimondi, Advance and Simulator Responsible, Maserati S.p.A., Italy

16:00 – 17:30, Parallel strand II – Palaishalle

MOTION CONTROL

Moderation: Dr. Christian Hartweg, Manager Vehicle Dynamics Specification & Requirements, Opel Automobile GmbH

16:00 **Vehicle Motion Management – cracking the complexity code**
Helge Westerfeld, Project Director Vehicle Motion Management, Robert Bosch GmbH, Germany

16:30 **A generic model predictive vehicle dynamics controller for simulation**
Dr. Volker Ewald, Consultant, IPG Automotive GmbH, Germany

17:00 **Integrated vehicle dynamic control strategy for an over-actuated by-wire vehicle**
Lionel Brice Pouansi Majiade, Research Assistant, Institute for Automotive Engineering (ika), RWTH Aachen University, Germany

17:35 – 18:10, Plenary section – Festsaal

INTERACTIVE DISCUSSION OF THE TOP TRENDS

Moderation: Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Hochschule München University of Applied Sciences; Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group, Springer Nature

18:30 **Evening reception in Munich Ratskeller**
Enjoy interesting conversations with colleagues and speakers in a pleasant atmosphere.

chassis.tech

08:30 – 10:00, chassis.tech section – Palaishalle

SENSOR SYSTEMS

Moderation: Dr. Daniel Wegener, Head of Chassis & NVH, fka GmbH

08:30 **Utilization of chassis height sensors for truck payload detection**
Devin Wojcik, Suspension Calibration Engineer, ZF Group, USA

09:00 **Enhancing the real-time connection among driver, vehicle, and road**
Joe Klesing, Product Line Executive, Nexteer Automotive Corp., USA;
Shahar Bin-Nun, CEO, Tactile Mobility, Israel

09:30 **Digital and real-world proving grounds – use cases of high-resolution track models from road condition monitoring to simulation**
Karsten Bronowski, Sales & Business Development Manager, XenomatiX N.V., Belgium

steering.tech

08:30 – 10:00, steering.tech section – Festsaal

STEER-BY-WIRE: SAFETY AND CONTROLLABILITY

Moderation: Dr. Matthias Schölzel, BMW AG

08:30 **Basic safety guidelines for steer-by-wire for a new DIN standard Indroduction**
Dr. Matthias Schölzel, Consultant for Pre-Development Steering Systems, BMW AG, Germany

Safety goals, item definition, and controllability in the case of a first fault
Christian Kleiner, Lead Engineer Safety Systems for Chassis Systems, Schaeffler AG, Germany

Operating behavior after faults
Alexander Ein Waldt, Technical Expert Steering Systems, Ford-Werke GmbH, Germany

09:00 **Evaluation of requirements for safety mechanisms and E/E architecture in SbW steering systems with fault injection techniques**
Maximilian Wesche, PhD Student Development Steering Systems, Volkswagen AG [in cooperation with Clausthal University of Technology], Germany

09:30 **Evaluation methodology for controllability of SbW errors by normal drivers**
Lotte Saupp, Senior Researcher Traffic Psychology & Acceptance, formerly ika, RWTH Aachen University [in cooperation with fka GmbH], Germany

10:00 Refreshment break with coffee and tea in the exhibition area

chassis.tech

10:30 – 12:00, chassis.tech section – Palaishalle

SUSPENSION

Moderation: Timo Schöning, Head of Department Chassis, Hyundai Motor Europe Technical Center GmbH

10:30 **Virtual chassis development – reaching for an optimized trade-off between safety, comfort, and efficiency**
Dr. Mark Wielitzka, Expert Software & Function Development, IAV GmbH [in cooperation with Chair of Fluid Systems, TU Darmstadt], Germany

11:00 **Driving on coconut shells: Carbon Air collaborates with UK OEM**
Dr. Toby Ackroyd, Product Development Engineer, Carbon Air Limited, UK

11:30 **Influence of friction and wear in ball joints and electric power steering systems on the driving comfort**
Jan Zuleeg, Senior Expert Tribology, Klüber Lubrication München GmbH & Co. KG, Germany

steering.tech

10:30 – 12:00, steering.tech section – Festsaal

DEVELOPMENT PROCESSES AND METHODS

Moderation: Bertram Möller, EPS Technology Manager and Managing Director, Nexteer Automotive Germany GmbH

10:30 **Steer-by-wire selfsteering behavior in the context of hands-off situations**
Götz-Philipp Wegner, SW Functional Safety Engineer Steering Systems, Ford-Werke GmbH, Germany

11:00 **Digital development of a robust steer-by-wire system**
Dr. Stefan Kirschstein, Engineering Manager System and Vehicle Simulation, ZF Automotive Germany GmbH, Germany

11:30 **Driving simulator study on the acceptance of a steer-by-wire steering system during braking on mue split**
Tim Ahrenhold, Research Assistant Vehicle Dynamics and Active Systems, Institute for Automotive Engineering (IfF), TU Braunschweig [in cooperation with Volkswagen AG], Germany

12:00 Lunch in the exhibition area

brake.tech

08:30 – 10:00, brake.tech section – Fürstensalon

NEW BRAKE SYSTEMS

Moderation: Dr. Falk Hecker, VP Technology – Driver Assistance and Automated Driving, Knorr-Bremse Systeme für Nutzfahrzeuge GmbH

08:30 **Safety and reliability requirements for EMB systems**
Timo Schröder, System Engineer, Future Brake Systems, Continental Automotive Technologies GmbH, Germany

09:00 **Requirements and solutions for brake-by-wire**
Dr. Hagen Kuckert, Project Director Chassis Systems Control, Robert Bosch GmbH, Germany

09:30 **Design of an eddy current brake by means of numerical simulation**
Dr. Jörg Neumeyer, Computational Engineer, Professional Development, CADFEM Germany GmbH, Germany

10:30 – 12:00, brake.tech section – Fürstensalon

EFFICIENCY AND SUSTAINABILITY

Moderation: Dr. Albert Schlecht, Head of Development Brake System / Brake Control System, AUDI AG

10:30 **Potential in the dimensioning of brake components in BEVs**
Matej Udovicic, PhD Student, Institute of Automotive Engineering (IFS), University of Stuttgart [in cooperation with FKFS – Research Institute for Automotive Engineering and Powertrain Systems Stuttgart; AUDI AG], Germany

11:00 **New HMI concepts for brake-by-wire systems**
Steffi Lang, Product Management, Chassis System Control, Robert Bosch GmbH, Germany

11:30 **Hybrid car regenerative braking system reverse engineering and modeling from track testing analysis**
Grazia Ponzano, formerly Dept. of Electronics and Telecommunications (DET), Politecnico di Torino [in cooperation with Danisi Engineering S.r.l.], Italy

tire.wheel.tech

08:30 – 10:00, tire.wheel.tech section – Königssaal

TIRE WEAR AND PARTICLE EMISSION

Moderation: Ralf Schweizer, Head of Development Wheels, Tires, Tire Pressure Monitoring Systems, AUDI AG

08:30 **How to design a representative tire abrasion rate on-vehicle test method**
Dr. Benjamin Oelze, Head of Test Method Development Tire Wear, ETRTO European Tyre & Rim Technical Organisation / Continental, Germany;
Frédéric Biesse, Senior Fellow for Tire Physics and Modelization, ETRTO European Tyre & Rim Technical Organisation / Michelin, France

09:00 **Recent approaches in the market-relevant evaluation of tire wear**
Jörg Buschmeier, Head of Expert Field Wear (Passenger & Light Truck Tires), Continental Reifen Deutschland GmbH, Germany

09:30 **LEON-T Project: tire particle emission measurements with a heavy-duty vehicle**
Dr. Sebastian Gramstat, Senior Expert, Development Foundation Brake, AUDI AG [in cooperation with TU Ilmenau], Germany

10:30 – 12:00, tire.wheel.tech section – Königssaal

TIRE TESTING AND SIMULATION

Moderation: Edwin van der Stad, Vice President Europe, Nexen Tire Europe s.r.o.

10:30 **Development of a tire sensor to determine the contact patch while driving**
Victor Mappes, Academic Research Assistant, Institute of Automotive Engineering (IFS), University of Stuttgart [in cooperation with FKFS], Germany

11:00 **Towards virtual tire development using driving simulators**
Sven Rechtsteiner, Senior Engineer, Steering & Suspension, Hyundai Motor Europe Technical Center GmbH, Germany; Guillaume Torres, SME Handling R&D Associate, Goodyear Innovation Center, Luxembourg [in cooperation with Goodyear, France]

11:30 **Tire virtualization and its usage as a digital twin: a modern approach**
Francesco Calabrese, Research Assistant, Fraunhofer Institute for Industrial Mathematics (ITWM) [in cooperation with tire.wheel.mobility solutions], Germany

chassis.tech

13:15 – 14:45, chassis.tech section – Palaishalle

VEHICLE DYNAMICS DEVELOPMENT

Moderation: Dr. Christoph Elbers, Vice President Car Chassis Technology Development, ZF Group

13:15 **Front loading the vehicle dynamics development via parametric modeling of axle elasto-kinematics**
Tim Wright, Development Engineer Vehicle Dynamics, Porsche Engineering Services GmbH, Germany

13:45 **Automated methods for the suspension pre-development**
Johannes Köpler, Research Assistant Vehicle Dynamics and Chassis Functions, Institute of Automotive Engineering (IFS), University of Stuttgart, Germany;
Yansong Huang, PhD Student, Div. Vehicle Engineering and Autonomous Systems, Chalmers University of Technology, Sweden [in cooperation with FKFS – Research Institute for Automotive Engineering and Powertrain Systems Stuttgart, Germany; Volvo Cars Corporation, Sweden]

14:15 **Target setting of driving performance index for module-based architecture development of product family**
Valentin Grange, Senior Engineer Cross-Portofolio Innovation, Siemens Digital Industries Software, France [in cooperation with Hyundai Motor Company, South Korea]

steering.tech

13:15 – 14:45, steering.tech section – Festsaal

FEEDBACK ACTUATORS AND STEERING FEEL

Moderation: Dr. Christoph Bittner, Director Development Vehicle Dynamics Systems, Dr. Ing. h.c. F. Porsche AG

13:15 **Study of information about the road surface and vehicle behavior provided by steer-by-wire without a feedback actuator**
Masayoshi Kimura, Technical Manager, Research and Development, Hitachi Astemo Europe GmbH, Germany [in cooperation with Hitachi Astemo, Ltd., Japan]

13:45 **Enabling HiL techniques for steering feel characterization on a dynamic simulator**
Alessio Anticaglia, PhD Student, UniFi Industrial Engineering (DIEF), Università degli Studi di Firenze [in cooperation with Meccanica 42 Srl], Italy

14:15 **Cooperative control concept for the handwheel actuator of a steer-by-wire system**
Robert Gonschorek, Senior Control Engineer, ZF Automotive Germany GmbH [in cooperation with Robots Research Institute (IRF), TU Dortmund University], Germany

14:45 Refreshment break with coffee and tea in the exhibition area

brake.tech

13:15 – 14:45, brake.tech section – Fürstensalon

BRAKE DUST

Moderation: Prof. Dr. Rüdiger Tiemann, Head of Chassis and Vehicle Dynamics, Automotive Engineering, htw saar – University of Applied Sciences

13:15 **Regulation of brake particle emissions – requirements and trends in future chassis development**
Toni Feißel, Development Engineer, IAV GmbH [in cooperation with Volkswagen AG], Germany

13:45 **Brake dust simulation with Discrete Element Method at Altair**
Benjamin Leblanc, Technical Manager, ALTAIR Engineering GmbH, Germany [in cooperation with Altair Engineering, Spain]

14:15 **Particle emission reduction of brake discs via high-performance cold spraying**
Leonhard Holzgaßner, Technical Director, Impact Innovations GmbH, Germany

tire.wheel.tech

13:15 – 14:45, tire.wheel.tech section – Königssaal

INNOVATIONS IN TIRES AND WHEELS

Moderation: Stefan Dittmar, Head of Wheels, TÜV SÜD Product Service GmbH

13:15 **Connected tire and tire predictive maintenance solutions**
Dr. Jérémy Vayssettes, System Designer – Connected Solutions,
Denis Martin, Global Program Manager for TMS – Connected Solutions, Manufacture Française des Pneumatiques Michelin, France

13:45 **Automatic tire wheel assembly: challenges and solutions**
Prof. Dr. Günter Leister, CEO, tire.wheel.mobility solutions / twms-consulting [in cooperation with Kokusai Europe GmbH], Germany

14:15 **Innovation in steel wheels: challenges and future perspectives**
PhD Giorgio Gallio, Research and Innovation Manager, 4W Italia srl (CLN Group), Italy

chassis.tech plus

15:15 – 16:15, Plenary section – Festsaal

KEYNOTE LECTURES III

Moderation: Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Hochschule München University of Applied Sciences, Germany

15:15 KEYNOTE
Chassis development in China – overview and trends
Thomas Sprengel, Senior Manager, Chassis Development, Porsche Engineering Services, s.r.o., Czech Republic

15:45 KEYNOTE
Lamborghini sports car: evolution from ICE to PHEV
Victor Underberg, Senior Manager, Whole Vehicle Development, Automobili Lamborghini S.p.A., Italy

16:15 **Closing remarks**
Prof. Dr. Peter E. Pfeffer, Automotive Engineering, Hochschule München University of Applied Sciences;
Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group, Springer Nature

The current program is also available online:
www.atzlive.de/en/chassis

TÜV SÜD

Generating competitive edge through smart use of knowledge.

TÜV SÜD is a premium quality, safety, and sustainability solutions provider that specializes in testing, inspection, auditing, certification, training, and knowledge services. Since 1866, the company has remained committed to its founding principle of protecting people, property, and the environment from technology-related risks.

Headquartered in Munich, Germany, TÜV SÜD is represented in more than 1,000 locations worldwide. TÜV SÜD operates globally with a team of more than 25,000 multi-disciplinary experts recognized as specialists in their respective fields. By combining impartial expertise with invaluable insights, the company adds tangible value to businesses, consumers and the environment.

The aim of TÜV SÜD is to support customers with a comprehensive suite of services worldwide to increase efficiency, reduce costs, and manage risk. As an innovative service provider to the automotive industry, TÜV SÜD operates a global network of testing laboratories and facilities for exhaust gas testing, tire analysis and tire testing, electrical and functional safety tests, alternative powertrain systems, and tanks and tank systems.

Exhibitors

The following exhibitors have already registered:

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Angst Pfister AG
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Registration fee

Participation on site

€ 1,695.– plus VAT

This includes the conference documentation, the accompanying trade exhibition, the use of the digital event platform, as well as the catering during breaks and the evening event on 20-06-2023.

Participation virtually via live stream

€ 995.– plus VAT

This includes the conference documentation as well as the use of the digital event platform with virtual exhibition.

Participants can change between the parallel sections at any time for both participation variants.

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

Languages used in the presentations

On site: German and English with simultaneous interpreting (German – English / English – German)

Virtually via live stream: English audio transmission

Further Information and Online Registration:

www.atzlive.de/en/chassis

Date

20 - 21 June 2023

Venue

Hotel Bayerischer Hof or virtually via live stream
Promenadeplatz 2 – 6, 80333 Munich, Germany

Hotels

Some hotels have room blocks at reduced prices for the participants. You can find more information on the events page of our website.

Evening reception in Munich Ratskeller

Tuesday, 20-06-2023 from 18:30 in Munich Ratskeller, Marienplatz 8, 80331 Munich, Germany

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LEADERS

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