ATZ live

Driver Assistance Systems

From Assistance to Automated Driving

3rd International ATZ Conference Automated Driving 25 and 26 April 2017 | Frankfurt/Main | Germany



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Driver Assistance Systems

WELCOME

In 2016 we saw new developments in automated driving. Advanced assistance systems are now available that allow trucks to see, think, and act and the potential for transferring technology from cars to commercial vehicles will help with the development of these systems. Interoperability is a fundamental requirement for the introduction of highly automated driving and in around five years' time we may well have reached that point, because there are no longer any technical problems involved in sharing data from different manufacturers. In order to ensure that data from vehicles and the environment, some of which is cloud-based, can be exchanged without difficulties, interfaces need to be opened up and standards agreed upon. In addition, secure and regular updates "over the air" are important to enable us to make use of the swarm intelligence that is necessary for automated driving.

The 3rd International ATZ Conference "Driver Assistance Systems" 2017, which has parallel sessions on technology and insurance, takes an up-to-the-minute approach to the latest developments. The key question is: What can be achieved and how and when? The redundancies needed for safety reasons and the reduction in the handover times to drivers will require new electric and electronic architectures and vehicle electrical systems. The environment recognition functions need to be improved further and new methods such as deep machine learning will involve major challenges. We do not yet have an answer to the questions of how automated vehicles can be insured and how customers and society as a whole will accept the new technology.

We would like to invite you to Frankfurt am Main to meet the experts in this field.

On behalf of the Scientific Advisory Board Dr. Alexander Heintzel Editor-in-Chief ATZ | MTZ | ATZelektronik

PARTICIPANTS

The ATZ conference "Driver Assistance Systems – From Assistance to Automated Driving" is aimed at engineers and managers as well as experts involved in developing driver assistance systems and those who cooperate with these developers in the interdisciplinary field of car-to-x technology. In addition to automotive engineers, the target group also includes function developers, software and IT engineers from industry, application-related research and teaching as well as analysts, consulting and insurance companies and experts working in fields relating to the social, economic and legal background conditions.

PROGRAM TUESDAY 25 APRIL 2017

>> PLENUM

Festsaal (Ground Floor)

9:15 Welcome and opening of the conference

Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ | ATZelektronik; Prof. Dr. Dr. Rolf Isermann, Head of the Laboratory for Control Systems and Process Automation. iat. TU Darmstadt

KEYNOTE LECTURES

Moderator: Prof. Dr. Rolf Isermann, Head of the Laboratory for Control Systems and Process Automation, Institute of Automatic Control and Mechatronics (iat), TU Darmstadt

- 9:30 Challenges for electrical/electronic development resulting from automated driving functions
 Dr. Thomas M. Müller, Executive Vice President Electrics/ Electronics. AUDI AG
- 10:00 The mobility concepts of the future opportunities and challenges for driver assistance systems
 Ralph Lauxmann, Senior Vice President Systems & Technology, Dr. Andree Hohm, Head of Self Driving Car Project, Continental, Division Chassis & Safety
- 10:30 Refreshment break with coffee and tea in the exhibition area

>> PARALLEL SESSIONS

You will find more detailed information about the parallel sessions on the following pages of the program.

- 11:00 SESSION I MARKETS AND USERS FESTSAAL (GROUND FLOOR)
- 11:00 SESSION II VERSICHERUNGSKONZEPTE ROOM ORCHIDEE (FIRST FLOOR)
- 12:30 Session I Lunch in the exhibition area
- 13:00 Session II Lunch in the exhibition area
- 14:00 SESSION I DEVELOPMENT TOPICS FESTSAAL (GROUND FLOOR)
- 14:00 SESSION II FORSCHUNG UND PRAXIS ROOM ORCHIDEE (FIRST FLOOR)
- 15:30 Refreshment break with coffee and tea in the exhibition area

INTRODUCTORY LECTURES AND PANEL DISCUSSION

Moderator: Markus Schöttle, Vice Editor-in-Chief ATZelektronik

16:00 New challenges for autonomous cars – facts and findings over the past 12 months

Prof. Dr. Dr. Eric Hilgendorf, Chairman of the Department of Criminal Law, Criminal Justice, Legal Theory, Information and Computer Science Law, Julius-Maximilians-Universität Würzburg

16:20 Qualifying and classifying Israeli start-ups for the new automotive supply chain

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

16:40 Panel discussion:

Putting automated driving to the test – what can be achieved and how and when can this be done?

Participants: Dr. Wolfgang Bernhart, Roland Berger GmbH

Dr. Klaus Büttner, BMW Group

Ralph Lauxmann.

Continental, Division Chassis & Safety

Marc-Oliver Matthias,

R+V Allgemeine Versicherung AG Stephan Stass, Robert Bosch GmbH

Christian Theis, Federal Ministry of Transport and

Digital Infrastructure

Moderators: Dr. Alexander Heintzel,

Editor-in-Chief ATZ | MTZ | ATZelektronik;

Markus Schöttle,

Vice Editor-in-Chief ATZelektronik

19:30 Evening of encounters at the "Gesellschaftshaus Palmengarten"

Enjoy a delightful evening and interesting conversations over dinner with colleagues and speakers.

PROGRAM — PARALLEL SESSIONS TUESDAY 25 APRIL 2017

>> SESSION I

Festsaal (Ground Floor)

MARKETS AND USERS

Moderator: Dr. Peter Schöggl, Vice President Business Field Vehicle and Racing, AVL List GmbH, Austria

- 11:00 Automated driving functions for traffic flow models to assess the traffic situation on high-level roads
 Andreas Kerschbaumer, Research Engineer, M. Rudigier, VIRTUAL VEHICLE Research Center; M. Haberl, Institute of Highway Engineering and Transport Planning (ISV), TU Graz; B. Hintermayer, ASFINAG, Austria
- 11:30 Assistance-on-demand development of a speech-based, personalized left-turning assistant
 Dr. Martin Heckmann, Principal Scientist, Dr. H. Wersing, Honda Research Institute Europe GmbH; D. Orth, Prof. Dr. D. Kolossa, Faculty of Electrical Engineering and Information Technology (EI), Ruhr University Bochum
- 12:00 Connected cars an evolution or a revolution in the user experience?

 Heiko Herchet, Head of Car IT / trive.me, J. Barckmann, EDAG Engineering GmbH
- 12:30 Lunch in the exhibition area

DEVELOPMENT TOPICS

Moderator: Dr. Dirk Wisselmann, Senior Engineer Automated Driving, BMW Group

- 14:00 From research to mass production using a versatile platform for developing new HAD software functions Dr. Sebastian Ohl, Senior Expert Driver Assistance, Elektrobit Automotive GmbH
- 14:30 Integrated cockpit computer
 David Rabe, Director Engineering, Preh Car Connect GmbH
- 15:00 Automotive 3D reconstruction based on multi-pixel LED headlight systems
 Christian Schneider, Doctoral Student,
 Dr. Ing. h.c. F. Porsche AG
- 15:30 Refreshment break with coffee and tea in the exhibition area

>> SESSION II

Room Orchidee (First Floor)

11:00 **Begrüßung**Bernhard Rudolf, Chefredakteur Versicherungsmagazin

VERSICHERUNGSKONZEPTE

Moderation: Meris Neininger, Chefin vom Dienst Versicherungsmagazin

11:00 Wann haben Assistenzsysteme Bedeutung für die Kraftfahrtprämie?

Dr. Peter Ackermann, Head of Motor Insurance, Gothaer Allgemeine Versicherung AG

- 11:30 **Kfz-Versicherungsprodukte in Zeiten des autonomen Fahrens**Dr. Christoph Lüer, Leiter Kraftfahrzeugversicherung
 Produktentwicklung, Zurich Gruppe Deutschland
- 12:00 **Versicherungskonzepte für automatisiertes Fahren**Marcos Lemaitre, Underwriter Spartenmanagement
 Kraftfahrt, Deutsche Rückversicherung AG
- 12:30 Wertschöpfungsnetz "Mobilität" Herausforderungen eines Autoversicherers Marc-Oliver Matthias, Leiter Innovation Lab, R+V Allgemeine Versicherung AG
- 13:00 Lunch in the exhibition area

FORSCHUNG UND PRAXIS

Moderation: Frank Leimbach, Direktor Technische Angelegenheiten, DEKRA Automobil GmbH

- 14:00 Rechtliche Rahmenbedingungen für automatisierte Fahrfunktionen "Last oder Vorteil"?
 Carsten Winkelbach, Leiter Institut für Fahrzeugtechnik & Mobilität, Dr. R. Plank, TÜV NORD Mobilität GmbH & Co. KG
- 14:30 Bewertung von Fahrerassistenzsystemen zur Vermeidung und Folgenminderung von Parkunfällen und Kollisionen bei niedrigen Geschwindigkeiten
 Gerald-Alexander Beese, Leiter Strategisches Projekt-
- management, Helge Kiebach, Projektleiter, KTI GmbH & Co. KG

 15:00 Aktuelle Forschungsergebnisse zur Wirksamkeit von Fahrerassistenzsystemen mit zunehmendem Automatisierungsgrad

Marcel Borrack, Referent, Dr. J. Gwehenberger, J. Schatz, Allianz Zentrum für Technik; P. Feig, FTM, TU München

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

PROGRAM WEDNESDAY 26 APRIL 2017

>> PLENUM

Festsaal (Ground Floor)

KEYNOTE LECTURES

Moderator: Markus Schöttle, Vice Editor-in-Chief ATZelektronik

9:00 ADAS sensors go online –
the future of automated driving is connected
Stephan Stass, Senior Vice President, Dr. H.-J. Mathony,
Dr. D. Hötzer, C. Gavanescu, Dr. C. Passmann,
Robert Bosch GmbH

9:30 Use cases for automated driving commercial vehicles
Alexander-Cosmin Teleki, Senior Manager Product Strategy
Truck, Dr. M. Fritz, Dr. M. Kreimeyer, MAN Truck & Bus AG

SERIES APPLICATION

Moderator: Markus Schöttle, Vice Editor-in-Chief ATZelektronik

10:00 Driver assistance systems in the new BMW 5 Series – experiencing automation

Dr. Claus Dorrer, Senior Manager Customer Functions, R. Friedrich, Dr. P. Reinisch, BMW Group

10:30 Refreshment break with coffee and tea in the exhibition area

>> PARALLEL SESSIONS

You will find more detailed information about the parallel sessions on the following pages of the program.

- 11:00 SESSION I SIMULATION AND TEST I FESTSAAL (GROUND FLOOR)
- 11:00 SESSION II SOFTWARE, IT, AND SECURITY ROOM ORCHIDEE (FIRST FLOOR)
- 12:30 Lunch in the exhibition area
- 13:30 SESSION I DRIVING DYNAMICS FESTSAAL (GROUND FLOOR)
- 13:30 SESSION II SIMULATION AND TEST II ROOM ORCHIDEE (FIRST FLOOR)
- 15:30 Refreshment break with coffee and tea in the exhibition area

Festsaal (Ground Floor)

KEYNOTE LECTURES

Moderator: Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ | ATZelektronik

15:30 Maps for cars from cars

Prof. Dr. Ralf Herrtwich, Head of Automotive, HERE Deutschland GmbH

16:00 BMW 2021 - the route to autonomous driving

Dr. Klaus Büttner, Vice President Project Autonomous Driving, BMW Group

16:30 Closing remarks

Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ | ATZelektronik

PROGRAM — PARALLEL SESSIONS WEDNESDAY 26 APRIL 2017

>> SESSION I

Festsaal (Ground Floor)

SIMULATION AND TEST I

Moderator: Dr. Karl-Heinz Glander, Chief Engineer for Automated Driving and Integral Cognitive Safety, ZF TRW – TRW Automotive GmbH

- Scenario-based approach for developing ADAS and automated driving functions using a virtual prototype Andreas Höfer, Product Manager Simulation Software, M. Herrmann, IPG Automotive GmbH
- 11:30 A real-time capable multi-sensor model to validate ADAS in a virtual environment

 Marius Feilhauer, Ph.D. Student, Dr. J. Häring, ETAS GmbH
- 12:00 Virtual validation of automated driving functions using a highway construction site assistance system as an example André Rolfsmeier, Lead Product Manager, Dr. H. Haupt, Dr. K. Krügel, dSPACE GmbH
- 12:30 Lunch in the exhibition area

DRIVING DYNAMICS

Moderator: Prof. Dr. Prof. Dr. Torsten Bertram, Head of the Institute of Control Theory and Systems Engineering (RST), TU Dortmund

- 13:30 Evasive Maneuver Assist (EMA) enhanced vehicle safety using a combination of braking and steering Ralph-Carsten Lülfing, Innovation Leader Automated Driving, S. Kallenbach, Dr. K. Plähn, WABCO Vehicle Control Systems
- 14:00 Sensor-based learning one step closer to autonomous driving Dr. Nicole Beringer, Program Manager, Elektrobit Automotive GmbH
- 14:30 Vehicle speed trajectory optimization under speed limits in time and spatial domains Ziqi Ye, Research Associate, T. Plum, Prof. Dr. S. Pischinger, Institute for Combustion Engines (vka), RWTH Aachen University; Dr. M. Stapelbroek, Dr. J. Pfluger, FEV GmbH
- 15:00 Refreshment break with coffee and tea in the exhibition area

SOFTWARE, IT, AND SECURITY

Moderator: Hans-Günter Gromeier, Vice President Product Group Automotive, ETAS GmbH

- 11:00 Trusted execution environments in vehicles for secure driver assistance systems
 - Dr. Jens Köhler, Senior Security Engineer, H. Förster, ITK Engineering AG
- 11:30 The impact of 5G on future ADAS and HAD systems Sebastian Schröder, Group Leader, Dr. S. Butenweg, Telemotive AG; Prof. Dr. Dr. F. Fitzek, Deutsche Telekom Chair of Communication Networks, TU Dresden
- 12:00 New IT architectures for development and validation Dr. Tobias Abthoff, Board Member, NorCom Information Technology AG
- 12:30 Lunch in the exhibition area

SIMULATION AND TEST II

Moderator: Steffen Schmidt, Managing Director, IPG Automotive GmbH

- 13:30 Incorporating high fidelity physics models of sensors into real-time ADAS and autonomous vehicles simulation
 Lee Johnson, Product Manager, S. Sovani, ANSYS Inc., USA
- 14:00 Development and test of a lane change prediction algorithm for automated driving

Christian Wissing, Research Associate, Prof. Dr. Prof. Dr. T. Bertram, Institute of Control Theory and Systems Engineering (RST), TU Dortmund; Dr. K.-H. Glander, Dr. C. Haß, Dr. T. Nattermann, ZF TRW – TRW Automotive GmbH

- 14:30 In-vehicle validation of safety-critical sensor fusion ECUs with microprocessor technology
 - Dr. Heinz Tilsner, Project Manager, Robert Bosch GmbH; B. Triess, ETAS GmbH
- 15:00 Refreshment break with coffee and tea in the exhibition area



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Continental develops intelligent technologies for transporting people and their goods. As a reliable partner, the international automotive supplier, tire manufacturer, and industrial partner provides sustainable, safe, comfortable, individual, and affordable solutions. In 2015, the corporation generated sales of $\ensuremath{\mathfrak{e}}$ 39.2 billion with its five divisions, Chassis & Safety, Interior, Powertrain, Tire, and ContiTech. Continental currently employs more than 218,000 people in 55 countries.

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REGISTRATION FEE

€ 1,295.- plus VAT

This includes the conference documentation, coffee breaks, soft drinks, two lunches, and the evening reception.

VFNIIF

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HOTELS

The hotels have room blocks at reduced prices for the participants. Please make your reservation quoting the reference "Driver Assistance Systems" by 6 March 2017 at the MOTEL ONE Frankfurt-Messe or 24 February 2017 at the MARITIM Hotel Frankfurt.

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LANGUAGES USED IN THE PRESENTATIONS

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

There will be no simultaneous interpreting for the "Versicherungskonzepte" and "Forschung und Praxis" sessions.

CONDITIONS

No cancellation charge is due if registration is canceled by 27 March 2017. Cancellations made after that date will incur a charge of 35 % of the registration fee. For cancellations made after 3 April 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.

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// Spotlight on Powertrain and Vehicle Engineering //

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CONFERENCE REGISTRATION

Driver Assistance Systems

25 and 26 April 2017 | Frankfurt/Main | Germany

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