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Automated Driving

From Driver Assistance to Autonomous Driving

5th International ATZ Conference

2 and 3 April 2019 | Wiesbaden | Germany

Simultaneous Interpreting
German and English

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DEEP LEARNING
Artificial neural networks, machine learning, evaluation

SENSOR SYSTEMS AND FUNCTIONAL SAFETY
Environment recognition, interfaces, vehicle dynamics models, driverless systems

HUMAN-MACHINE INTERACTION
Cooperation, collaboration, testing

/// KEYNOTE LECTURES

Enno Tang, Continental China | **Dr. Christoph Peylo,** Robert Bosch GmbH | **Masayuki Soga,** Toyota Motor Corporation, Japan

Continental ETAS

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Automated Driving

WELCOME

Artificial intelligence, machine learning, and deep learning are key enablers of automated driving. Interaction between artificial and human intelligence and the ability of humans and machines to cooperate must be designed on new levels of interaction and made usable for future mobility. To achieve this, it is necessary for society to accept this development. Against this background, methods, tools, and processes become just as relevant as sensors and connectivity.

The insurance sector has also discovered automated driving as an important business field, and some companies already have their own fully automated vehicles on the road as pilots. But they also want to have a say in the question of who owns the data in the vehicle.

The international ATZ Conference "Automated Driving – From Driver Assistance to Autonomous Driving" is an annual trend barometer of the successes and the necessary adaptations from a technical, legal, and social perspective. Now in its fifth year, the conference will not only examine the latest technical topics, but will also offer parallel sessions on insurance issues, thus also giving specialists in this sector once again the opportunity to acquire comprehensive information. It therefore offers engineers, decision-makers, and insurance experts the optimal platform for a mutual exchange of ideas and knowledge.

We cordially invite you to Wiesbaden to meet some of the most important experts in the field.

On behalf of the Scientific Advisory Board

Dr. Alexander Heintzel
Editor-in-Chief
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Springer Nature

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The international ATZ Conference "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 vehicle-to-x technology. The target group includes automotive engineers, function developers, software and IT engineers from industry, application-related research and teaching analysts, consultancy companies, and insurance companies, as well as experts working in fields relating to the social, economic, and legal background conditions.

PROGRAM
TUESDAY 2 APRIL 2019

>> PLENUM

Room “Plenum and Session I”

9:15 **Welcome and opening of the conference**
Dr. Alexander Heintzel, Editor-in-Chief
ATZ | MTZ | ATZelektronik | lightweight.design, Springer Nature;
Prof. Dr. Prof. h.c. Dr. h.c. Torsten Bertram, Head of the
Institute of Control Theory and Systems Engineering (RST),
TU Dortmund University

KEYNOTE LECTURES I

Moderator: Friedhelm Pickhard, President, ETAS GmbH

9:30 **Trends of autonomous driving in the commercial vehicle industry**
Wabco GmbH (inquired)

10:00 **Smart cities in China – challenges and opportunities for automated driving**
Enno Tang, President and CEO, Continental China

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 – METHODS AND PROCESSES I**
ROOM “PLENUM AND SESSION I“

11:00 **SESSION II – AUTONOME VERSICHERUNGSVISIONEN***
ROOM “SESSION II“

12:30 Lunch in the exhibition area

14:00 **SESSION I – VALIDATION**
ROOM “PLENUM AND SESSION I“

14:00 **SESSION II – HAFTUNGSFRAGEN, FAHRZEUGDATEN***
ROOM “SESSION II“

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

* These sessions will be held in German language.

>> PLENUM

Room “Plenum and Session I”

PANEL DISCUSSION

Moderator: Dr. Alexander Heintzel, Editor-in-Chief
ATZ | MTZ | ATZelektronik | lightweight.design, Springer Nature

16:00 **Panel discussion:**
Reality check for automated driving –
how will we be driving in 2025?

Participants:

Dr. Stephan Hönle,
Senior Vice President Automated Driving Systems,
Robert Bosch GmbH

Masayuki Soga,
Chief Professional Engineer / Vehicle Dynamics Control
Engineering Div., Toyota Motor Corporation, Japan

Dr. Christoph Zimmer,
Managing Director, BPV Consult GmbH

A representative of the commercial vehicle industry
(to be confirmed)

approx.
17:15 End of the first day of the conference

19:30 **Networking Dinner**
at the Garden Restaurant Grande Basilico (Dorint Hotel)
Enjoy a pleasant evening and interesting conversations
over dinner with colleagues and speakers.

PROGRAM – PARALLEL SESSIONS
TUESDAY 2 APRIL 2019

>> SESSION I

Room “Plenum and Session I”

METHODS AND PROCESSES I

Moderator: Jörg Hölig, Manager Competence Center for Integral Safety, EDAG Engineering GmbH

11:00 **Validation of level 4-5 functions with a cloud-based simulation**
Dr. Jürgen Häring, Head of Product Management for Testing and Validation, J. Wagner, ETAS GmbH

11:30 **Handling complex systems: systems design for AD vehicles**
Dr. Martin Grießer, Head of Systems Engineering, M. Khalil, S. Dreiseitel, Continental Teves AG & Co. oHG

12:00 **Game changers in automated driving development and software creation in a state of change**
Dr. Michael Reichel, Head of Product Management Automated Driving, J. Petersohn, Elektrobit Automotive GmbH

12:30 Lunch in the exhibition area

VALIDATION

Moderator: Steffen Schmidt, Managing Director, IPG Automotive GmbH

14:00 **Using drones as a tool for the safety validation of highly automated driving functions**
Robert Krajewski, Scientific Staff, J. Bock, Prof. Dr. L. Eckstein, Institute for Automotive Engineering (IKA), RWTH Aachen University; A. Zlocki, fka GmbH

14:30 **Start the flow! Why autonomous driving functions are needed at an early stage**
Olaf Schmidt, Manager Business Development, Dr. R. Münzenberger, INCHRON GmbH

15:00 **High-performance data acquisition and replay at 4 Gbyte/s for the development of highly automated driving functions**
Thomas Schöpfner, Solution Manager for HAD Solutions, ETAS GmbH

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

>> SESSION II

Raum „Session II“

AUTONOME VERSICHERUNGSVISIONEN*

Moderation: Meris Neininger, Chefin vom Dienst Versicherungsmagazin, Springer Nature

11:00 **Automatisierte Fahrfunktionen – Herausforderungen und Lösungsansätze aus Sicht des AZT**
Dr. Johann Gwehenberger, Leiter Unfallforschung/ Schadenverhütung, Dr. C. Lauterwasser, M. Borrack, AZT Automotive GmbH Allianz Zentrum für Technik

11:30 **Der Kfz-Versicherungsmarkt im Jahr 2019**
Andreas Kelb, Bereichsleiter, E+S Rückversicherung AG

12:00 **Warum die R+V autonome Shuttle betreibt**
Verena Reuber, Mitglied des R+V InnovationLabs MO14, Leiterin des Projekts „autonome Shuttle“, R+V Allgemeine Versicherung AG

12:30 Gemeinsames Mittagessen im Ausstellungsbereich

HAFTUNGSFRAGEN, FAHRZEUGDATEN*

Moderation: Prof. Andre Seeck, Leiter der Abteilung Fahrzeugtechnik, Bundesanstalt für Straßenwesen (BASt)

14:00 **Relevanz von Fahrzeugdaten höher automatisierter Fahrzeuge für den Automotive Aftermarket über den gesamten Fahrzeug-Lebenszyklus**
Gerald-Alexander Beese, Leiter Strategisches Projektmanagement, H. Kiebach, KTI Kraftfahrzeugtechnisches Institut und Karosseriewerkstätte GmbH & Co. KG

14:30 **Haftungsfragen beim automatisierten Fahren**
Dr. Philipp Ehring, Rechtsanwalt, GH-Legal

15:00 **Allokation von Haftungskosten zwischen Kfz-Versicherern und -herstellern – eine Analyse des geltenden Haftungs- und Versicherungsrahmens für automatisierte Fahrzeuge**
Fabian Pütz, PhD-Student und Researcher, Institute of Insurance Studies, TH Köln und University of Limerick, Irland

15:30 Erfrischungspause mit Kaffee und Tee im Ausstellungsbereich

* These sessions will be held in German language.

>> PARALLEL SESSIONS

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

9:00 **SESSION I – ARTIFICIAL INTELLIGENCE**
ROOM "PLENUM AND SESSION I"

9:00 **SESSION II – ENVIRONMENT RECOGNITION**
ROOM "SESSION II"

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

11:00 **SESSION I – METHODS AND PROCESSES II**
ROOM "PLENUM AND SESSION I"

11:00 **SESSION II – DATA AND CONNECTIVITY**
ROOM "SESSION II"

12:30 Lunch in the exhibition area

>> PLENUM

Room “Plenum and Session I”

USERS AND ACCEPTANCE

Moderator: Frank Leimbach, Representative Technical Affairs, DEKRA e. V.

13:30 **Do you trust driverless vehicles?**
Alfred Eckert, Director Advanced Technology, Systems & Technology, Chassis & Safety Division, M. Schneider, Continental Teves AG & Co. oHG

14:00 **Keeping the balance between overload and underload during partly automated driving: relevant secondary tasks**
Paula Laßmann, Research Associate, M. Fischer, M. Jenke, F. Reichelt, Prof. Dr. T. Maier, Institute for Engineering Design and Industrial Design (IKTD), University of Stuttgart; Dr. H.-J. Bieg, Robert Bosch GmbH

14:30 **Haptic shared control of electric power steering – a key enabler for cooperation between drivers and automation systems**
Naoki Shoji, Engineer, M. Yoshida, Dr. R. Fuchs, JTEKT Corporation, Japan

15:00 Refreshment break with coffee and tea in the exhibition area

KEYNOTE LECTURES II

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

15:30 **Explainability and plausibility as prerequisites for trusted AI**
Dr. Christoph Peylo, Global Head of Bosch Center for Artificial Intelligence, Robert Bosch GmbH

16:00 **Toyota automated driving technology**
Masayuki Soga, Chief Professional Engineer / Vehicle Dynamics Control Engineering Div., Toyota Motor Corporation, Japan

16:30 **Closing remarks**
Dr. Alexander Heintzel, Editor-in-Chief
ATZ | MTZ | ATZelektronik | lightweight.design, Springer Nature

PROGRAM – PARALLEL SESSIONS
WEDNESDAY 3 APRIL 2019

>> SESSION I

Room “Plenum and Session I”

ARTIFICIAL INTELLIGENCE

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

9:00 **Is artificial intelligence the solution to all our problems?**
Jörg Schrepfer, Head of Driving Assistance Research Germany, H. Barth, Valeo Schalter und Sensoren GmbH

9:30 **Artificial intelligence for automated driving – quo vadis?**
Dr. Alexander Jungmann, Development Engineer, Dr. C. Lang, Dr. R. Kallweit, M. Taubenreuther, Dr. M. Butenuth, IAV GmbH

10:00 **Training and validation of neural networks in virtual environments**
Raphael Pfeffer, Product Manager Test Systems, IPG Automotive GmbH

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

METHODS AND PROCESSES II

Moderator: Dr. Andreas Teuner, Vice President, Engineering ADAS, ZF Group

11:00 **Methodology for the generation and use of scenarios for virtual test driving with automated driving functions**
Martin Herrmann, Business Development Manager ADAS and Automated Driving, IPG Automotive GmbH

11:30 **Solving the validation challenge of automated driving with a holistic test center**
Andreas Mank, Team Manager Test and Development, S. Tiedemann, Elektrobit Automotive GmbH

12:00 **Toolbox for test planning and test realization of scenario-based field tests for automated and connected driving using the example of the “digital public testbed Dresden/Saxony”**
Dr. Thomas Otto, Traffic System Data, Department of Intelligent Transport Systems, Fraunhofer Institute for Transportation and Infrastructure Systems (IVI)

12:30 Lunch in the exhibition area

>> SESSION II

Room “Session II“

ENVIRONMENT RECOGNITION

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

9:00 **Fusion of raw sensor data for testing applications in autonomous driving**
Julius von Falkenhausen, Software Developer ADAS, Q. Liu, BFFT Gesellschaft für Fahrzeugtechnik mbH

9:30 **Core components of automated driving – algorithms for situation analysis, decision-making, and trajectory planning**
Christian Lienke, Research Assistant, M. Schmidt, C. Wissing, Prof. Dr. Prof. h.c. Dr. h.c. T. Bertram, TU Dortmund University, Institute of Control Theory and Systems Engineering; Dr. M. Keller, Dr. C. Manna, Dr. T. Nattermann, ZF Group

10:00 **Experiences of increased environment perception with the latest high-range LiDAR sensors**
Henri Häfner, Program Manager Automotive Europe, Velodyne Europe GmbH

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

DATA AND CONNECTIVITY

Moderator: Ralph Lauxmann, Senior Vice President Systems & Technology, Continental Teves AG & Co. oHG

11:00 **Making automated driving a reality for the customer**
Dr. Joachim Damasky, Managing Director, German Association of the Automotive Industry (VDA)

11:30 **Automotive Ethernet – opportunities and challenges for automotive security**
Ramona Jung, Security Project Manager, Dr. J. Holle, ESCRYPT GmbH

12:00 **Quantum computing and cyber security – implications for the automotive industry**
Prof. Dr. Christof Paar, Chair for Embedded Security, Dept. Electrical Engineering & Information Technology, Ruhr-Universität Bochum

12:30 Lunch in the exhibition area

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Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent, and affordable solutions for vehicles, machines, traffic, and transport. In 2017, Continental generated sales of €44 billion and currently employs more than 243,000 people in 60 countries.

The Chassis & Safety division develops and produces integrated active and passive driving safety technologies as well as products that support vehicle dynamics. The product portfolio ranges from electronic and hydraulic brake and chassis control systems to sensors, advanced driver assistance systems, airbag electronics, and sensorics, plus electronic air suspension systems, windscreen washer systems, and headlight cleaning nozzles. The focus lies on a high level of system competence and the networking of individual components. Thus products and system functions are developed along the SensePlanAct chain of effects. They form the foundation for automated driving.

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We excel in providing innovative solutions that drive the development of embedded systems for the automotive industry and related sectors. As a systems provider, we offer a comprehensive portfolio of integrated tools and tool solutions as well as engineering services, consulting, training, and support. Security solutions for embedded systems are delivered by our subsidiary ESCRYPT.

An international presence
ETAS now has more than 1,100 associates working in 12 countries in Europe, Asia, and the Americas. In addition to our corporate headquarters in Germany, we have offices in Brazil, Canada, China, France, Great Britain, India, Italy, Japan, Korea, Sweden, and the USA. We are constantly working to expand our international network.

Our customers
ETAS provides solutions for the development of embedded systems. Our customers represent a cross-section of the global automotive industry and related sectors. They include automakers, automotive component suppliers, ECU suppliers, and engineering service providers.

Market challenges – ETAS solutions
The automotive industry is undergoing a radical transformation. The list of innovations is getting longer by the day, ranging from new, energy-efficient drive systems to semi and fully autonomous driving, digitization, and connected vehicle technologies. These new developments rely on electronics and software – two areas in which ETAS excels. We offer expert knowledge and appropriate tools to develop safety-relevant software. Our solutions are found at every stage of the embedded software development process. Automotive electronics are increasingly connected – and that means they need to be protected from unauthorized access. The ETAS subsidiary ESCRYPT offers a comprehensive range of security solutions which are designed to ward off attacks on embedded software systems.

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€ 1,395.– plus VAT

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

VENUE

RheinMain CongressCenter
Friedrich-Ebert-Allee 1
65185 Wiesbaden | Germany

Parking is available in the RMCC underground car park for a fee.

HOTELS

The hotels have room blocks at reduced prices for the participants.
Please make your reservation exclusively via the following link: https://www.atzlive.de/en/events/automated-driving/information/information-for-participants/

Dorint Hotel Pallas Wiesbaden
Auguste-Viktoria-Straße 15 | 65185 Wiesbaden | Germany
Phone +49 611 3306-0 | Fax +49 611 3306-1000
€ 197.– Single room, including breakfast

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LANGUAGES USED IN THE PRESENTATIONS

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

No simultaneous interpreting for Session II
on the first day of the conference.

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CONFERENCE REGISTRATION

Automated Driving

2 and 3 April 2019 I Wiesbaden I Germany

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