



AGENDA TUESDAY, APRIL 4, 2006

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10:00	Welcome Prof. Dr. Bernd Heißing, Technische Universität München, Lehrstuhl für Fahrzeugtechnik	
10:15	Opening Lecture I Driver assistance – more than an electronic passenger? Prof. Dr. Jürgen Lehold, Volkswagen AG, Wolfsburg	1
10:45	Opening Lecture II Flight control systems for pilot assistance: what can we learn from aviation? Prof. Dr. Robert Luckner, Technische Universität Berlin, Institute for Aeronautics & Astronautics	2
MOTIVATION – BENEFIT <u>CHAIR: PROF. DR. RAYMOND FREYMANN,</u> BMW FORSCHUNG UND TECHNIK GMBH, MUNICH		
11:15	The safety effect of ESP in real accidents –reflections on the economic benefits of predictive driver assistance systems Prof. Dr. Peter M. Knoll, Robert Bosch GmbH, Leonberg; Prof. Dr. Klaus Langwieder, German Traffic Safety Council (DVR), Bonn	3
11:45	Coffee break	
12:15	Serious accidents with motorcycles – analysis of the structure of accidents and the effectiveness of ABS Dr. Johann Gwehenberger, Dr. Jörg Kubitzki, Allianz Zentrum für Technik, Ismaning; Isabell Schwaben, Fachhochschule München; Dr. Alexander Spörner, Europäisches Motorrad Institut, Munich	4
12:45	Analysis of traffic accidents utilising DAS potential evaluation, exemplified by the driver Assistance System Lane Departure Warning Ulrich Hörauf, Audi Accident Research Unit (AARU); Klinikum der Universität Regensburg; Boris Buschardt, Eckart Donner, Birgit Graab, Thomas Winkle, AUDI AG, Ingolstadt	5
13:15	Lunch break	
14:15	Potential effect of Adaptive Cruise Control and Lane Guard System in heavy commercial vehicles Walter Schwertberger, MAN Nutzfahrzeuge AG, Munich; Dr. Johann Gwehenberger, Dieter Daschner, Allianz Zentrum für Technik, Ismaning	6

PARALLEL SESSION I

DEVELOPMENT, VALIDATION, MARKET INTRODUCTION

CHAIR: DR. PETER F. TROPSCHUH, AUDI AG, INGOLSTADT

14:45	Classification and appreciation of international and German legal framework covering the implementation of modern driver assistance systems Andre Seeck, Tom Michael Gasser, Bundesanstalt für Straßenwesen, Bergisch Gladbach	7
15:15	Driver Assistance Systems in the conflict area between benefits and risks – How do complex failure structures become more controllable? Udo Steininger, Marcus Rau, Bernhard Schick, TÜV SÜD Automotive GmbH, Munich	8
15:45	Coffee break	
16:15	RESPONSE 3 – Code of practice for development, validation and market introduction of ADAS Dr. Jürgen Schwarz, DaimlerChrysler AG, Sindelfingen	9
16:45	Methods for the reconstruction of test scenarios and the evaluation of driving assistance systems regarding functions and quality Dr. Bertold Huber, GeneSys Elektronik GmbH, Offenburg; Bernhard Schick, TÜV SÜD Automotive GmbH, Munich	10
17:15	Model based design of driver assistance systems: simulation of vehicle dynamics and virtual environment Martin Ehmman, TESIS DYNAware GmbH, Munich	11
from 18:30	Transfer to the Evening Programme: Guided tour at the „Allianz Arena“, the new Munich football stadium and dinner	

PARALLEL SESSION II

DRIVER ACCEPTANCE:

HUMAN – MACHINE – INTERACTION AND ERGONOMICS

CHAIR: PROF. DR. HANS-JOACHIM WÜNSCHE,
UNIVERSITÄT DER BUNDESWEHR MÜNCHEN

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| 14:45 | An ergonomic solution approach for a simultaneous driver feedback of various driver assistance systems | 12 |
| | Hagen Wolf, Rolf Zöllner jun., Prof. Dr. Heiner Bubb,
Technische Universität München, Lehrstuhl für Ergonomie | |
| 15:15 | Vehicle integration of multiple ADAS – HMI concept and architecture | 13 |
| | Dr. Johannes Happe, Michael Lütz, Siemens VDO Automotive, Regensburg | |
| 15:45 | Coffee break | |
| 16:15 | Optimisation and safeguarding of active vehicle dynamics control systems based on the standard driver | 14 |
| | Stefan Ullmann, Lehrstuhl für Fahrzeugtechnik
der Technischen Universität München am INI.TUM | |
| 16:45 | How do driver use adaptive cruise control? | 15 |
| | Heike Sacher, Lehrstuhl für Ergonomie der
Technischen Universität München am INI.TUM | |
| 17:15 | Pilot-in-the-Loop – towards the “artificial co-pilot” for passenger cars | 16 |
| | Norbert Neuendorf, Dr. René Knorr, Kai Kulp, Andreas Lenz,
ESG Elektroniksystem- und Logistik-GmbH, Munich | |
| from 18:30 | Transfer to the Evening Programme:
Guided tour at the „Allianz Arena“, the new Munich football stadium
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AGENDA WEDNESDAY, APRIL 5, 2006

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- 8:30** **Technologies for primary safety of passenger cars –
“consumable” or genuine improvement?** **17**
Prof. Dr. Dr. Hans-Hermann Braess, Dr. Edmund Donges, Munich

INFRASTRUCTURE AND PERCEPTION OF DRIVING ENVIRONMENT

CHAIR: PROF. DR. GEORG FÄRBER,

TECHNISCHE UNIVERSITÄT MÜNCHEN, LEHRSTUHL FÜR REALZEIT-COMPUTERSYSTEME (RCS)

- 9:00** **Development of intersection assistance systems with extended
functionality through wireless short-range communication** **18**
Dr. Timo Kosch, Dr. Dirk Ehmanns, BMW Group Forschung und Technik, Munich

- 9:30** **Vision based perception of driving environment for enhanced
assistance systems** **19**
Stephan Neumaier, Prof. Georg Färber, Technische Universität München,
Lehrstuhl für Realzeit-Computersysteme (RCS)

- 10:00** **Coffee break**

- 10:30** **Influence on the horizontal field of vision of a radar sensor for
the ACC-system-performance in curve situations** **20**
Steffen Luh, Prof. Hermann Winner, Technische Universität Darmstadt,
FG Fahrzeugtechnik

- 11:00** **Active drivers’ support through a disturbance compensation by
Steer by Wire in a commercial vehicle** **21**
Heinz Weinfurter, Prof. Wolfgang Hirschberg, TU-Graz, Institut für Fahrzeugtechnik;
Eberhard Hipp, MAN Nutzfahrzeuge AG, Munich

- 11:30** **Local danger warning in vehicular ad-hoc networks –
a comprehensive analysis and current approaches** **22**
Markus Straßberger, Christian Adler, BMW Group Forschung und Technik, Munich

- 12:00** **Lunch break**

FEATURES AND SYSTEMS

CHAIR: PROF. DR. BERND HEIßING,

TECHNISCHE UNIVERSITÄT MÜNCHEN, LEHRSTUHL FÜR FAHRZEUGTECHNIK

- 13:00** **Left turn assistance – an example for top-down development
of an active safety system** **23**
Karl-Heinz Meitinger, Prof. Dr. Bernd Heißing, TU München,
Lehrstuhl für Fahrzeugtechnik; Dr. Dirk Ehmanns, BMW Group Forschung und
Technik, Munich

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14:00	Combined Active & Passive Safety – CAPS, possibilities and challenges of the driving environment perception and communication on the way to an accident free traffic Jochen Pfäffle, Robert Bosch GmbH, Abstatt	25
14:30	FlexRay Communication Protocol for an innovative scalable X-By-Wire platform Michael Armbruster, Eduard Zimmer, Henning Tjaden, Washington Mutikani, Swapnil Gandhi, Reinhard Reichel, Universität Stuttgart, Institut für Luftfahrtssysteme, Stuttgart; Dr. Gernot Spiegelberg, Armin Sulzmann, DaimlerChrysler AG, Stuttgart	26
15:00	Summing up and outlook	