CHASSIS.TECH PLUS SECTION

KEYNOTE SPEECHES

THE CHASSIS OF THE FUTURE

Automotive development in a process of change
Prof. Dr. Ulrich Hackenberg, AUDI AG

Goals and challenges of future chassis developments – solving a multidimensional optimization problem
Brandon Vivian, General Motors Company, USA;
Dr. V. Held, Adam Opel AG

Driving dynamics of the BMW 2 Series Active Tourer
(Die Fahrdynamik des BMW 2er Active Tourer)
Martin Schuster, M. Schwarz, C. Kilian, K. Huber,
A. Schuhmann, BMW Group

TRENDS IN CHASSIS DEVELOPMENT

Performance-improved simulator for the quantification of steering feel and vehicle maneuvering
Dr. Shirou Nakano, JTEKT Corporation, Japan

Automated driving – Where are we heading?
Dr. Hans-Peter Hübner, Robert Bosch GmbH
NEW CHASSIS SYSTEMS

918 Spyder – the impulse source for future sports car concepts
Georg Wahl, Dr. M. Harrer, Dr. A. K. Zschocke,
Dr. Ing. h.c. F. Porsche AG

The electronic chassis of the new BMW i8 –
influence and characterization of driving dynamics
Dr. Christian Wimmer, J. Felten, Dr. D. Odenthal, BMW Group

Direct adaptive steering – independent control of steering force
and wheel angles to improve straight line stability
Satoshi Miura, Nissan Motor Co., Ltd., Japan

VEHICLE DYNAMICS TUNING

Universal steering and suspension application with objective,
subjective and virtual methods
Dr. Christian Schimmel, W. Wijts, C. Jablonowski, J. Agostini,
AUDI AG

Solution spaces for damper design in vehicle dynamics
Markus Eichstetter, C. Redeker, Dr. P. Kvasnicka,
Dr. M. Zimmermann, BMW Group;
Prof. Dr. S. Müller, Department of Motor Vehicles, TU Berlin

CAE-based driving comfort optimization for passenger cars
Dr. Friedrich Wolf-Monheim, J. Palandri, Dr. P. Zandbergen,
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T. Drotar, Ford Research and Innovation Center, USA
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CHASSIS.TECH SECTION

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Willy Armand Fongue, J. Kieserling, Daimler AG; Prof. Dr. P. F. Pelz, Chair for Fluid System Technology, TU Darmstadt

How subjective evaluation by drivers is affected by car body stiffening – proposal of a hypothetical mechanism

Comparability of dynamic chassis measurements with full vehicle tests using the example of a sports car
Sebastian Haberzettl, W. Stein, N. Weijenberg, Dr. Ing. h.c. F. Porsche AG; Prof. Dr. F. Gauterin, Institute of Vehicle System Technology (FAST), Karlsruhe Institute of Technology (KIT)

VEHICLE STABILITY

Load problem of lightweight electric vehicles and solution by online model adaptation
Florian Kohlhuber, Prof. Dr. M. Lienkamp, Institute of Automotive Technology (FTM), TU Munich

Fast identification of a detailed two-track model with onboard sensors and GPS
Jakob Bechtloff, M. Bauer, C. Ackermann, Prof. Dr. Dr. R. Isermann, Institute of Automatic Control and Mechatronics (iat), TU Darmstadt

The influence of production vehicle dynamics control systems on the yaw stability of car-trailer combinations
Dr. Jonathan Miller, T. Beretta, BMW Group
LIGHTWEIGHT DESIGN AND SYSTEMS

Methodical conception and development of innovative lightweight chassis systems, illustrated by the example of the "LEICHT" concept
Andreas Höfer, Prof. Dr. H. E. Friedrich,
Institute of Vehicle Concepts (FK), Deutsches Zentrum für Luft- und Raumfahrt e. V. (DLR)

Improving the development of sheet structures with optimization and simulation methods
Sierk Fiebig, J. Sellschopp, A. Rottmann, Volkswagen AG

Schaeffler's electromechanical anti-roll system
Dr. Manfred Kraus, Dr. M. Baeuml, Schaeffler Technologies GmbH & Co. KG