

# The complete Conference Program

Tuesday, November 10, 2009

8.15 a.m. Welcome and Opening of the  
3rd International Symposium on Development Methodology  
Prof. H. List  
AVL List GmbH, Graz, Austria

## Section 1\*

Development processes and methodologies:  
Efficient utilization of simulation / combination of simulation and test  
Chairman: Prof. Dr. H. Eichlseder  
Technische Universität Graz, Austria

8.30 a.m. **Driving without fire?**  
Dr. R. Leonhard  
Robert Bosch GmbH, Stuttgart

9.00 a.m. **Virtual meets real: How simulation and engine testing join forces**  
R. Montélimard  
Volvo Powertrain France, Saint-Priest, France

9.30 a.m. **Development of Hybrid-Powertrain applying universal Simulation  
Methods and Test Equipment**  
Dr. R. Ellinger, Dr. P. Schoeggel, J. Zehetner  
AVL List GmbH, Graz, Austria

10.00 a.m. **Combination of Vehicle Measurement  
and Simulation for the Analysis of Hybrid Concepts**  
M. Fischer, J. Böttcher  
Honda R&D Europe (Deutschland) GmbH, Offenbach am Main  
P. Weickgenannt, Prof. Dr.-techn. C. Beidl  
Institut für Verbrennungskraftmaschinen, Technische Universität Darmstadt  
C. Bacher, Prof. Dr. G. Hohenberg  
IVD Prof. Hohenberg GmbH, Graz, Austria

10.30 a.m. Coffee Break

11.00 a.m. **Extension of Experience in Selecting Target-Aimed Experimental Design  
and Models by Simulation**  
H. Uzun  
Mercedes-AMG GmbH, Affalterbach  
Prof. Dr. O. Nelles  
Institut für Mechanik und Regelungstechnik – Mechatronik, Universität Siegen

11.30 a.m. **Integration of Simulation and Test using Vehicle-in-the-loop technology  
at the roller test bench and in the road test**  
Prof. Dr. Dr. h.c. A. Albers, T. Düser  
IPEK – Institut für Produktentwicklung Karlsruhe, Universität Karlsruhe

12.00 a.m. Lunch

\* Discussion after each presentation

## Section 2\*

Development processes and methodologies:  
test design, modelling, modelbased optimization  
Chairman: Prof. Dr. Dr. h.c. A. Albers

IPEK – Institut für Produktentwicklung Karlsruhe, Universität Karlsruhe

1.30 p.m. **Model-Based Methods for Engine Calibration – Quo Vadis**  
Dr. K. Röpke, A. Nessler, Dr. C. Haukap, Dr. W. Baumann, Dr. B.-U. Köhler, S. Schaum  
IAV GmbH, Berlin

2.00 p.m. **Rapid measurement and prediction of the steady state response:  
a case study in a tuning methodology applied to diesel engines**  
Dr. M. Toledo, S. Livonnet  
Renault SAS, Lardy, France

2.30 p.m. **Quasi-stationary measurement method for the ECU-functions of the cylinder charge  
determination and the torque model**  
Dr. M. Martiny, J. Kern, M. Kerkau  
Dr. Ing. h.c. F. Porsche AG, Weissach  
D. Boehme, Prof. Dr. Dr. h.c. R. Isermann  
Institut für Automatisierungstechnik, Technische Universität Darmstadt

3.00 p.m. **Application and potential of a functional product model for the development of gear units**  
G. Bansemir, Prof. Dr. B.-R. Höhn, M. Otto  
Forschungsstelle für Zahnräder und Getriebebau, Technische Universität München  
Dr. A. Dyla  
Rolls-Royce Motor Cars Ltd., BMW Group, Munich

3.30 p.m. Coffee Break

4.00 p.m. **Nonlinear dynamic modelling for ECU parameter optimisation**  
D. Boja, M. Becker  
MBTech Powertrain GmbH, Fellbach-Schmidlen  
Dr. F. Kirschbaum, R. Saueremann  
Daimler AG, Stuttgart

4.30 p.m. **Integrated methodology for stationary and dynamic measurement  
and modeling of combustion engines**  
A. Schreiber, Prof. Dr. Dr. h.c. R. Isermann  
Institut für Automatisierungstechnik, Technische Universität Darmstadt

\* Discussion after each presentation

5.30 p.m. Bus Transfer to Evening Event –  
Departure from the front of the Kurhaus

6.00 p.m. Wine tasting at Kloster Eberbach  
(Monastery Eberbach)

7.00 p.m. Dinner

approx.

11.00 p.m. Return of buses



## Wednesday, November 11, 2009

### Section 3\*

Development environment and tools  
Chairman: Prof. Dr. G. Hohenberg  
*IVD Prof. Hohenberg GmbH, Graz, Austria*

- 8.30 a.m. **'Explosion' of power train development paths:  
Effective handling of an embarrassing diversity in daily test bench operation**  
Dr. A. Schloßer, Dr. P. Stommel, H. Sonntag  
*FEV Motorentechnik GmbH, Aachen*
- 9.00 a.m. **From idea to product: The Smart Calibration concept of AVL**  
E. Martini, J. Achten, Dr. N. Keuth, H. Pflügl  
*AVL List GmbH, Graz, Austria*  
Dr. M. Wellers  
*AVL Powertrain UK Ltd., Basildon, Great Britain*
- 9.30 a.m. **Rapid Measurement and Calibration utilizing MC embedded**  
K. Schnellbacher  
*ETAS GmbH, Stuttgart*
- 10.00 a.m. **Calibration methods and tools in drivetrain electronics**  
Dr. H. Klar, Dr. B. Klages, D. Gundel  
*Volkswagen AG, Wolfsburg*
- 10.30 a.m. Coffee Break
- 11.00 a.m. **Efficient Implementation of Optimization and Automation Methodologies  
at MTU Friedrichshafen GmbH / TOGNUM AG**  
Dr. S. Fritz, Dr. C. Gietzelt  
*MTU Friedrichshafen GmbH, Friedrichshafen*
- 11.30 a.m. **Tomorrow's Testing Technology Today  
Hooking-up KTM's real engines with the virtual world of simulation**  
A. Riedler, Dr. R. Abt  
*KTM-Sportmotorcycle AG, Mattighofen, Austria*  
Dr. F. Pfister, H. Rieger  
*AVL List GmbH, Graz, Austria*
- 12.00 a.m. Lunch
- \* Discussion after each presentation



### Section 4\*

Integration in to development process and successful rollout  
in series development

Chairman: Prof. Dr. Dr. h.c. R. Isermann

*Institut für Automatisierungstechnik, Technische Universität Darmstadt*

- 1.30 p.m. **Automated calibration of load change behavior and shift behavior on chassis dyno**  
G. Kokalj, K. Klumaier, R. Vögl – *AVL List GmbH, Graz, Austria*
- 2.00 p.m. **Automatic Full Load Optimization**  
Y. Yano, Y. Murakami, T. Nakagawa, H. Yamamoto  
*Mazda Motor Corporation, Hiroshima, Japan*  
R. Leithgöb – *AVL List GmbH, Graz, Austria*
- 2.30 p.m. **Global Dynamic Modeling: A new approach for calibration needs**  
M. Nebel, T. Combé, M.-S. Vogels, J. Bachler – *AVL List GmbH, Graz, Austria*
- 3.00 p.m. Coffee Break
- 3.30 p.m. **Roll out of a fast calibration approach for engine base calibration**  
M. Büchel – *AVL List GmbH, Graz, Austria*  
M. Thomas – *Renault SA, Lardy, France*
- 4.00 p.m. **Calibration methods at BMW – advantageous in many ways, not least economically**  
Dr. J. Rückert, M. Bross – *BMW Group, München*
- 4.30 p.m. **25 years dynamic engine test bed**  
G. Ziegler – *Dr. Ing. h.c. F. Porsche AG, Weissach*  
Prof. Dr. G. Hohenberg – *IVD Prof. Hohenberg GmbH, Graz, Austria*  
Prof. Dr.-techn. C. Beidl – *Institut für Verbrennungskraftmaschinen,  
Technische Universität Darmstadt*  
C. Christ – *AVL List GmbH, Graz, Austria*
- 4.50 p.m. **Closing Remarks**  
Prof. Dr.-techn. C. Beidl
- 5.00 p.m. **End of conference**

\* Discussion after each presentation

Conference Office in the Lobby – Das Kurhaus Wiesbaden  
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Phone 0170 9080121  
Open from 7.00 a.m. to 6.00 p.m.  
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