



Agenda System Simulation

AVL International Simulation Conference 2017

June 27 – 29, 2017

CONFERENCE PROGRAM SYSTEM SIMULATION – TUESDAY, JUNE 27, 2017

- 08:30 - 08:45 **Welcome Address**
 H. List, Chairman and CEO, AVL List GmbH
- 08:45 – 09:15 **Virtualization Drives Powertrain Simulation Technologies**
 G. Rainer, Vice President, Advanced Simulation Technologies, AVL List GmbH

Keynotes

- 09:15 – 09:45 **Engine Development Driven by Simulation at John Deere**
 P. Wynthein, Head of Design Analysis, John Deere Co.
- 09:45 – 10:00 **Coffee Break**
- 10:00 – 10:30 **Interconnection as Key to Digital Transformation**
 W. Puntigam, Head of Department, AVL List GmbH
- 10:30 – 11:00 **Automotive Industry – The Future is Electric**
 A. Neumann, Partner and Managing Director, Strategy Engineers GmbH & Co. KG
- 11:00 – 11:30 **Coffee Break & Poster Session**

Driveability

- 11:30 – 11:50 **Performing Drivability Trade-Offs for Turbocharged Engines**
 A. Shabashevich, T. Dynybyl, T. Mueller-Werth, T. Kraemer, AVL Powertrain Engineering Inc.

Real Time Engine in Systemsimulation

- 11:50 – 12:10 **Real Time & System Simulation of Marine Applications Contributing to CAE Tasks Concerning Vibrations and Durability**
 R. Strasser, H.-G. Flesch, C. Huber, AVL List GmbH
- 12:10 – 12:30 **An Advanced Real-Time Capable System Level Modelling Framework for Simulating SI Engines**
 T. Katrašnik, University of Ljubljana; H. A. Schuemie, AVL List GmbH
- 12:30 – 13:30 **Lunch**
- 13:30 – 13:50 **Exhibitor Presentations & Poster Session**

Real Time Engine for Control Development

- 13:50 – 14:10 **Distributed Co-Simulation Platform for Maritime Control & Validation**
D. Valero Bertrand, S. Swamidass, AVL Software and Functions GmbH
- 14:10 – 14:30 **Model Based Control Strategy and Virtual Calibration of DOC Outlet Temperature for DPF Regeneration about EURO 6**
G. Ying, Jilin University; X. Yan, AVL List Technical Center
- 14:30 – 14:50 **Coffee Break & Poster Session**

Driveline, Fuel Efficiency & Performance

- 14:50 – 15:10 **A Holistic Approach for Drive-line Ratio Optimization for a Small Commercial Vehicle**
R.T. Sangeetha, Mahindra & Mahindra Ltd.
- 15:10 – 15:30 **AMT Modeling for Simulation**
B. Singh, S. Bhatia, P. Mehra, S. Dhiman, V. Khanna, Maruti Suzuki India Ltd.
- 15:30 – 16:00 **Coffee Break & Poster Session**
- 16:00 – 16:20 **Truck2030 - Optimisation of a Long-Haul Vehicle Concept**
M. Fries, M. Sinning, C. Mährle, M. Lienkamp, G.Wachtmeister, TU Munich

Fuel Cell

- 16:20 – 16:40 **CAE Based Development of Fuel Cell Systems**
J. Rechberger, AVL List GmbH
- 16:40 – 17:00 **CFD Analysis of PEM Fuel Cell Performance**
Z. Penga, G. Radica, F. Barbir, University of Split
- 17:00 – 17:20 **Temperature Profiles in PEM Fuel Cells**
F. Moyon, L. Feierabend, S. Gößling, ZBT GmbH Duisburg Germany
- 17:20 – 17:40 **A Mechanistic System Level Model of PEM Fuel Cells**
G. Tavčar, A. Kregar, T. Katrašnik, University of Ljubljana

- 17:40 **End of Speeches**
- 18:10 **Transfer to Social Evening (Tram 1)**
- 18:30 **Transfer to Social Evening (Tram 2)**
- 19:00 – 23:00 **Social Evening @Schlossbergrestaurant Graz**

Social Evening

The AVL International Simulation Conference is all about making smart connections – both in the use of our products and in getting to know simulation experts from the field.

We invite you to continue networking at the Schlossbergrestaurant.



CONFERENCE PROGRAM SYSTEM SIMULATION – WEDNESDAY, JUNE 28, 2017

Keynotes

- 08:30 – 09:00 **Knowledge-Based Models and Data-Driven Approaches**
S. Lindstaedt, Managing Director, Know-Center GmbH
- 09:00 – 09:30 **Vehicle Attribute Development & Validation by Digital Methods**
P. Schöggel, Skill Area Manager, AVL List GmbH
- 09:30 – 10:00 **AVL's Model Based Calibration – a Complete Process Supporting Toolchain from Model Generation up to Calibration**
F. Dorfer, Product Manager AVL MoBEO™, G. Vitale, Global Business Segment Manager, AVL List GmbH
- 10:00 – 10:30 **Coffee Break & Poster Session**

Electrification & Energy I

- 10:30 – 10:50 **Four Wheel Drive Commercial Vehicle Energy Management and Diagnosis**
Y. Zhang, L. Oriet, E. Lang, T. Zicheng, University of Windsor
- 10:50 – 11:10 **Hino Melpha Plug-in Hybrid Bus CRUISE™ Utilization in Control Development**
H. Tanaka, Hino Motors Ltd.
- 11:10 – 11:30 **Application of Energy Distribution Analysis During the Vehicle Development**
L. Xin, J. Wang, L. Wang, Z. Jia, W. Tian, H. Yu, Dongfeng Motor Corporation Technical Center; X. Yan, AVL List Technical Center
- 11:30 – 11:50 **Research of Dynamic and Fuel Economy of a Hybrid Truck and Trailer**
A. Kozlov, A. Terenchenko, FSUE NAMI
- 11:50 – 12:10 **Gear Ratio Optimization Workflow with AVL CRUISE™ using Design Explorer & AVL CAMEO™**
A. Balihe, AVL List GmbH
- 12:10 – 13:30 **Lunch**

Electrification & Energy II

- 13:30 – 13:50 **AVL CRUISE™ Model-based Optimisation of Shift Scheduling Maps for a Parallel Hybrid Electric Vehicle**
J. Soldo, V. Ranogajec, B. Škugor, J. Deur, University of Zagreb
- 13:50 – 14:10 **Thermal and Energy Management Prediction of a 2L Diesel Engine**
G.S. Lee, Youngsan University; C. Kim, S. Han, S. Park, Korea Automotive Technology Institute
- 14:10 – 14:30 **Thermal Analysis of Hybrid Transmissions with AVL CRUISE™**
M. Diehl, GETRAG B.V.& Co. KG.

Driveability

- 14:30 – 14:50 **Simulation-Based Optimization of Engine Characteristics regarding Driveability and Performance in the Concept Phase**
R. Schuh, Mercedes AMG GmbH; M. Teitzer, AVL List GmbH
- 14:50 – 15:20 **Coffee Break & Poster Session**
- 15:20 – 15:40 **AVL CRUISE™ CVT Motor Bike Model on AVL PUMA Open™**
D. Ciglar, AVL-AST d.o.o. Croatia

MiL & ADAS

- 15:40 - 16:00 **Impact of Latencies on a Yaw Rate Controller Using Real-Time Co-Simulation**
M. Baumann, P. Baumann, O. Kotte, L. Mikelsons, Robert Bosch GmbH
- 16:00 – 16:20 **Development of Predictive Energy Management & ADAS Functions**
S. Jones, A. Massoner, N. Wikström, A. Ferreira Parrilla, A. Huss, U. Karapinar, AVL List GmbH
- 16:20 – 16:40 **Integrated Controls Software MiL Testing on PC using Virtual ECUs**
A. Desai, AVL Powertrain Engineering Inc.
- 16:40 **End of Speeches**
- 17:00 **Best Paper Award and Farewell**

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