AVL Advanced Simulation Technologies International User Conference 2015 Tuesday, June 23, 2015

	Opening Session / Keynote Speeches					
8:30	Welcome Address					
8:45	I. List, Chairman and CEO, AVL List GmbH Powertrain Simulation - From Design Optimization to Model Based Development					
9:15	i. Rainer, Vice President, Advanced Simulation Technologies, AVL List GmbH /orsche Intelligent Virtual Development Process					
0.45						
9.45 10:15	Application without Simulation is Improvisation					
10:45	Simulation in Large Engine Development, Challenges and Trends					
11:15	H. Tienhaara, Wartsila Connecting Elements are Leading to Development Efficiency - AVL IODP					
11:45	W. Puntigam, AVL List GmbH 45 Exhibitor presentations (tbd.) in Session Rooms					
12:15	LUNCHBREAK					
	Structure Dynamics	Engine Fluid Dynamics		System Simulation		
13:15	Session Keynote Using AVL EXCITE for Engine Design M. Ejakov, Ford Motor Company	Session Keynote Efficient Gasoline Engine Combustion – Today's Role of CFD A. Ennemoser, AVL List GmbH		Session Keynote Implementing AVL CRUISE in the DAF trucks development chain M.J.A. Taken, B.A.M. Lipsch, H.J.M. Voets, DAF Trucks NV		
	Bearing Analysis	Diesel Engine Development		Commercial Vehicles		
13:45	Influence of Shell Contour, Journal Shape, Bearing Clearance and Oil Viscosity on Conrod Big End Bearing Results G. Pichler, SinusPro GmbH	Pollutant Emission Optimization for Diesel Engines M. Chauvy, O. Davodet, PSA Peugeot Citroën		Use of AVL CRUISE Simulation Tool as Virtual Test Bed for Deriving Energy Consumption Function for Different LCV Vehicle Type (Diesel, EV, PHEV)		
14:05	Creep Deformation in Journal Bearings under Constant Load:	Thermodynamic Analysis with Various Compression Ratios in Direct		G. Magra, E. Morello, lveco/CNH Complete Vehicle Modeling and Simulation of a Long Haul Truck with		
	Influences and Effects	Injection Diesel Engines		Electrified Auxiliaries in the CONVENIENT Project		
	C. Sous, G. Burgharot, KWITH Aachen University	L. Passily, O. Rastilei, Continental Automotive Gribh		J. Hollin, O. Lindgarde, Volvo GTT, H. Olner, AVE List Gribh, E. Peng, KTH		
14:25	Simulation of an Axial Thrust Bearing in a Heavy Duty Diesel Engine Valvetrain Using the AXHD Joint in AVL EXCITE Power Unit	3D CFD Simulation of Oil and Gas Flow Across a 2-piece Piston Oil Control Ring		Tractor and Implements Optimization Considering Soft Soil, Vehicle and Powertrain		
	A. Spencer, H. Herbst, Scania	M. Carlsson, D. Konstanzer, H. Hernst, Scania CV AB		M. Oswald, AVL List GmbH		
14:45	COFFEE BREAK	COFFEE BREAK		COFFEE BREAK		
	Cranktrain Strength and Durability	Diesel Engine Development		Fuel Efficiency		
15:10	Cranktrain Bearing Parametric Study	Engine Configurator Based on AVL BOOST and CAMEO		tbc.		
15:30	Cranktrain System Assessment of Ecotorq 12.7 Litre Diesel Engine O. Deliktas, M. S. Tabak, Ford Otosan	HM. Rogeler, J. Wolkerstorfer, AVL List GmbH Modeling of the Air Fuel Mixing and Flame Lift-off of a Diesel Spray E. Celik, Continental Automotive GmbH		Development of Simulation Models with Modern Electrical Systems S. Tsiamakis, G. Fontaras, K. Anagnostopoulos, B. Ciuffo, Z. Samaras, Aristotle University of Thessaloniki		
15:50	Introduction of AVL EXCITE into Cummins Standard Analysis Process I. Piraner, D. Liu, Cummins Inc.	Modeling of Diesel Spray from Multi-hole Nozzle under Off-Axis Needle Displacement		Combined Driveability and Fuel Efficiency Simulation in the Concept Phase		
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15:50	Introduction of AVL EXCITE into Cummins Standard Analysis Process I. Piraner, D. Liu, Cummins Inc. Using OptiStruct with AVL EXCITE H. Thomas, Altair Engineering, Inc.	Modeling of Diesel Spray from Multi-hole Nozzle under Off-Axis Needle Displacement F. Palmieri, G. Chiatti, O. Chiavola, Roma Tre University 1D / 3D Coupling Simulations for EGR Distribution in the Cylinder J. Houstin, Alten, O.Davodet, PSA Peugeot Citroen		Combined Driveability and Fuel Efficiency Simulation in the Concept Phase M. Oswald, A. Shabashevich, AVL List GmbH Predicting İstanbul Metrobus Line Fuel Consumption by Using AVL CRUISE and IPG Truck Maker Co Simulation O. Özener, M. Özkan, E. Orak, Yildiz Technical University Istanbul, E. Kural, Allourberg, AVL List GmbH G. Acardınlut IETT		
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AVL Advanced Simulation Technologies International User Conference 2015 Wednesday, June 24, 2015

Opening Session / Keynote Speeches 8:30 Energy Management Development based on the Entire Vehicle Simulation Model H. Tokuda, DENSO

9:00 Engine Simulation at BMW: Past, Present and Future D. Linse, BMW Group

9:30 Calibration 4.0? - Paradigm Change due to New Model-based Development Methods

B. Schick, AVL List GmbH

10.00	COFFEE BREAK			
	Structure Dynamics	Engine Fluid Dynamics I	Engine Fluid Dynamics II	System Simulation
	Transmission / Driveline	Diesel Engine Development	Gasoline Engine Development	Hybrid, Electric, Control
10:30	Transmission Radiation Noise Reduction by means of Combination of EXCITE and Optimization Calculation C. Togashi, N. Hariu, Y. Akiyama, I. Terada, Isuzu LTD.	Optimized Charge Air Cooling for Diesel Passenger Cars with Respect to Upcoming CO ₂ -Limitations and RDE-Use-Cases C. Doppler, Virtual Vehicle Research Center, G. Hirschl, AVL List GmbH, G. Zsiga, MAHLE Behr GmbH	A Novel CFD Approach for an Improved Prediction of Particulate Emissions in GDI Engines by Considering the Varying Piston Surface Temperature F. Koepple, P. Jochmann, A. Hettinger, A. Kufferath, Robert Bosch GmbH	Variable-structure Decentralized Powertrain Control of Simulated Conventional and Hybrid Driving Strategies F.Walz, P. Hermannstädter, Porsche AG
10:50	tbc.	Modification of Intake Port Shape for Increasing of Effective Parameters of Middle-Speed Diesel Engine A.A. Zelentcov, R.Z. Kavtaradze, Bauman Moscow State Technical University	Reducing the Knock Probability in a Gasoline Engine by Means of CFD M. Poli, Piaggio	Online Parameters Identification and SOC Estimation for Healthy and Aged Electric Vehicle Batteries Based on Equivalent Circuit Models R. Ahmed, S. Habibi, McMaster University
11:10	Computational Establishment of the Transmission Noise and Vibration M. Zubík, A. Prokop, K. Řehák, M. Janoušek, P. Novotný, Brno University of Technology	A Multi-Site Kinetic Model for NH3-SCR over Cu/SSZ-13 f K. Leistner, L.Olsson, K. Wijayanti, Chalmers University of Technology, A. Kumar, S.Y. Joshi, K. Kamasamudram, N.W. Currier, A. Yezerets, Cummins Inc.	Thermal Analysis of a 4-Cylinder GDI Engine C. Pecollo, FIAT Chrysler Automobiles	Powertrain Connectivity for Energy Efficient Driving A. Engstle, AVL Software and Functions GmbH
11:30	I4 Gasoline Power Unit Vibration Comparison, Using Manual versus Automatic Transmission H. Johannesson, Volvo Car Corporation	Efficient Use of Detailed Chemistry in AVL FIRE® with FGM F. Tap, D. Goryntsev, A. Starikov, Dacolt International BV	Fast Optimization of Spray Pattern and Injection Strategies in GDI Engine by using CFD simulation C. Forte, G.M. Bianchi, University of Bologna, A. Siliato, NAIS srl	Model-based Control-system Development and Pre-calibration of Injection-system Parameters by means of a Physics-based Injection System and Engine Model of a Locomotive Engine R. Strasser, S. Laszlo, C. Pötsch, AVL List GmbH, I. Koops, AVL Software and Functions GmbH
11:50	Grid-Ioss? Take it Easy M. Janic, SET Sustainable Energy Technologies GmbH	Engine Emission and Performance Optimization with Optimus S. Poles, NOESIS Solutions	CFD Simulation of Flow Field inside the Wankel Rotary Engine between Intake and Compression Stroke T. Poojitganont, H.P. Berg, Brandenburg University of Technology Cottbus- Senftenberg	An Advanced Real-time Capable Mixture Controlled Combustion Model T. Katrasnik, University of Lubijana
12:10	LUNCHBREAK	LUNCHBREAK	LUNCHBREAK	LUNCHBREAK
	Engine NVH	Natural Gas and Large Diesel Engines	Vehicle and General Purpose CFD	System Integration
13:10	EXCITE Power Unit M. Cavalli, G. Lavacchielli, TP Engineering; E. Riva, G. Nicoletto, Università degli Studi di Parma	A. Twellmeyer, F. Köpple, B. Weigand, Robert Bosch GmbH	Reduction of Aerodynamic brag of Venicles using How Control and AVL FIRE* S. Krajnovic, G. Minelli, M. Mirzaei, J.Östh, Chalmers University of Technology	A Short Cut from the Office to the Lest Bed – An integrated and Open Environment for Simulation K. Rothbart, J. Krasser, AVL List GmbH
13:30	Assessment and Optimization of Heavy Duty Engine Geartrain NVH and Dynamic by Using AVL Excite Timing Drive O. Subasi , M.S. Tabak, Ford Otosan	Investigation of the Flame Propagation in a Large Gas Engine with LES T. Lauer, W. Holly, Technical University Vienna, P. Prieschnig, J. Schneider R. Tatschl, AVL List GmbH	Detailed Heat Transfer Modelling & Optimisation of a Forced-Convection , Kiln using CFD methods H. Maier, Glidlab GmbH, W. Berger, R. Breyner Voest Alpine Special Wire GmbH	tbc.
13:50	tbc.	Numerical Investigation and Realisation of Optimised Valve Timing for an OHV Cogeneration Engine J. Bauer, D. Neher, M. Kettner, Karlsruhe University of Applied Sciences	Motorcycle Heat Transfer Analysis D. Suzzi, qpunkt GmbH	Development of a Python Based Tool Allowing the Interaction of Alternative I/O with the AVL CRUISE Simulation Tool S. Tsiamakis, G. Fontaras, K. Anagonstopoulos, B. Cuiffo, Z. Samaras, Aristotle University of Thessaloniki
14:10	Evaluation of Cummins QSK95 Vibration in a Locomotive Application R. Hodge, Cummins High Horsepower	Combustion Simulation for Large Diesel Engines using AVL FIRE [®] J. Vystejn, G. Taucher, M. Engelmayer, LEC, Technical University Graz	Enhancements of a High-performance CFD-DEM coupled Code towards Heat and Mass Transfer in Pharmaceutical Application G. Scharrer, CATRA GmbH, C. Radeke, Research Center Pharmaceutical Engineering GmbH, D. Jajcevic, SES-Tec OG	Integration of Real-time Systems into the Entire Vehicle Simulation M. Benedikt, G. Stettinger, VIRTUAL VEHICLE Research Center, J. Zehetner, AVL List GmbH
14:30	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
	Bearing Analysis	Gasoline and Diesel Engine Development	High Performance Computing	
15:00	Effect of Non-Linear Elastic Deformation of Materials with Low Stiffness on Pressure Build-Up with Surface Contact Layer S. Wolking, G. Burghardt, RWTH Aachen University	s Modelling of Cyclic Variability in Combustion of Spark-Ignition Engine Using the Cycle-Simulation Model M. Sjeric, D. Kozarac, I. Taritas, University of Zagreb	GPU Solvers and Beyond G. Haase, University Graz	tbc.
45.00	Evaluation of a Dad Bearing with Despect to Oil Sumply Units	Study of Atkingon and Miller Cycles Based on Vike and Erected	the	Fallyue Analysis
15:20	D. Schliemann, D. Wieczorek, GM Powertrain Engineering	Combustion Model D.S. Ju, China Engine Corporation	tDC.	An Engineering Approach to Advanced Fatigue of welded Joints L. Vallance, A.Winkler, Dassault Systemes Austria GmbH
15:40	Main Bearing Performance Investigation of Sprayed versus Non- sprayed Main Bearing Inserts S. Larzenius, Volvo Car Corporation		Leveraging Cloud HPC for AVL FIRE® Simulation 1. Graedel, Rescale Inc.	tbc.
16:00	End of Speeches			

16:20 Best Paper Award and Farewell