

AVL International Simulation Conference 2019 - Workshops					
Thursday, October 24					
	ICE Performance & Emissions	ICE Durability & NVH	Electrified Powertrains	Virtual Vehicle Development	Functional Prototyping
08:30	Simulation Methods Covering Recent Technologies for GDI Engines	3-Piece Oil Ring Model and Comparison of 3D-Ring versus 2D Ring Model Approach	Setup of XEV System (Engineering) Models by Introducing a Modular Approach for BEV, FCEV and REEV Configurations, including Control Functions Developed in AVL CRUISE™ M	Water Wading Simulation using PreonLab	Set-Up of Simulation Environment for ADAS Platooning Application using Model.CONNECT™, AVL CRUISE™ M and SUMO
08:45					
09:00	Injector Wetting Simulations for Low and High Pressure Injection Systems (SCR, GDI)	How to Investigate in Valve Train Guide and Seat Contact and Wear	Modeling of Thermal Networks and HVAC Systems for Electrified and Full Electric Vehicles	Vehicle Water Management Investigation using PreonLab	Investigation in Transmission Durability of a Ship Vessel based on System-Simulation using Model.CONNECT™ and Different Modeling Levels
09:15		EHD Evaluation: Bearing Wear Analysis in AVL EXCITE™	Battery Performance, Thermal and Safety Analysis on Component Level	Investigation of Water Breaching at Vehicle A-Pillar and Side Mirrors using PreonLab based on FIRE Flow Field	Soft ECU Virtual Calibration with AVL CRUISE™ M/ MOBEQ™ via Model.CONNECT™ xcp slave and INCA
09:30					
09:45					
10:00	Coffee Break				
10:30	Recent Enhancements in Multiphase with Focus on Injector Flow and Quenching	The New Center-Surface Roller Bearing Model in AVL EXCITE™	Automatic Transfer from 3D to System Model and Integration into Entire Vehicle	Driveability Analysis of Electrified Vehicles using AVL VSM™	Cameo for Simulation: Optimize Your Models using Active DOE
10:45					
11:00	Component Optimization: Improving the Performance of an SCR	How to Analyze NVH Results - Root Cause Analysis using TFs, NTPA, ODS and Modal Analysis	Fuel Cell - 3D-Multiphysics PEMFC Performance Analysis and Optimization	Torque Vectoring Development & Testing using AVL VSM™	Thermal Management System HiL Demo on Microautobox for an EV Model in AVL CRUISE™ / CRUISE™ M
11:15			Fuel Cell - Mechanistic System Level Modelling of Fuel Cell Electric Vehicles for BoP		From Office to Testbed using Model.CONNECT™ and Testbed.CONNECT™ - Experiences and Possibilities
11:30	News About Powertrain Thermal Analysis		E-Motor Simulation: Part 1 - Electromagnetic Analysis using AVL FIRE™; and Export Data to AVL EXCITE™ and AVL CRUISE™ M	Real-World Road Generation for RDE and Load-Cycle Simulation using AVL VSM™	Simulation of Hybrid Vehicle on Engine Test Bed
11:45					
12:00					
12:15					
12:30	Lunch Break				
13:30	Simulating Liner Cavitation and Erosion	How to Create your Own COMPOSE App	E-Motor Simulation: Part 2 - Rotor Dynamics and Acoustic Analysis using AVL EXCITE™	RDE Simulation with Semi-Physical Engine and Aftertreatment Model using AVL CRUISE™ M	Exchange on Virtual Development Methodologies
13:45					
14:00	EURO 6 Gasoline EAS Concept Development		Modeling of an E-Axle with Planetary and Cylindrical Gear Stages for Structural Dynamic Investigation	Control Functions Development using AVL CRUISE™ M Engine and Aftertreatment Model in MIL and SIL	
14:15					
14:30	Automated CRUISE™ M Engine Model Generation and Parametrization	Open Discussion	E-Motor Thermal Analysis using AVL FIRE™	Open Discussion	
13:45					
15:00	End of Workshop				