

AVL Advanced Simulation Technologies



EXCITE Tech-Day - Scandinavia

Powertrain and Driveline NVH, Durability & Efficiency

21st September 2016

Göteborg, Chalmers Teknikpark

With contributions from VOLVO Cars, VOLVO Trucks, SCANIA, and AVL Experts



AGENDA



08:30 **Welcome Coffee**

09:00 **ENGINE DYNAMICS & DURABILITY**

Main Bearing Fretting Analysis Considering Out of Roundness

Integrated Thermal Analysis of Piston Assembly on a FCA Engine

Fatigue evaluation of crankshaft using ANSYS + EXCITE

Hubert Herbst, **SCANIA**

Gudrun Kreuzwirth, **AVL**

Björn Rilbe, **VOLVO AB**

10:30 **Coffee Break**

11:00 Comparison between full and sliced engine model for main bearing analysis

Oil Transport Simulation in EXCITE P&R

H. Samuelsson, **SCANIA**

A. Spencer, **SCANIA**

12:00 **Lunch**

13:00 **FULL POWERTRAIN DYNAMICS**

Driveline Non-stationary Effects as Clutch Activation and Clonk

Simulation of an Engine Test Rig incl. DMF and drive shafts using EXCITE

Dynamic Simulation of HEV and EV Systems

Gudrun Kreuzwirth, **AVL**

Urban Rönqvist, **VOLVO Cars**

Gudrun Kreuzwirth, **AVL**

14:30 **Coffee Break**

15:00 **NVH & NOISE RADIATION**

AVL EXCITE Acoustics: Latest Features

Acoustic radiation analysis, using excitation from crank train, piston slap and valve train simulations

NVH Applications with AVL EXCITE : Gear Noise

Laurent Margerie, **AVL**

Hans Johannesson, **VOLVO Cars**

Laurent Margerie, **AVL**

16:30 **Closure**