

# 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

Engine Dynamics applications with AVL EXCITE

Fatigue evaluation of crankshaft using ANSYS + EXCITE

Hubert Herbst, **SCANIA**

Thomas Resch, 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**

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

AVL EXCITE Transmission & Driveline: Latest Features (Advanced Gear, Roller bearing, E-Motor)

Transmission Dynamics applications with AVL EXCITE

Urban Rönqvist, **VOLVO Cars**

Laurent Margerie, AVL

Thomas Resch, 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

Laurent Margerie, AVL

Hans Johannesson, **VOLVO Cars**

Thomas Resch, AVL

**Closure**