

Engine Dynamics & Acoustics

PLANNING GROUP 5

COORDINATOR

Prof. Dr. Christoph Brands,
Schaeffler Technologies

PROJECT MANAGEMENT

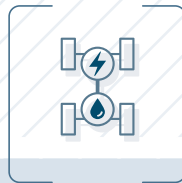
Max Decker, FVV

ENGINES

ENGINE DYNAMICS & ACOUSTICS



EFFICIENCY



HYBRIDS



MATERIALS
RESEARCH



COMPONENTS



DEVELOPMENT
TOOLS

RESEARCH PRIORITIES

Planning group 5, ›Engine Dynamics & Acoustics‹, is dedicated to the following topics:

Efficiency of the engine | Dynamic and acoustic behaviour of new powertrain variants/operating strategies | Hybridisation

And tackles the following lines of research/focuses:

Acoustic behaviour of powertrain components | Interferences | Vibration damping | Detecting acoustic phenomena in conventional and new powertrain variants

PUBLICATIONS

- **MTZ worldwide 01/2020:** Dynamic Acoustic Optimization of Engine Components, Engines and Powertrain Systems
- **MTZ worldwide 05/2019:** Structure-borne Sound Propagation in the Crankshaft Drive
- **FVV proceedings:** R587 | 2019 Spring Conference, R590 | 2019 Autumn Conference and R593 | 2020 Spring Conference

PG5
DATABASE



THEMIS

PG 5 | RESEARCH PROJECTS



NO	TITLE // FUNDING ORGANISATION // DURATION	PROJECT COORDINATOR
Planned projects		
M0620	Dissonance (Part-)Electric Drives	Rainer Weber, Vitesco
M3719	Calculation of Transfer Pathes Using Neural Networks	Dr. Matthias Wegerhoff, HEAD acoustics
M3819	Exterior Noise of Electric Vehicles	Dr. Stefan Heuer, MAN Truck & Bus
M4019	NVH Hydrogen Powertrains	Dr. Stefan Heuer, MAN Truck & Bus
M4119	E-Motor Eccentricity Tolerance for NVH in HEV	Hans Johannesson, Volvo
M4219	Engine Mount NVH Optimisation in HEV PU	Hans Johannesson, Volvo
Ongoing projects		
1304	Perceptual NVH-Aspects of Downspeeding // FVV-EM // 01-03-2018 to 30-09-2020	Dr. Harald Stoffels, Ford
1306	Prediction Diesel Roughness with TPA // FVV-EM // 01-06-2018 to 31-12-2020	Dr. Bernd Philippen, HEAD acoustics Roland Kühn, Daimler
1340	Interior Noise Hybrid Powertrains // FVV-EM // 01-01-2019 to 31-12-2020	Rainer Weber, Vitesco
1369	Interference Noise in the Vehicle Compartment with Electrified Drives // FVV-EM // 01-09-2019 to 31-08-2021	Dr. Stefan Heuer, MAN Truck & Bus
Completed projects		
1361	Acoustic Transmission Loss in Turbochargers II // FVV-EM // 01-07-2019 to 31-05-2020	Bernd Müller, Porsche
1274	Disturbing Engine Noise in the Vehicle Interior // FVV-EM, BMWi/AiF // 01-04-2017 to 31-03-2019	Dr. Stefan Heuer, MAN Truck & Bus