Meeting legislative demands for CO2 and emissions reduction by supporting effective vehicle development with new mobile measurement system approaches

Speaker: Martin Rzehorska, AVL List GmbH

The continuous reduction of CO2 and toxic exhaust emissions forces the automotive industry to integrate alternative propulsion systems in the vehicles. Due to higher system complexities the development effort is still increasing. The engineers have to test the vehicle performance extensive under real driving conditions. Therefore the need information about all development targets which they have to measure direct in their vehicles. This helps furthermore to see the interactions between different parameter settings and the impact to the results without additional cost intensive development loops. Besides this R&D area the legislative authorities are prescribing in use emission tests for heavy duty and non-road machinery applications.

Especially for these marked demands AVL developed a new product family. AVL M.O.V.E is a measurement system which measures particulate and gaseous emissions, the fuel consumption and combustion results simultaneously. Beside the high measurement accuracy, the data comparability to measured data coming from the test beds is a very important factor. By using the same physical measurement principles in mobile applications and test bed applications this requirement is fulfilled.

Due to its central device handling and data acquisition the system is very easy to use and reduces the operating effort in the vehicle. To cover all different applications, the instruments have to deal with harsh environmental conditions. Therefore the design of the devices is very robust and compact. New market demands will be continuously implemented into M.O.V.E.

About the speaker: After finishing the apprenticeship in 1996 Martin Rzehorska worked with Sappi fine paper Europe Ldt. in Gratkorn as electrician and control technician. 1999 he concluded his education in the

evening school for electrical engineering in Graz. At the beginning of the year 2000 Martin Rzehorska joined AVL as calibration engineer for diesel engine applications passenger cars. He continued his education at the advanced technical college for employees mid of 2000 in the field of automation technique. After finishing this education with the master degree he changed in 2005 internally to Instrumentation and Test Systems as Product manager for combustion measurement systems. Since 2007 Martin Rzehorska is the responsible Product manager for in vehicle measurement systems AVL M.O.V.E.