



**AVL**

# 5<sup>TH</sup> AVL INTERNATIONAL COMMERCIAL POWERTRAIN CONFERENCE

April 28<sup>th</sup> - 29<sup>th</sup>, 2009, Helmut-List-Halle, Graz/Austria



**SYNERGY FOR PROGRESS**

**PROCEEDINGS**



## SESSION 1: SETTING THE SCENE

Chair

David M. Porreca; SAE International



1.1 **On-road and Non-road Powertrains: Different markets, Common Challenges, Similar Solutions**

Prof. Dr. Franz. X. Moser, Executive Vice President, AVL List GmbH, Austria

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1.2 **Product Development Strategies in A Global Automotive Marketplace**

Dr. V Sumantran; Hinduja Automotive Ltd., UK

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1.3 **The Agricultural Tractor Market - Trends and Challenges**

Fabio Mingrino, Riccardo Spadoni; Case New Holland Italy

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1.4 **Strategies to cope with the market and legislation challenges in the construction equipment industry**

Dr. Tim Leverton; JCB Excavators Ltd.

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1.5 **Global Trends in Emissions Legislation Strategy**

Michael Walsh; International Consultant, Board Chairman, International Council on Clean Transportation

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1.6 **Forecast of Global Markets for Heavy Duty Vehicles & Machines**

Edward J. Hadingham; Power Systems Research

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## SESSION 2: DIFFERENT INDUSTRIES - SAME TOPICS

Chair

Peter Wuensche;; AVL List GmbH



### 2.1 **The Influence of Urea Droplet Size on the Efficiency of SCR Catalysts for HD-Diesel Engines**

Dr. Georg Hühthwohl, Volker Schaika, Dirk Bleicker, Axel Eckel; Albonair GmbH

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### 2.2 **EAS solutions and engine-out emissions for agricultural applications**

Ing. Manlio Mattei, Ing. Luca Crippa, Ing. Alberto Bellini; Same Deutz-Fahr

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### 2.3 **Exhaust gas aftertreatment systems to meet the Non-Road emission challenges**

Dr. Andreas Geißelmann, Dr. Stefan de Buhr, Dr. Ingo Lappas, Wilfried Müller, Ralf Sesselmann; Umicore AG & Co. KG

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### 2.4 **The impact of CO<sub>2</sub> on global warming**

Prof. Dr. Dr. h.c. Reinhard Zellner; University Duisburg-Essen

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### 2.5 **Powertrain Solutions with Common Rail Systems for advanced Commercial Vehicle Applications On- and Off-Highway**

Dr.-Ing. Dipl.Wirt.-Ing. Marcus Parche, Dr.-Ing. Stefan Becher, Dipl.-Ing. Lothar Schmid; Robert BOSCH GmbH

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### 2.6 **Model based calibration methodology**

Thomas Cartus, Hanno Bachler, Martin Schüßler; AVL List GmbH

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### 2.7 **Application of PM-METALIT® and SCRi® Systems**

Rolf Brück, Klaus Müller-Haas, Oswald Holz, Peter Hirth; EMITEC Gesellschaft für Emissionstechnologie mbH  
Robert-Gilles Entlesberger, Thomas Cartus; AVL List GmbH

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## SESSION 3: INNOVATIVE PRODUCTS AND TECHNOLOGIES

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Dr. Andreas Truckenbrodt; AFCC Automotive Fuel Cell Cooperation Corp.,  
Daimler AG



- 3.1 **Powertrain control systems in a multi-customer environment**  
Peter Österberg; Volvo Powertrain Corporation

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- 3.2 **Electronic systems in agricultural vehicle powertrains**  
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- 3.3 **Electronic equipment in construction machines and cranes**  
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- 3.4 **Hybrid powertrains for truck applications**  
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- 3.5 **Hydrostatic variable and regenerative drive train architectures  
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- 3.6 **New hybrid wheel loader**  
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- 3.7 **Hybrid Drive Systems for Industrial Applications**  
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Prof. Dr. Franz. X. Moser, Executive Vice President, AVL List GmbH, Austria



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Roberto F. Aguilera  
International Institute for Applied Systems Analysis (IIASA);  
and University of Vienna

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### 4.2 **Fuel Cells for Commercial Applications – Bus, Truck, Agricultural and Construction Equipment**

Dr. Andreas Truckenbrodt, Dr. Manfred Schuckert; AFCC Automotive Fuel  
Cell Cooperation Corp., Daimler AG

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### 4.3 **The Commercial Powertrain Beyond 2020**

Dr. Theodor Sams, Rolf Dreisbach, Prof. Dr. Franz X. Moser; AVL List GmbH

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