




**VECOM Suppliers Workshop:
Vehicle Concept Modelling in the Automotive
Sector**





VECOM
Vehicle Concept Modelling

VLEVA Office, Kortenberglaan 71, Brussels
June 6-7, 2011
organized by K.U.Leuven, LMS and VLEVA; fully
endorsed by CLEPA














VECOM
Vehicle Concept Modelling

Welcome

- FP7 Marie Curie Initial Training Network (ITN)
VECOM – Vehicle Concept Modelling (Grant Agreement: 213543): 1/10/2009 – 30/09/2012
- Dissemination and networking event organized by:
 - VECOM network – represented by K.U.Leuven and LMS
 - VLEVA – Liaison Agency Flanders-Europe
 - CLEPA – European Association of Automotive Suppliers





Welcome

- 19 presentations in 5 sessions
 - 1 presentation by EC – DG EAC
 - 2 presentations by CLEPA members (GKN Driveline, Delphi)
 - 2 presentations by VECOM OEM's (BMW, CRF)
 - 14 presentations by VECOM Fellows

- 49 participants
 - 22 external representatives
 - 2 representatives from the EC – DG EAC
 - 27 VECOM representatives of which 15 MC Fellows
 - From 11 EU countries
 - 24 university and 23 industry representatives









Agenda

- **Session 1** – chair: Bert Pluymers, K.U.Leuven
 - 13:00-13:30 **Welcome**
 - *About VECOM* (B. Pluymers, K.U.Leuven; S. Donders, LMS)
 - *About CLEPA* (W. Verhoeve, CLEPA)
 - *About VLEVA* (P.-P. Knops-Gerrits, VLEVA)
 - 13:30-14:00 **Opportunities in the FP7 People Program – ITN, EID and IAPP** (V. Debais-Sainton and F. Miranda, DG EAC)
 - 14:00-15:00 **VECOM Fellow Presentations**
 - *Development of Design Assistance System* (S. Bogomolov, CTU Prague)
 - *NVH multi-disciplinary optimization of a vehicle suspension by means of combined multibody and FE techniques* (T. Tamarozzi, K.U.Leuven)
 - *Model Updating and Optimization of Vehicle Structural Concepts* (P. Mihaylova, UNIFI)
 - 15:00-15:20 **Coffee Break**









Agenda

- **Session 2** – chair: Stijn Donders, LMS
 - 15:20-15:50 **Application of a hybrid Computational Aeroacoustics method to an automotive blower** (Melanie Piellard, Delphi)
 - 15:50-16:50 **VECOM Fellow Presentations**
 - *Vehicle Concept Modelling for Car Body NVH Optimization in the Early Design Phase at BMW AG* (A. Moroncini, BMW)
 - *Advanced Transitional Modelling for Calculation of Aerodynamic Self-Sustained Noise* (M. De Gennaro, AIT)
 - *Investigation of the NH₃ and NO_x adsorption for the development a Urea-SCR kinetic model for engine After-treatment system simulation* (S. Skarlis, IFP)
 - 16:50-17:10 **Coffee Break**









Agenda

- **Session 3** – chair: Helmut Kühnelt, Austian Institute of Technology (AIT)
 - 17:10-17:40 **NVH CAE concept modeling and optimization at BMW** (Luc Cremers, BMW)
 - 17:40-18:20 **VECOM Fellow Presentations**
 - *Exhaust gas after-treatment modelling: a focus on the NH₃-SCR of NO_x from Diesel vehicles* (M. Colombo, LAT)
 - *Validation of the Eulerian-Lagrangian Spray Atomization model in Diesel sprays* (K.-A. Dung, CMT)
 - 19:30-22:00 **Dinner in Brussels**










Agenda

- **Session 4** – chair: Xandra Margot, Universidad Politecnica de Valencia
 - 9:00-9:30 **System approach to consider efficiency, NVH and durability in optimization of an electric all wheel drive gearbox** (Artur Grunwald, GKN Driveline International)
 - 9:30-10:30 **VECOM Fellow Presentations**
 - *Impact of Multi-Body Component Flexibility on the Simulation of a Vehicle Active Braking Manoeuvre* (Marco Gubitosa, LMS)
 - *Multi-objective optimization tool- validation and extension* (I. Kowarska, J. Korta, CRF)
 - *Real-Time Capable Modelling of Modern Vehicle and Powertrain* (S. Bardubitzki, AVL)
 - 10:30-10:50 **Coffee Break**










Agenda

- **Session 5** – chair: Wim Desmet, K.U.Leuven
 - 10:50-11:20: **NVH numerical analysis and concept phase assessment in the car development phase** (M. Danti, CRF)
 - 11:20-12:20 **VECOM Fellow Presentations**
 - *Structural dynamical analysis using Enhanced assumed strain method* (N. Srivatsan, IDMEC)
 - *Vehicle Dynamics Modelling and Test Methodologies* (Ozan Avarisli, PoliTo)
 - *Validation of a DPF model based on engine experiments* (T. Bollerhoff, LAT)
 - 12:20-12:30: **Adjourn**
 - 12:30-13:30: **Sandwich lunch**






ACTIONS
SEVENTH FRAMEWORK PROGRAMME
MARIE CURIE

VECOM
Vehicle Concept Modelling

Dinner at 19h30

- Restaurant Raphael, Grasmarkt 76, Brussel



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VLEEA

KATHOLIEKE UNIVERSITEIT LEUVEN

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