16th International Forum

Advanced Microsystems for Automotive Applications

Smart Systems for Safe, Sustainable and Networked Vehicles

30-31 May 2012, Harnack House, Berlin, Germany

AMAA

Agenda

Scope

The ambitious objectives of future road mobility, i.e. fuel efficiency, reduced emissions, and zero accidents, imply a paradigm shift in the concept of the car regarding its architecture, materials, and propulsion technology, and require an intelligent integration into the systems of transportation and power. ICT, components and smart systems have been essential for a multitude of recent innovations, and are expected to be key enabling technologies for the changes ahead, both inside the vehicle and at its interfaces for the communication of data and energy.

It has been the objective of the International Forum on Advanced Microsystems for Automotive Applications (AMAA) for almost two decades to detect novel trends and to discuss the technological implications and innovation potential from day one on. In 2012, the topic of the AMAA conference will be "Smart Systems for Safe, Sustainable and Networked Vehicles". Experts from industry and academia will address current research, developments and innovations in the field of ICT, components and systems and other key enabling technologies leading to the automobile and road transport of the future.

Venue

Harnack House
Ihnestraße 16-20, 14195 Berlin, Germany
For guest room reservation please contact:
+49 30 84 13 38 04
info@harnackhaus-berlin.mpg.de

Exhibitor Information

The exhibition is an integral part of the AMAA. On both conference days, companies will be given the opportunity to present new products and services as well as novel technologies to an international expert audience representing automakers, suppliers and academia. Prototype vehicles can be shown at a parking lot close to the venue.

Organisers

VDI/VDE Innovation + Technik GmbH
European Technology Platform on Smart Systems Integration (EPoSS)
EU-Project Information and Communication Technologies for the Fully Electric Vehicle (ICT4FEV)
EU Project PPP Implementation for Road Transport Electrification (CAPIRE)

Wed, 30 May 2012

9:00 **Keynotes**
Introduction
Khalil Rouhana, Director Components & Systems (designated), European Commission
Electric Vehicles
Patrick Bastard, Vice President Advanced Electronics & New Technologies, Renault (France)
Wireless Charging
Eric Giler, President and CEO, WiTricity (USA)
Automated Driving
Reiner Höger, Director Engineering Governance Automotive Systems and Technology, Continental (Germany)

10:30 **Coffee Break / Posters**

11:00 **Session A: Electrification**
Wireless Charging: The Future of the Electric Car
Andrew Gilbert, Qualcomm (U.K.)
Standard Proposal for Resonant Inductive Charging of Electric Vehicles
Steffen Kümmell, IAV (Germany)
Comparison of Gapped and Gapless Designs for an Automotive DC-DC Converter Inductor
Richard Demersseman, Valeo (France)
Battery Management Network for Fully Electrical Vehicles Featuring Smart Systems at Cell and Pack Level
Alexander Otto, Fraunhofer ENAS (Germany)

12:30 **Lunch Break / Posters**

13:30 **AMAA 2012 Posters**
Elevator Talks

14:00 **Session B: Safety and Driver Assistance**
Laser-Based Hierarchical Grid Mapping for Detection and Tracking Moving Objects
Markus Schütz, Daimler (Germany)
Slippery Road Detection by Using Different Methods of Polarised Light
Johan Casselgren, Lulea University (Sweden)
Lane Accurate Position Sensing of Vehicles for Cooperative Driver Assistance Systems
Bernhard Schmid, Continental (Germany)
A Centralized Real-Time Driver Assistance System
Andrea Corti, Politecnico Milan (Italy)

15:30 **Coffee Break / Posters**

2012

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16:00 **Session C: Green Cars Initiative Update**
Speakers:
Frederic Sgarbi, DG Research, European Commission
Cosmin Codrea, DG Infso, European Commission

17:00 **Session D: Simulation and Testing**
Simulation of Advanced Lateral Safety Systems as a Cost Effective Tool to Estimate Potential Success
E. Canibano Alvarez, CIDAUT (Spain)
On the Design of Performance Testing Methods for Active Safety Systems
Henrik Eriksson, SP (Sweden)

18:00 **Social Event (Bus Departure)**
Belvedere at Pfingstberg, Potsdam

Thu, 31 May 2012

9:00 **Session E: Components & Systems**
Vehicle Re-identification With Several Magnetic Sensors
Anne-Cecile Pitton, CEA-Leti (France)
New Concepts of High Current Sensing by Using Active Semiconductors for the Energy Management in Automotive Applications
Klaus Rink, Continental (Germany)
Far Infrared Imaging Sensor for Mass Production of Night Vision and Pedestrian Detection Systems
Emmanuel Bercier, ULIS (France)

10:30 **Coffee Break / Posters**

11:00 **Session F: In-Vehicle Networks and Architectures**
Automotive Ethernet, a Holistic Approach for a Next Generation In-Vehicle Networking Standard
Steffen Müller, NXP (Germany)
Ethernet-Based and Function-Independent Vehicle Control-Platform: Motivation, Idea and Technical Concept Fulfilling Quantitative Safety-Requirements from ISO26262
Andreas Zirkler, Siemens (Germany)
Research Project E-performance - In-Car-Network Optimization for Electric Vehicles
Georg Gut, Fortiss (Germany)
Simplified Architecture by the Use of Decision Units
Volker Scheuch, Intedis (Germany)

12:30 **Lunch Break / Posters**

13:30 **Session G: Mini-Faros**
A low cost Miniature Laser Scanner – The EC Project MiniFaros
Kay Fürstenberg, SICK (Germany)
Truck Safety Applications for Cost-Efficient Laser Scanner Sensors
Malte Ahrholdt, Volvo (Sweden)
A Laser Scanner Chip Set for Accurate Perception Systems
Sami Kurtti, University of Oulu (Finland)
Biaxial Tripod MEMS Mirror and Omnidirectional Lens for a Low Cost Wide Angle Laser Range Sensor
Ulrich Hofmann, Fraunhofer ISIT (Germany)

15:00 **Coffee Break / Posters**

15:30 **Session H: Cooperative Driving and Navigation**
Overall Probabilistic Framework for Modeling and Analysis of Intersection Situations
Galia Weidl, Daimler (Germany)
Traffic Jam Warning Messages from Measured Vehicle Data with the Use of Three-Phase Traffic Theory
Hubert Rehborn, Daimler AG (Germany)
Realtime Roadboundary Detection for Urban Areas
Stefan Hegemann, Continental (Germany)
Lane-Sensitive Positioning and Navigation for Innovative ITS Services
Erwin Schoitsch, AIT (Austria)

17:00 **End of Conference**
Posters: See website for detailed list

Conference Chairman

Dr. Gereon Meyer (VDI/VDE-IT)

Contact

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Fees

Regular Rate (Registration prior to 28 May 2012)
1025,- Euro + 19% VAT
Reduced Rate (AMAA authors/one per paper)
575,- Euro + 19% VAT
On site Registration
1075,- Euro + 19% VAT

VDI|VDE|IT

EPoSS European Technology Platform on Smart Systems Integration

ICT4FEV

AP!RE PPP Implementation for Road Transport Electrification

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