FISITA 2014 World Automotive Congress
2–6 June, Maastricht, the Netherlands

Intelligent transport to solve our future mobility, safety and environmental challenges

Preliminary Programme
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It is my pleasure to invite you to join FISITA, its member societies and its global supporters from Industry and Academia at our 35th biennial World Automotive Congress in Maastricht.

FISITA’s mission remains the same as it was when our organisation was founded more than sixty years ago. Our federation was created to share knowledge among the world’s automotive engineers and to contribute to the development of automotive technology worldwide. By enabling engineers from different nations to work together, FISITA helps to move the automotive industry and the engineering profession closer to our shared goal of safe, sustainable, efficient and affordable mobility for everyone.

Our last FISITA World Automotive Congress was held in China, a country of continuous growth within the automotive industry, and this year we move to Maastricht, the Netherlands, situated in a thriving technological region of Europe which has dominated the growth, development and manufacture of vehicles for decades. There are almost 300,000 people working in a vast range of roles within the automotive sector in the area, from raw materials suppliers to leading research and development experts to major OEMs, including Ford, Toyota, Volvo, DAF, Daimler, Mitsubishi and Audi.

For this year’s congress we have once again assembled the world’s top experts to seek wider perspectives on every aspect of vehicle design, development, production and usage. The theme of this year’s congress is ‘Intelligent Transport to Solve our Future Mobility, Safety and Environmental Changes’.

It is a world in which more than half of the population now lives in cities, presenting enormous challenges and opportunities which demand radical new vehicle and mobility concepts. The technology and policy approaches needed to meet these challenges often differ significantly between developed and emerging markets. Consumer demands and new regulations are influencing the development and marketability of innovations throughout the vehicle. First among these demands is fuel efficiency, which is leading to major changes in new and existing powertrain technologies. Safety and traffic management are also important factors to be considered as part of the challenge of keeping moving in our cities.

These topics will be discussed in our diverse line up of Technical Sessions, including sessions focused on Clean and Efficient Engine Technologies, Advanced Safety Technologies, Automotive Human Factors, NVH and New Energy Powertrain. Another exciting topic of focus at this year’s congress will be Autonomous Driving, with both a keynote speech and a session topic devoted to exploring transformational benefits in safety and environmental performance as well as a pathway to a lucrative new market. Our opening keynote address comes from Prof. Dr.-Ing. Ulrich Hackenberg, credited with restructuring technical development at Rolls Royce, developing the concept of the Bentley model and revolutionising vehicle platform strategy for Volkswagen group by developing the innovative Modular Longitudinal Matrix.

This year’s congress includes a number of programmes and initiatives specially designed for students and young engineers: the Student Congress, Travelling Fellowship, Islands of Excellence and the Career Zone; a new addition to the FISITA World Congress. Here, students will have the opportunity to receive information and guidance from OEMs, suppliers and technology companies about their future in automotive, from recruitment to career development. FISITA 2014 also offers two strategic sessions for educators and those involved in the recruitment or management of graduate engineers to come together and discuss the future of automotive engineering education in the shape of the Educators Seminar and the Educators Technical Session.

In addition to the expert scientific and technical information on offer, we have not neglected that other great strength of all FISITA congresses - the opportunity to make contacts and build relationships with colleagues from all over the world. Alongside the technical sessions and the exhibition, The Royal Dutch Society of Engineers has prepared an inviting programme of social events and cultural visits, the highlight of which will be the spectacular Gala Dinner.

The exciting and colourful city of Maastricht forms the heart of Europe’s technological hub. FISITA, with its uniquely powerful network encompassing the automotive engineering societies in 37 countries and supported by the world’s leading vehicle manufacturers and automotive companies, is the organisation best placed to bring the world’s automotive professionals together to meet the challenges of the low-carbon world, and to enhance the advancement of the automobile for the benefit of mankind. FISITA 2014 will be one of the year’s most important gatherings for all of us involved in the drive to achieve cleaner, safer, low-carbon road transportation.

Join us in June and play your part in shaping the future of the automobile.

Dr. Li Jun
FISITA President
The Royal Dutch Society of Engineers is proud to host the FISITA 2014 World Automotive Congress in Maastricht, the Netherlands from 2 - 6 June 2014. Following the highly successful FISITA 2012 Congress in Beijing, China, which attracted more than 2,000 engineers, scientists and business leaders from over 40 countries, the city of Maastricht will open its doors to the automotive engineering community, thought-leaders, managers and executives in the mobility industries to exchange knowledge and establish collaborations for the creation of greener and safer mobility worldwide.

FISITA 2014 is strongly supported by AutomotiveNL, Union Belge des Ingenieurs de L’Automobile (UBIA), the VDI - Gesellschaft Fahrzeug-und Verkehrstechnik (VDI e.V. / FVT), Flanders’ DRIVE and AutoCluster.NRW.

The FISITA Congress theme, Intelligent Transport to Solve Our Future Mobility, Safety and Environmental Challenges, will be thoroughly dissected by some of the greatest minds in academia, industry and government, working together to challenge conventional views of automotive engineering and aiding the development of cleaner, safer and more efficient mobility for all. Around 800 authors have submitted their abstracts to present their latest research developments.

The location of Maastricht acts as a strategic hub for the advanced mobility technology region including Belgium, France and Germany, offering a prime location for industry visits within Europe. FISITA 2014 offers a unique platform for engineers and companies to convene and discuss the ways the automotive industry contributes to advances within the business and technology sectors.

Another highlight is the exhibition within the Congress, showcasing the latest technologies, products and services as well as providing a thriving marketplace for delegates to network and do business. Major companies such as DAF, Ford, China FAW and Toyota are confirmed for the exhibition and sponsorship in addition to major European research institutes.

Attending FISITA 2014 enables engineers and delegates to learn about the most significant research and development activities in vehicle propulsion, dynamics, safety, weight-reduction, ITS and more. It provides an excellent platform to network and meet influential experts from industry, academia and government.

New for the FISITA 2014 World Automotive Congress is the Executive Track, that brings together the best papers from each of the 10 Congress themes. The FISITA 2014 Scientific and Technical Committee has selected the papers with the biggest impact and greatest interest to the audience for the Executive Track.

Each Executive Track session features a carefully selected keynote speaker invited to present a broad strategic overview of the theme, focusing on future challenges and roadmaps in their specialist area. There will be no other sessions running concurrently to the theme being featured in each Executive Track to ensure that delegates can access easily the best papers on the most pressing issues facing the automotive engineering community.

We have prepared an exciting programme of social events and cultural tours, showcasing the best of the Netherlands, and offering you the opportunity to visit picturesque towns and cities in neighbouring Belgium and Germany.

I look forward to seeing you in Maastricht.

Harrie Schippers, DAF
Congress Chairman

Harrie Schippers MSc
FISITA 2014 Congress Chairman
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FISITA

FISITA was founded in Paris in 1948 to bring together engineers from different countries to share ideas and advance the technological development of the automobile and now links the national automotive engineering societies in 37 countries, representing 185,000 engineering professionals around the world. Our work is supported by 60 of the world’s leading vehicle manufacturers, suppliers, automotive technology providers and energy companies which are members of the FISITA Honorary Committee. The Honorary Committee provides FISITA’s vital link with industry, and its support helps us to raise the profile of automotive engineering and to promote the contribution made engineers to society.

The biennial FISITA World Automotive Congress is recognized as the leading international forum for the exchange of knowledge in all areas of automotive technology, and since its launch in 1947 has brought thousands of engineers, scientists and executives together to work on the technologies and ideas which have moved the automobile forward.

The FISITA World Automotive Summit was introduced in 2009 to bring together leaders of the automotive industry, influential thinkers and key players from politics, academia and NGOs to work on an issue of major importance to the future of the automobile. Our first Summit tackled CO2 reduction from road transport and led to FISITA becoming a participant in the UN Framework Convention on Climate Change. Following the 2010 Summit, which tackled global traffic safety, FISITA became a participant in WHO’s Global Road Safety Collaboration. The 2011 Summit explored the future for personal mobility and the possible implications for the automotive industry. The 2013 Summit addressed the question “Can autonomous vehicles make traffic accidents a thing of the past?”

Our website brings together technical information on automotive engineering topics from around the world. Engineers can download individual papers, order congress proceedings, books, journals, CD ROMs and other information. FISITA supports the training and development of young engineers through our Student Travel Bursaries, Student Congress and Travelling Fellowship. A dedicated website, Your Future in Automotive, has been designed to inspire young people to seek careers in automotive engineering and to convey useful, practical advice on education and training. What could be more rewarding than to help shape future mobility for mankind?

www.fisita.com

Royal Dutch Society of Engineers

The Royal Dutch Society of Engineers (KIVI), founded in 1847, is the Dutch association for engineers and engineering students. With 20,000 members the Royal Dutch Society of Engineers is the largest engineering association in the Netherlands. All engineering disciplines are organised within the Royal Dutch Society of Engineers.

From January 2014 KIVI NIRIA has changed its name to the Royal Dutch Society of Engineers.

As the network body for engineers and other highly educated technical professionals in the Netherlands, the society’s primary objective is to promote the importance of technology, which encourages adequate investment in education, research and innovation. To meet this objective, the Royal Dutch Society of Engineers conducts the following core activities:

- Technical promotion – to promote the role of technology and engineers in general
- Network – to stimulate contacts and exchange of knowledge between engineers
- Member services – to provide services that assist members with the development of their professional careers

The Royal Dutch Society of Engineers provides professional services to its members all over the world and organises a large number of activities throughout the year. The Royal Dutch Society of Engineers also offers assistance to engineers from abroad who wish to work or study in the Netherlands.

www.kivi.nl

FISITA 2014 World Automotive Congress is organised in partnership with AutomotiveNL, Union Belge des Ingenieurs de L'Automobile (UBIA), the VDI - Gesellschaft Fahrzeug-und Verkehrstechnik (VDI e.V. / FVT), Flanders’ Drive and AutoCluster.NRW.
People travel to reach their goals. Whether it’s home, a workplace, school, or a recreational facility, different destinations are reached with different modes of transportation. ZF doesn’t merely see the conservation of resources and increased safety and convenience as key requirements for modern-day mobility, but also as opportunities to spark sustainable innovation. As one of the world’s leading providers of driveline and chassis technology, we are part of – and a force behind – this development. We are a reliable partner both to society as a whole and for our customers and employees, and we pursue our aim of harnessing innovative and efficient products to enhance quality of life and help shape the future in a sustainable manner. www.zf.com
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<td>Brazil</td>
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<td>United Kingdom</td>
<td>Institute of Mechanical Engineers – Automobile Division</td>
<td><a href="http://www.imeche.org">www.imeche.org</a></td>
<td></td>
<td>+31 63 433 3355</td>
</tr>
<tr>
<td>United States of America</td>
<td>Society of Automotive Engineers International (SAE International)</td>
<td><a href="http://www.sae.org">www.sae.org</a></td>
<td></td>
<td>+1 724 772 8516</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Vietnamese Society of Automotive Engineers (VSAE)</td>
<td><a href="http://www.vsae.org">www.vsae.org</a></td>
<td>Email: <a href="mailto:office@vsae.org.vn">office@vsae.org.vn</a></td>
<td>+84 4 357 44535</td>
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</table>

**Note:** The list above includes only those societies that are members of FISITA as of the latest update. For the most current and detailed information, please visit the respective society’s website.
We’re going places we’ve never been before

It’s why Toyota is proud to support the 35th FISITA World Congress and its efforts to share knowledge among the world’s automotive engineers and contribute to the development of automotive technology.
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Programme Overview

Monday 2 June
08:30  Welcome Reception

10:00  Formal Opening
12:30  Lunch and Exhibition

Tuesday 3 June
08:30  Breakfast and Exhibition
10:00  Technical Visits
12:30  Lunch and Exhibition
13:30  Refreshment break and Exhibition

Wednesday 4 June
08:30  Breakfast and Exhibition
10:00  Lunch and Exhibition
12:30  Technical Visits
13:30  Refreshment break and Exhibition

Thursday 5 June
08:30  Breakfast and Exhibition
10:00  Lunch and Exhibition
12:30  Technical Visits
13:30  Refreshment break and Exhibition

Friday 6 June
08:30  Breakfast and Exhibition
10:00  Lunch and Exhibition
12:30  Technical Visits
13:30  Refreshment break and Exhibition

Closing Ceremony
Post Conference Visit

A highlight for FISITA 2014 is the Executive Track, which has been specially created to bring together for you the very best papers from each of the congress themes. Delegates who follow the Executive Track will receive a broad overview of the state of the art in each of the engineering fields explored at the congress.

Executives with a wide set of interests, who do not necessarily want to take the deep-dive approach and attend all the technical sessions associated with a particular theme, can get a taste of all the themes on offer at the congress by attending all the Executive Track sessions. Each Executive Track themed session features a specially-invited keynote speaker who will provide a broad strategic overview of that theme, focusing on current trends, future challenges and roadmaps in that area.

The schedule for the Executive Track has been designed so that no parallel technical sessions for an individual theme take place at the same time as that theme’s Executive Track session. This enables delegates following a particular theme to attend the Executive Track for that theme also. The Executive Track also offers experts from one sector of the industry the opportunity to look outside the scope of their daily technical role, and gain an insight into the most pressing issues facing the automotive engineering community in other sectors of the industry.

Sessions are described in more detail below:

**Tuesday June 3rd 2014**
- 08:30-10:30: New Energy Powertrain
- 13:30-15:00: Transmissions and Hybrids
- 15:30-17:30: Clean and Efficient Engine Technologies

**Wednesday June 4th 2014**
- 08:30-10:00: Lightweight Solutions
- 10:30-12:30: Vehicle Dynamics and Intelligent Vehicle Controls
- 15:30-17:30: Noise, Vibration and Harshness

**Thursday June 5th 2014**
- 08:30-10:00: Automotive Human Factors
- 10:30-12:30: New Mobility: Vehicle and Control Concepts
- 13:30-15:30: Advanced Safety Technologies
**10:30-12:30**
Vehicle Dynamics and Intelligent Vehicle Controls

Keynote: Prof. Dr. Pim van der Jagt, Ford Motor Company, GERMANY

Intelligent Vehicle Controls for Autonomous Vehicles

F2014-IVC-041
Predictive Operating Strategy for Range Extender Vehicles
Respecting Situational Influences and Individual Driving Behaviour
Dipl.-Ing. Till Uhner, Prof. Dr.-Ing. Lutz Eckstein, Dipl.-Ing. Felix Fahrenkrog, Institut für Kraftfahrzeuge, RWTH Aachen University, Dipl.-Ing. Felix Töpler, Forschungsgesellschaft Kraftfahrwesen mbH Aachen, Dr.-Ing. Jens Papajewski, Dipl.-Ing. Michael Hamacher, Audi AG, GERMANY

F2014-IVC-013
Non-Linear Decoupled 3D Moment Control for Vehicle Motion Using In-Wheel Motors
Mr. Etsuo Katsuyama, Toyota Motor Corporation, JAPAN

F2014-IVC-093
Integrated Robust Control Design for In-Wheel-Motor Vehicles
Dr. Timée Fulep, Research Center of Vehicle Industry, Sächsische Universität, Prof. Dr. Péter Gáspár, Systems and Control Laboratory, Computer and Automation Research Institute, Hungarian Academy of Sciences, Budapest, HUNGARY

**15:30-17:30**
Noise, Vibration and Harshness

Keynote: Prof. Wim Desmet, KU Leuven, BELGIUM

Design and Dynamic Characterization of Lightweight Materials to Meet the Automotive NVH Targets

F2014-AHF-016
Relationship between Driver's Attention and Micro-Saccadic Eye Movements
Mr. Takeshi Enya, Mr. Masau Kakizaki, DENSO Corporation, Mr. Shuntaro Miki, Mr. Takashi Hirayama, Prof. Dr. Yutaka Hirata, Chubu University College of Engineering, JAPAN

F2014-AHF-017
Identifying Types of Driver in Electric and Conventional Vehicles
Dipl.-Ing. Magnus Helmibrecht, Mr. Roman Rolnik, Prof. Klaus Bengler, Technische Universität München, Institute of Ergonomics, Dr. Roman Vilimek, BMW Group, GERMANY

**10:30-12:30**
New Mobility: Vehicle and Control Concepts

Keynote: Univ.-Prof. Dr.-Ing. Lutz Eckstein, IKA/FKA, GERMANY

Evolution or Revolution? The Future of Motor Vehicles and their Control Concepts

F2014-NVC-004
DEUVER - An Innovative Vehicle Concept for Increased Energy and Transport Efficiency
Mr. Thomas Welfers, Mr. Michal Liesemann, Institute of Automotive Engineering RWTH Aachen University, GERMANY

F2014-NVC-023
CULT – CO2 Reduction by Intelligent Lightweight Design in Combination with Alternative Powertrain in a Complete Vehicle Concept
Dipl.-Ing. Wolfgang Fritz, Dipl.-Ing. Dietmar Hofer, Dr.-Ing. Franz Kampelmüller, Magna Steyr Engineering AG & Co KG, Prof. Dr.-Ing. Bernhard Gehetner, Prof. Dr.-Ing. Peter Hofmann, Technical University Vienna, AUSTRIA

F2014-NVC-004
International Conference on Vehicle and Control Concepts

**13:30-15:30**
Advanced Safety Technologies

Keynote: Dr. Adrian K. Lund, Insurance Institute for Highway Safety (IIHS), USA

Road to Vision Zero and Other Guideposts on the Road to Vision Zero

F2014-ACD-029
Influence of Automated Brake Application in Take-Over Situations of High Automated Driving Scenarios
Mr. Christian Gold, Prof. Dr. Klaus Bengler, Institute of Ergonomics / Technische Universität München, Mr. Lutz Lorenz, BMW Group Research and Technology, GERMANY

F2014-ACD-071
Assessment Methodologies for Forward Looking Integrated Pedestrian Safety Systems - The AsPeCSS Project
Ms. Monica Pla, IDIADA Automotive Technology SA, SPAIN

Mr. Marcus Wisch, BAS, Mr. Thomas Schaller, Mr. Paul Lemmen, Humanetics Europe, GERMANY

Ms. Stefanie de Haar, TNO, NETHERLANDS

F2014-ACD-042
Integrated Collision Avoidance by Active Intervention of Brake and Steer for Intelligent Vehicles
Mr. Jitendra Shah, Dr.-Ing., Ahmed Bennisouf, Ford Forschungszentrum Aachen GmbH, GERMANY

F2014-ACD-004
The Growing Need for Functional Safety in Driver Assistance Systems
Mr. Cliff De Locht, Melexis, BELGIUM
Technical Programme – Tuesday, 3 June 2014

Opening Ceremony & Plenary Session
3rd June, 11:00-12:30

11:00-12:30 Welcome Addresses

Dr. Li Jun
FISITA President

Erik Jonnaert
Secretary General
ACEP

Keynote Speeches

Dr. Ulrich Hackenberg
Member of the Board of Management
AUDI AG

Technical Presentations

Two kinds of author presentations will be offered within the technical sessions:
- long presentation slots of 20 minutes (15 + 5 discussion)
- brief presentation slots of 7 minutes. Short presentations (symbolised with asterisk*) are offered where the subject matter of the presentation is more suited to a brief, stimulating talk, rather than a repetition of information and concepts already familiar to the audience. Panel discussions will take place with the presenters after each group of 6 short presentations, providing the audience with a variety and pace sometimes lacking in the traditional conference format. Short presentations are indicated by asterisks within each session.

All presentations will be published in full in the Congress Proceedings. Presentations are liable to change. Please consult the website when planning your visits for the most up to date programme.

08:30 - 10:30
ACD1 – Driver Interaction with Automated and Cooperative Driving Applications

F2014-ACD-002
V2X Communication for Road Safety and Efficiency

F2014-ACD-005
Analysis of Driving Automation with Cooperative Approach
Dipl.-Ing. Joseph A. Urhahne, Ford Motor Company, GERMANY
Dr. Maacha C. van der Vroet, University of Twente, NETHERLANDS

F2014-ACD-030
Intelligent Camera Based Driver Drowsiness Detection: Combination of Heart Pulse, Head Movement and Facial Features
Dr. Hadj Hamma Tadjine, lav GmbH, GERMANY

F2014-ACD-009
Towards Guidelines for Transition of Control
Ms. Dehia Willemsen, Ms. Liselotte Kroon, Mr. Arjan Stuiver, Mr. Jeroen Hogema, Mr. Preemaath Sukumar, TNO, NETHERLANDS

F2014-ACD-024*
Challenges on the Way towards Automated Driving - Development, Human Factors and Evaluation
Dr. Adrian Zlocki, Forschungsgesellschaft Kraftfahrtwesen Aachen mbH (FKA); Prof. Dr.-Ing. Lutz Eckstein, Institut für Kraftfahrzeuge (IKA), RWTH Aachen University, GERMANY

F2014-ACD-035*
Current Gaps, Challenges and Opportunities in the Field of Road Vehicle Automation
Dr.-Ing. Azra Habibovic, Dr.-Ing. Cristofer Englund, Dipl.-Ing. Johan Wedlin, Viktoria Swedish ICT, SWEDEN

F2014-ACD-002
Evaluation of the Effect of Outside Mirrors on Driver’s Direct Field of View - What Happens if Outside Mirrors are Removed?
Dr. Takashi Hosokawa, Mr. Hiroshi Yonekawa, Mr. Yoshitaka Furumoto, Mr. Shoji Ito, Mr. Katsuhiko Iwazaki, TOYOTA Motor Corporation, JAPAN

F2014-ACD-009
A Human Driving Model Using Combined Functions of UML, Matlab/Simulink and Code Library

08:30 - 10:30
AHF1 – Methods for Human Factors Research & Analysis and Design for Safety

F2014-AHF-014*
Motion Cueing Algorithm for Prevention of Simulator Sickness Caused by Unnecessary Vestibulo-Ocular Reflex
Mr. Takahiro Adachi, Mr. Takashi Yonekawa, Mr. Yoshitaka Furumoto, Mr. Shoji Ito, Mr. Katsuhiko Iwazaki, TOYOTA Motor Corporation, JAPAN

F2014-AHF-003
Facilitating the Design Process of (Semi-)Automated Driving - Using Driving Simulator Studies for the Development and Assessment of Interfaces for Transitions in Driver-Vehicle Control
Ir. Arie P. van den Beukel, Universiteit Twente, NETHERLANDS

F2014-AHF-005
Facilitating the Design Process of (Semi-)Automated Driving - Using Driving Simulator Studies for the Development and Assessment of Interfaces for Transitions in Driver-Vehicle Control
Ir. Arie P. van den Beukel, Universiteit Twente, NETHERLANDS

F2014-AHF-045
Evaluation of the Effect of Outside Mirrors on Driver’s Direct Field of View - What Happens if Outside Mirrors are Removed?
Dr. Takashi Hosokawa, Mr. Hiroshi Hashimoto, Japan Automobile Research Institute, JAPAN
Mr. Macato Tsutari, Calsonic Kansei; Mr. Toru Eguchi, Fujitsu Computer Technologies Limited; Dr. Eng. Noshiro Yoshida, Satsuma University, JAPAN

F2014-AHF-021* Driver Behavior Detection Based on Multi GNSS Technology
Mr. Raisik Thipatapanpong, National Electronic & Computer Technology Center; Dr. Eng. Nukiit Noomwongs, Dr. Sunthapur Chatranuwathana, Mechanical Engineering Dept., Chulalongkorn Univ.; Mr. Sanya Klongnavaj, National Electronic & Computer Technology Center, THAILAND

F2014-AHF-025* Driver-Pedestrian Interaction in Pedestrian Road Crossing Events
Dipl.-Ing. Andreas Purszt, Prof. Dr.-Ing. Lutz Eckstein, Institut für Kraftfahrzeuge, RWTH Aachen University; Dr.-Ing. Adrian Zloczki, Forschungsgesellschaft Kraftfahrwesen Aachen, GERMANY

Prof. Dr. Carlos Daniel Henriques Ferreira, Mr. Marcelo Oliveira Brás, Prof. Dr. Carlos Fernando Couceiro de Sousa Neves, ESTG - Instituto Politécnico de Leiria, PORTUGAL

Mr. Jong-Hyun Yoon, Mr. Hyunchul Lee, Han-il-eoha Co., Ltd., REPUBLIC OF KOREA

Mr. Allen Gullon, ACEs, CANADA

F2014-AHF-046* The Effect of a Safety Education Web System on Driving Behavior
Mr. Takami Michishita, Prof. Dr. Nobuyasu Kasuga, Mr. Hitoshi Ishizaki, Mr. Takumi Yasuda, Shibaura Institute of Technology; Mr. Satoshi Tokunaga, Mr. Toshihiko Totsuka, JAFFATE; Mr. Kouji Ukena, UK Consultant, JAPAN

08:30 – 10:30
AST1 - New Systems for Crash Avoidance or Mitigation I

F2014-AST-048 Next Generation Eye Sight
Mr. Shinnosuke Kida, Fuji Heavy Industries Ltd., JAPAN

F2014-AST-065 Adaptive Driving Beam for Far Greater Driver Night-Time Visibility Reduces Pedestrian Accidents - Proven by Use of Simulation Program -
Dr. Kazumoto Morita, Dr. Nobuhisa Tanaka, Dr. Yoshio Aoki, Ms. Megumi Emomoto, Ms. Makoto Yasumoto, Dr. Michiaki Sekine, National Traffic Safety and Environment Laboratory, JAPAN

F2014-AST-080 Collision Avoidance System Using Braking and Steering Autonomous Maneuvers
Dr. Eng. Feloie Jimenez, Mr. Oscar Gomez, Technical University of Madrid, SPAIN

F2014-AST-034 Development of MEMS-Based GPS/IMU Integration Module and Algorithm for Automotive Accident Data Recorder
Prof. Inhwan Han, Hongik University; Mr. Jong Gyu Kang, Ms. Gyeom Joo Yoon, Daeduk Wireless Co., REPUBLIC OF KOREA

F2014-AST-035 Recognition of Driving Environment on Community Roads for Predictive Vehicle Controls
Dr. Takuma Ito, Mr. Yuma Mouri, Prof. Minoru Kamata, University of Tokyo, JAPAN

F2014-AST-043 Robust Detection of Pedestrian/ Cyclist by Neuromorphic Visual Processing
Prof. Dr. I Song Han, Korea Advanced Institute of Science and Technology, REPUBLIC OF KOREA

08:30 - 10:30
CE1 - Exhaust Aftertreatment I

F2014-CET-020 Smart DPF Regeneration Using Preview
Ir. Vital van Reeven, Rob van den Neuenhof, Theo Hofman, Maarten Steinbuch, Eindhoven University of Technology, NETHERLANDS

F2014-CET-023 The Solid Ammonia S-SCR Systems for Automobile
Mr. Kejin Zhang, Mr. Long Cui, Mrs. Dan Wang, Mr. Zhe Zhang, Mr. Yiming Zhang, China FAW Corporation Limited R&D Center, CHINA

F2014-CET-084 Evaluation of Soot Sensors for DPF Failure Monitoring
Dr. Eng. Savas Gewiandis, Prof. Dr.-Ing. Zissis Samaras, Laboratory of Applied Thermodynamics (LAT), Aristotle University, GREECE

F2014-CET-034 Oxidation Behaviours Detailing Examination of Particulate Filters (DPF)
Mr. Masatoshi Arai, Calsonic Kansei; Dr. Eng. Hisao Haga, Mr. Eiji Hashimoto, Mr. Koki Nakajima, Mr. Hideki Matsunaga, Dr. Yuji Yasui, Honda R&D, JAPAN

F2014-CET-130 Advanced Urea-SCR Control for Next Generation Clean Diesel Vehicle
Mr. Hisao Haga, Mr. Eiji Hashimoto, Mr. Koki Nakajima, Mr. Hideki Matsunaga, Dr. Yuji Yasui, Honda R&D, JAPAN

F2014-CET-015 Impact of FAME Content on the Functional Properties of Diesel Exhaust Catalyst on Various Precious Metals
Mr. Osami Yamamoto, Dr. Tomohiro Ikeda, Mr. Atsuhi Furukawa, Mr. Tatsuya Okayama, Honda R&D Co., Ltd. Automobile R&D Center, JAPAN

F2014-CET-041 Cold-Storage Evaporator for Air-Conditioning Improvement of Idling-Stop Vehicle
Mr. Jun Abe, Mr. Aun Ota, Mr. Yusuke Kisho, DENSO, JAPAN


Ir. Ludovic Guillaume, Ir. Arnaud Legros, Dr. Vincent Lemort, University of Liège, BELGIUM
Ir. Vincent Geleit, Volvo Group Trucks technology, FRANCE

F2014-CET-128 Numerical Modeling Study of Diesel Exhaust Catalyst on Various Precious Metals
Mr. Osami Yamamoto, Dr. Tomohiro Ikeda, Mr. Atsuhi Furukawa, Mr. Tatsuya Okayama, Honda R&D Co., Ltd. Automobile R&D Center, JAPAN


F2014-CET-013 Advanced Urea-SCR Control for Next Generation Clean Diesel Vehicle
Mr. Hisao Haga, Mr. Eiji Hashimoto, Mr. Koki Nakajima, Mr. Hideki Matsunaga, Dr. Yuji Yasui, Honda R&D, JAPAN

F2014-CET-041 Cold-Storage Evaporator for Air-Conditioning Improvement of Idling-Stop Vehicle
Mr. Jun Abe, Mr. Aun Ota, Mr. Yusuke Kisho, DENSO, JAPAN


Ir. Ludovic Guillaume, Ir. Arnaud Legros, Dr. Vincent Lemort, University of Liège, BELGIUM
Ir. Vincent Geleit, Volvo Group Trucks technology, FRANCE
**F2014-IVC-004**
Active Global Chassis Control in Urban Heavy Vehicles for Roll-Over Prevention
Prof. Dr.-Ing. Didier Remond, Dr.-Ing. Yerlan Akhmetov, Mr. Lionel Maffreyd, Prof. Dr.-Ing. Wilfried Marquis Favre, INSa de Lyon, Dr. Ing. Virginia Harth, VOLVO, Renault Trucks, FRANCE

**08:30 - 10:30**
LWS1 - Manufacturing Technologies

**F2014-LWS-004**
Mechanical Fatigue Behaviour of Selective Laser Sintered and Injection Moulded Specimens in Polyamide
Mr. Brecht van Hooreweder, Prof. Dr. Rene Boonen, Prof. Dr. David Moens, Prof. Dr. Paul Sas, KU Leuven, BELGIUM

**F2014-LWS-006**
Development of IMX Instrument Panel
Mr. Byungseok Kim, Hyundai Motor Company, REPUBLIC OF KOREA

**F2014-LWS-012**
The Development of Front Side Member Applied by Locally Hardening Method Using Laser Heat Treatment
Mr. Jongbin Hong, SEOJIN; Mr. Sangil Lee, Mr. Jongbin Hong, SO, Automotive Parts Institute Center, Mr. Younul Jung, Mr. Kyungbo Kim, Hyundai Motor Group, REPUBLIC OF KOREA

**F2014-LWS-014**
Development of Enhanced Performance Hot Stretch Reduced Steel Tube for Automotive Use
Mr. Jungsub Kim, Mr. Sangil Lee, Mr. Jongbin Hong, SEOJIN; Mr. Sangwoo So, Automotive Parts Institute Center, Mr. Younul Jung, Mr. Kyungbo Kim, Hyundai Motor Group, REPUBLIC OF KOREA

**F2014-LWS-036**
Stable, Filled Inlay CombiCore Tubes for Foundries
Dr. Susanne Rupp, Dipl.-Ing. Frank Heppes, Drahtzug Stein comibcor GmbH & Co. KG, GERMANY

**F2014-LWS-030**
Optimisation of Material Properties & Mold Design for Low Thickness Plastic Parts
Mr. Gayatri S, Maruti Suzuki India Ltd., INDIA

**F2014-LWS-055**
Research in Auto-Intelligent- Learning of TPMS Sensors' ID Based on UDS and Application in the Plant Production Line
Mr. Lingtao Han, Guangzhou Automobile Group CO., LTD Automotive Engineering Institute, CHINA
Mr. Ted S Huang, Guangzhou Automobile Group CO., LTD Automotive Engineering Institute, UNITED STATES

**F2014-LWS-027**
Lightweighting Development by means of Laser Welding in China Automaker FAW
Dr. Yuan Yao, Mr. Mingcheng Wang, China FAW Corporation Limited R&D, CHINA

**F2014-LWS-027**
Hybrid Transfer Function Analysis of Powertrain Vibration and Sound basing on Measured and Simulated Data
Mr. Lin Zhou, Mrs. Xin Liu, IAT Automotive Technology Co., Ltd., CHINA

**F2014-TMH-013**
Highly Reliable and Integrated Automatic Transmission Control Unit
Mr. Kazuya Hirasa, DENSO Corporation, JAPAN

**F2014-TMH-011**
Topology Design and Size Optimization of Auxiliary Units: A Case Study for Steering Systems
Ms. Emilia Silvas, Mr. Eric Backx, Mr. Theo Hofman, Mr. Maarten Steinbuch, Eindhoven University of Technology; Mr. Henk Voets, DAF Trucks N.V., NETHERLANDS

**F2014-TMH-040**
Power Transmission System with Magneto-Rheological Fluid
Mr. Seiichiro Washino, Mr. Takashi Furukawa, DENSO Corporation, JAPAN

**F2014-TMH-045**
Redefinition of the Constant Velocity Joint - the "Countertrack" Technology as Contribution to a High Efficiency Drivetrain and Reduction of CO2 Emission
Dr.-Ing. Wolfgang Hildebrandt, Dr.-Ing. Joachim Horst, GKN Driveline, GERMANY
Mr. Karl Berger, GKN Driveline, ITALY
Technical Programme – Tuesday, 3 June 2014

F2014-TMH-015
Touch Point Detection Algorithm Design and Validation for Dry Double Clutch Transmission
Mr. Dong-Jin Lee, Continental Automotive / Transmission, REPUBLIC OF KOREA

F2014-TMH-060
Study on Linkage Shifting Device for Uninterrupted Shift Transmission
Mr. Xiangdong Huang, Mr. Yong Yang, GAC ENGINEERING,Guangzhou Automobile Group Co.Ltd, Mr. Kegang Zhao, South China University of Technology, CHINA

F2014-ACD-003
Parametric Study of Active Trailer Steering Systems Off-Highway
Mr. Qiheng Mao, Prof. David Cebron, Cambridge University, UNITED KINGDOM

F2014-ACD-010
Control Reconfiguration for Cooperative Adaptive Cruise Control Ensuring Safety and Comfort
Ir. Ellen van Nuenen, TNO, Mr. Alejandro Morales Medina, TU/e, NETHERLANDS

F2014-ACD-012
System Concept and Validation Results of Cooperative Driver Assistance Improving Fuel Economy
Mr. Philipp Thiemann, Prof. Dr.-Ing. Lutz Eckstein, Institut für Kraftfahrzeuge Aachen, RWTH Aachen University, GERMANY

F2014-ACD-033
Model Scale Experimental Vehicle as Test Platform for Autonomous Driving Applications
Dipl.-Ing. Matthias Christian Reiter, Dipl.-Ing. Bassam Alfaee, Institute of Automatic Control, RWTH Aachen University, GERMANY

F2014-ACD-031
Vehicle Follow Control Function
Mr. Jose Antonio Colin Navarrete, Mr. Dino Sepac, Eindhoven University of Technology, NETHERLANDS

F2014-ACD-032
DITCM Roadside Facilities for Cooperative Systems Testing and Evaluation
Ir. Roy Bours, Martijn Tideman, TASS International, Igor Pascher, Bart Netten, Harry Wiedemeyer, Sander Maas, Coen van Leeuwen, Peter-Paul Schackmann, TNO, NETHERLANDS

F2014-ACD-011
Device for Autonomous Control to be Implemented in Any Kind of Road Vehicle
Dr. Eng. Felipe Jimenez, Dr. Eng. Jose Eugenio Naranjo, Mr. Oscar Gomez, Technical University of Madrid, SPAIN

13:30 - 15:00
ACD2 - Applications of Automated and Cooperative Driving

F2014-AST-076
Development of Forward Collision Warning and Autonomous Emergency Brake Systems Algorithm using Vehicle Stopping Distance
Mr. Donghwi Lee, Prof. Kunsoo Huh, Hanyang University, REPUBLIC OF KOREA

F2014-AST-085
Driver Assistance System for a Three Wheeled Vehicle When Driving at Vehicle’s Handling Limits
Mr. Siddharth Kapoor, Manipal Institute of Technology, INDIA

13:30 - 15:00
AST2 - New Systems for Crash Avoidance or Mitigation II

F2014-AST-070
Particulate Size Distribution Measurements from a GDI Engine Using a Nafiondryer and a Dmss500, Without Sample Dilution
Mr. Anders Johansson, Dr. Stina Reiche, Dr. Ing. Jean-Paul Janssens, Ir. Robert Cloutd, BOSAL Emission Control Systems, BELGIUM

F2014-AST-073
Experimental Investigations of the Valorization of the Exhaust Urea and Heat of a Gasoline Engine Based on a Rankine Cycle
Mr. Arnaud Legros, Prof. Dr. Vincent Lemort, University of Liége, BELGIUM

F2014-AST-074
An Exploration of Best Practice in Performing EIS Test for Li-ion Battery
Mr. Anup Barai, Dr. Yue Guo, Dr. Andrew McGordon, Prof. Paul Jennings, University of Warwick, UNITED KINGDOM

13:30 - 15:00
EPT2 - Battery Advancements I

F2014-AST-106
Modelling Li-ion Battery Charge Characteristics with Temperature Dependence and its Application for Estimation of Over-Potential at Graphite Anode
Mr. Haruki Ishida, Mr. Hiromu Nakano, Dr. Tetsuya Nikuni, Dr. Kenichiro Koshika, National Traffic Safety and Environmental Laboratory, JAPAN

F2014-AST-082
Energy Management by Coordination Control of Hybrid Driving and Heating System
Mr. Tsuyoshi Okamoto, Mr. Youhei Koshika, National Traffic Safety and Environmental Laboratory, JAPAN

13:30 - 15:00
CET2.1 - Waste Heat Recovery and Heat Transfer II

F2014-CET-042
Dissipation Analysis
Mr. Xin Zheng, Mr. Xin Qiao, Shenyang Brilliance Automotive Engineering Research Institute, CHINA

F2014-CET-068
Ir. Joël Op de Beeck, Mr. Kevin Slusser, Energetix Automotive Systems, BELGIUM

F2014-CET-150
The Effect According to the Type of Support for Diesel Oxidation Catalyst
Prof. Dr. Choong Kil Seo, Howon University, Prof. Dr. Jae Young Bae, Keimyung University, REPUBLIC OF KOREA

F2014-CET-028
Study on the Failure and Regeneration Modes of Particulate Filter Based on High-Sulfur Diesel Fuel
Mr. Zhe Zhang, Mr. Kejin Zhang, China FAIH Corporation Limited R&D Center, CHINA

13:30 - 15:00
CET2.2 - Waste Heat Recovery and Heat Transfer I

F2014-CET-074
Effects of Effective Flow Areas of Exhaust Valves on a Turbocompound Diesel Engine Combined with Divided Exhaust Period
Mr. Habib Aghaali, Prof. Hans-Erik Ångström, KTH – Royal Institute of Technology, SWEDEN

F2014-CET-151
Calibration on Thresholds for Fault Levels of HV Battery System in Hybrid Electric Vehicle
Mr. Ao Mei, Mr. Chengjiao Tu, GAC ENGINEERING, Guangzhou Automobile Group Co., Ltd., CHINA

F2014-CET-070
Modeling Li-ion Battery Charge Characteristics with Temperature Dependence and its Application for Estimation of Over-Potential at Graphite Anode
Mr. Haruki Ishida, Mr. Hiromu Nakano, Dr. Tetsuya Nikuni, Dr. Kenichiro Koshika, National Traffic Safety and Environmental Laboratory, JAPAN

F2014-CET-152
Modelling Li-ion Battery Charge Characteristics with Temperature Dependence and its Application for Estimation of Over-Potential at Graphite Anode
Mr. Haruki Ishida, Mr. Hiromu Nakano, Dr. Tetsuya Nikuni, Dr. Kenichiro Koshika, National Traffic Safety and Environmental Laboratory, JAPAN

F2014-EPT-001
Electric Vehicle Battery Heat Dissipation Analysis
Mr. Xin Zheng, Mr. Xin Qiao, Shenyang Brilliance Automotive Engineering Research Institute, CHINA
F2014-EPT-050*
A Research on the Lightweight of Range Extended Electric Vehicle Batteries Pack Based on Multi-Objective Optimization
Mr. Xingfeng Fu, Mr. He Huang, Mr. Qingguan Wang, Ms. Sha Xiao, GAC ENGINEERING, Guangzhou Automobile Group Co. Ltd., CHINA

F2014-EPT-058*
Thermal Behavior and Modeling of Lithium-ion Battery in Electric Vehicle Operating Conditions
Dr. Hongjie Wu, Mr. Shifei Yuan, Institute of Automotive Engineering, Shanghai Jiao Tong University, CHINA

F2014-EPT-090*
Optimization of Battery Sizing for Small Battery Electric Car in China
Dr. Jiuyu Du, Prof. Minggao Ouyang, Tsinghua University, CHINA

13:30 - 15:00
IVC2 - Intelligent Chassis Controls II

F2014-IVC-094
Chassis System Evaluation Using Force and Moment Allocation
Mr. Archit Rastogi, Prof. Timothy Gordon, University of Michigan, UNITED STATES

F2014-IVC-045
Autonomous Driving Intellgence Systems for Collision Avoidance Based on Expertised Anticipatory Driving Behavior
Dr. Pongsaithon Raksincharoensak, Mr. Ryosuke Matsui, Prof. Dr.-Ing. Masaao Nagai, Tokyo University of Agriculture and Technology, JAPAN

F2014-IVC-048
Estimation of Steerability and Cornering Stability of Light Commercial Vehicle by Results of Road Tests and Simulation
Mr. Anton Tumasov, Mrs. Ksenia Shashkina, Mrs. Galina Konskova, Mr. Anatoly Groshiev, Mr. Yuri Trusov, Mr. Alexander Bezrukov, NINSTU, RUSSIAN FEDERATION

F2014-IVC-117
2-Drive Motor Control Unit for Electric Power Steering
Mr. Takashi Suzuki, Mr. Hideki Kabune, Mr. Norihisa Ito, DENSO Corporation; Mr. Akira Ito, JTEKT Corporation, JAPAN

F2014-IVC-122*
The Input Signal Probability Research for Variant Vehicle with Different Sprung Mass
Mr. Suri Zhonghui, Dr. Guo Yanying, China FAW Corporation Limited R&D Center, CHINA

F2014-IVC-123*
Desired Yaw Determination in Yaw Stability Control
Mrs. Ugwula Karle, Mr. Swapnil Ghugai, Automotive Research Association of India, INDIA

F2014-IVC-124*
Road Surface Friction Coefficient (MUE) Determination for Traction Control System
Mrs. Ugwula Karle, Mr. Anand Subramaniam, Automotive Research Association of India, INDIA

13:30 - 15:00
LWS2 - New Materials Development

F2014-LWS-018
New Wear-Resistant Al-Zn-Si-Cu Alloy Development
Dr. Heesam Kang, Dr. Byungjun Jung, Hyundai Motor group, REPUBLIC OF KOREA

F2014-LWS-028
Development of High Elastic Aluminum Alloy Using In-Situ Reaction
Dr. Hoorno Park, Dr. Kyungmoon Lee, Mr. Hooodam Lee, Mr. Taegyu Lee, Dr. Jongkook Lee, Mr. Hyundai Park, Hyundai Motor Company, REPUBLIC OF KOREA

F2014-LWS-050
NiTi Alloys Designed for Automotive Safety Systems
Dipl.-Ing. Viorel Gheorghita, Prof. Dr.-Ing. Paul Guempel, HTWG Konstanz; Dr.-Ing. Joachim Strittmatter, HTWG Konstanz/HTITG Institu at der HTWG Konstanz, GERMANY
Prof. Dr.-Ing. Anghel Chiru, University Transilvania from Brasov, ROMANIA

F2014-LWS-053
Development of Newly-Designed Press Hardened Steel (PHS) for TSDR Processing Conditions
Mr. Jewoong Lee, POSTECH/GIFT, REPUBLIC OF KOREA
Prof. Bruno Charles De Cooman, POSTECH/GIFT, BELGIUM

F2014-LWS-071
Application of Carbon Nano Material Coating on Heat Sink for Reducing Weight
Dr. Sumin Lee, Hyundai MOBIS / Material Research Team, REPUBLIC OF KOREA

F2014-LWS-007*
Development of Low Air-Permeability Inner Liner Material for Lightweight Tire
Mr. Yongtae Joo, Mr. Hyunchul Cho, Hyundai Motors, REPUBLIC OF KOREA

F2014-LWS-013*
Improvement of High-temperature Strength and Oxidation Resistance of Si-Mo Ductile Cast Iron with Aluminum Addition
Mr. Yoonki Lee, Hyundai Motors, REPUBLIC OF KOREA

13:30 - 15:00
NVH2 - Drivetrain NVH II

F2014-NVH-036
Study on Proppshaft with Cardan Universal Joint Induced Vehicle NVH
Dr. Qian Zhao, Chongqing HITer Automotive Exhaust System Co. Ltd., CHINA

F2014-NVH-031*
Optimization of Powertrain Mounting System Based on Vehicle Model
Mr. Wang Kuiyan, Mr. Wang Hui, Brilliance Automotive Engineering Research Institute, CHINA

F2014-NVH-023*
The Application of MBS in the NVH Performance Optimization of Vehicle Transmission System
Mr. Zhao Changyun, Mr. Wang Hui, Brilliance Automotive Engineering Research Institute, CHINA

F2014-NVH-015*
Research of Transmission Gear Rattle Noise under Idle and Creeping Conditions
Dr. Xian-wu Yang, Dr. Jian Pang, Mr. Zhi-jun Zhang, Mr. Lan-jun Wang, Mr. Hui Wang, Changan Automobile Company Limited, CHINA

F2014-NVH-030*
Evaluation of Occurrence Mechanism for 1/2 Sub-Harmonic Nonlinear Vibration in Automatic Transmission
Mr. Sofian Rosbi, Oita University, Graduate School of Engineering, Prof. Dr. Takahiro Ryu, Prof. Dr. Kenichiro Matsuzaki, Kagoshima University, Faculty of Engineering, Dr. Takashi Nakai, Oita University, Faculty of Engineering, Prof. Dr. Atsuo Sueoka, Kyushu Polytechnic College, Mr. Yoshishiro Takikawa, Mr. Yoichi Ooi, Asin A.W.Co. Ltd., JAPAN

F2014-NVH-023*
Experimental Determination of the Rigid Body Properties of a Powertrain Unit for Engineering Development and Validation
Mr. Jos Frank, Mr. Venkateshvararao Manchi, Mr. Prasath Raghavendra, Mahindra & Mahindra Ltd., INDIA

F2014-NVH-047*
Driveline System Modeling and Dynamic Behavior Analysis in Frequency & Time Domain with Computer Algebra System
Dr. Kazuhide Togai, Mitsubishi Motors Corporation, JAPAN
Dr. Michael Parrent, Romax Technology Ltd., UNITED KINGDOM

F2014-NVH-072*
Powertrain Simulation of Self-Excited Vibration Harshness at Vehicle Start-Up
Mr. Takashi Hoshi, Honda R&D Co., Ltd. Automobile R&D Center, JAPAN

F2014-NVH-048*
Driveline Input Force Shaping for Transient Noise & Vibration Suppression
Dr. Kazuhide Togai, Hiroki Yamaura, Mitsubishi Motors Corporation, JAPAN
Dr. Michael Parrent, Romax Technology Ltd., UNITED KINGDOM
Dr. Zhiewei Zhang, Romax Technology Ltd., CHINA

F2014-NVH-031*
The Impacts of Time Varying Mesh Stiffness on Response Sensitivity of Linear Vibration of the Vehicle Transmission
Mr. Yi Huang, Dr. Charlie Xiang, Dr. Hui Liu, Beijing Institute of Technology, CHINA

F2014-NVH-034*
Lateral-Torsional Coupled Nonlinear Dynamic Modelling and Analysis of Vehicle Gear Transmission

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<td>TMH2 - Transmissions and Hybrids</td>
<td>Modules for Car-to-X: An Overview</td>
<td>Dipl.-Ing. Timo Gendrullis, Dr. Martin Moser, Mr. Thomas Enderfe, Mr. Fethulah Smallbegovic, Mr. Benjamin Weggenmann, ESCRYPT GmbH - Embedded Security, GERMANY</td>
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<td>F2014-AHD-020*</td>
<td>Operating a Car-to-X PKI - Challenges for Security and Privacy</td>
<td>Mr. Martin Moser, Mr. Daniel Estor, Mr. Monitz Minzlaff, Mr. André Weimenköt, Mr. Lars Wolleschensky, ESCRYPT GmbH - Embedded Security, GERMANY</td>
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<td>15:30 - 17:30</td>
<td>TMH2 - Transmissions and Hybrids</td>
<td>Driving Advice of Green Driving Support Systems</td>
<td>Dipl.-Ing. Philipp Seewald, Mrs. Johanna Josten, M.Sc., Prof. Dr.-Ing. Lutz Eckstein, Institut für Kraftfahrzeuge, RWTH Aachen University; Dr.-Ing. Adrian Zlocki, Forschungsgesellschaft Kraftfahrwesen mbH Aachen; Dr. Jan Löwenau, BMW Forschung und Technik GmbH, GERMANY</td>
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<td>F2014-AHD-037*</td>
<td>Study on Lane Change Intentions of Chinese Drivers Based on Real-Road Driving Data</td>
<td>Dr. Hui Zhang, Mr. Shaobo Qiu, Dr. Hongjian Li, China Faw Co., Ltd R&amp;D Center; Ms. Yang Li, Ms. LiDan Zhang, Prof. Zhenhai Cao, Jinlin University, CHINA</td>
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<td>F2014-AHD-012</td>
<td>On Road Driver State Estimation</td>
<td>Dr. Joop Pauwelussen, HAN University of Applied Sciences, NETHERLANDS Omkar Patil, SPM University, Chennai, INDIA</td>
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<td>Driver Behaviour Monitoring Based On Vehicle Sensors for Safety-Critical Event Logging</td>
<td>Ir. Lex van Rooij, Mr. Tjerk Blijma, Mr. Jeroen Hogema, Ms. Liselotte Kroon, Mr. Premnaath Sukumar, Ms. Dehila Willemsen, TNO, NETHERLANDS</td>
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<td>Driving Simulator Study to Model the Driver’s Braking Reaction to Pedestrians</td>
<td>Dipl.-Ing. Dominik Raudszus, Mrs. Johanna Josten, Prof. Dr.-Ing. Lutz Eckstein, Institut für Kraftfahrzeuge, RWTH Aachen University; Dr.-Ing. Adrian Zlocki, Forschungsgesellschaft Kraftfahrwesen Aachen; Dr.-Ing. Thomas Schaller, BMW Group, Dipl.-Ing. Eugen Schubert, Robert Bosch, GERMANY</td>
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<td>TMH2 - Transmissions and Hybrids</td>
<td>Driving Advice of Green Driving Support Systems</td>
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<td>F2014-AFP-023</td>
<td>Automatic Driver Characteristic Estimation Using Driving Signals</td>
<td>Dr. Eng. Atsunobu Kaminuma, Nissan Motor Co., Ltd/Nissan Research Center; Dr. Eng. Yoshihiko Nankaku, Nagoya Institute of Technology, JAPAN</td>
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<td>F2014-AST-004</td>
<td>Enhance Dynamic Pass Predictor: Preventing Overtaking Accidents</td>
<td>Dipl.-Ing. Felix Fahrenkrog, Prof. Dr.-Ing. Lutz Eckstein, Institut für Kraftfahrzeuge, RWTH Aachen University; Dr. Jan Löwenau, BMW Group Forschung und Technik; Dr.-Ing. Adrian Zlocki, Forschungsgesellschaft Kraftfahrwesen Aachen, GERMANY</td>
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<td>Tyre Labelling: Sharing Tyre Performances to End Users</td>
<td>Dr.-Ing. David Gallegos, Prof. Dr.-Ing. Lutz Eckstein, Institut für Kraftfahrzeuge, RWTH Aachen University; Dr. Jan Löwenau, BMW Group Forschung und Technik; Dr.-Ing. Adrian Zlocki, Forschungsgesellschaft Kraftfahrwesen Aachen, GERMANY</td>
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<td>Development of a Test Unmanned Target Robot for Active Safety Vehicle Evaluation</td>
<td>Prof. Jay Jeong, Mr. Youngseul Park, Kookmin University, REPUBLIC OF KOREA</td>
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<td>Automotive Safety: Wireless Embedded System for Vehicle Presence Detection</td>
<td>Mr. Wesley Angelino, University of...</td>
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Campinas; Mr. Ivando Diniz, Univ Estadual Paulista (UNESP), BRAZIL

Active Safety Integration Based on the Vehicle Information System (Telematics)
Mr. Wei Xu, Dr. Ted S Huang, Mr. Ying Zhang, Ms. Fen Zhang, GAC ENGINEERING, Guangzhou Automobile Group, CHINA

F2014-AST-089*
Aspects of Functional Safety in End-2-End Diagnostics
Dr. Roman Curis, Mr. Alexander Levin, ServiceXpert GmbH, GERMANY

F2014-AST-050*
A Consideration on the Results of Whiplash Tests in KNCP
Mr. Dong Jun Lee, KATRI, REPUBLIC OF KOREA

15:30 - 17:30 Executive Track

CET3 - Clean and Efficient Engine Technologies
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EP3 - Battery Advancements II

F2014-EP3-007
Study on Matching Performance of Ceramic Coating Nonwoven Separators with Electrolytes
Mrs. Dan Wang, Mrs. Lina Yu, Mr. Zhongjing Zhao, Mr. Kejin Zhang, Mr. Shaoqiang Ying, CHINA FAW Corporation Ltd. R&D Center; Mr. Hui Na, Guo Zhang, Jilin University, CHINA

F2014-EP3-010
High Regenerative Power Battery Pack for Full Electric SUV
Mr. Wouter De Nijs, Flanders’ DRIVE, BELGIUM

F2014-EP3-016
Multiascale, Multiphysics Simulators Based on Ultra-Accelerated Quantum Chemical Molecular Dynamics for Automotive Battery Technologies
Prof. Dr. Akira Miyamoto, Prof. Dr. Ryuji Murai, Prof. Dr. Al Suzuki, Prof. Dr. Nezomu Hatakeyama, Dr. Sumio Kozawa, Prof. Dr. Mark Williams, Tohoku University; Ms. Yuka Oono, Mr. Kenji Kobayashi, Prof. Dr. Michio Hori, Daido University, JAPAN

F2014-EP3-021
Electrospraying Preparation of Silicon-Carbon Nanofibers Anode for New Energy Vehicles Lithium-Ion Power Batteries
Mr. Tao Jiang, Mr. Kejin Zhang, Mr. Hui-ming Chen, Mrs. Dan Wang, Mrs. Xinran Yi, Mr. Shaoqiang Ying, China FAW Corporation Limited R&D Center, CHINA

F2014-EPT-091*
Review of Electric Bus Energy Supplying Modes and Typical Case Cost-Benefit Analysis Of In China
Dr. Jiuyu Du, Prof. Minggao Ouyang, Tsinghua University, CHINA

15:30 - 17:30

IVC3 - Intelligent Chassis Controls III

F2014-IVC-058*
Tire State Estimation Based On Measured Accelerations at the Tire Inner Liner using an Extended Kalman Filter Design
Ir. Laura van de Molengraft-Luijten, Dr. Antoine Schmetz, TNO, NETHERLANDS

F2014-IVC-074*
Experimental Verification of Understeer Compensation by Four Wheel Braking
Dr. Matthias Klop, e-AAM Driveline Systems AB; Dr. Mathias Lidberg, Chalmers University of Technology, SWEDEN

F2014-IVC-091*
Derivation of an Optimal Semi-Active Suspension Control using MPC Techniques
Ir. Tom van der Sande, Dr. Igo Besselink, Prof. Dr. Henk Nijmeijer, Eindhoven University of Technology, NETHERLANDS

F2014-IVC-023*
Integrated Chassis Control Based on the State Dependent Riccati Equation Technique
Dr. Mohsen Alirezaei, Dr. Stratis Kanarachos, TNO, NETHERLANDS

F2014-IVC-038*
Real Time Optimization Path Planning Strategy for an Autonomous Electric Vehicle with Obstacle Avoidance
Mr. Reza Dariani, Dipl.-Ing. Stephan Schmidt, Prof. Dr.-Ing. Roland Kasper, University of Magdeburg, GERMANY

F2014-IVC-011*
A Bilateral Control Scheme for Vehicle Steer-By-Wire System with Road Feel and Steering Controller Design
Dr. Hongyu Zheng, Dr. Zong Changfu, Jilin University, CHINA

Vehicle Steer-By-Wire System with Road Feel and Steering Controller Design
Dr. Hongyu Zheng, Dr. Zong Changfu, Jilin University, CHINA

Development of ABS System for Truck in China
Dr. Jiuyu Du, Prof. Minggao Ouyang, Tsinghua University, CHINA

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LWS3 - Simulation and Modelling

F2014-LWS-072
Delopment of a Validated Multi-Body Model and FEM-Model of a Hybrid Constructed Double-Deck Semi-Trailer for Design Optimization
Ir. Rens Horn, Han University of Applied Sciences, Institute of Automotive Engineering and Management; Ing. Jaap Janssen, Ing. Tonno Kokman, Mr. Rini Thiel, Van, HAN-Automotive; Ir. Ton Bertens, Van Eck; Ing. Maarten Morsink, SABA Dinorperk BV, NETHERLANDS

F2014-LWS-068
Flow around Rotating Wheels and its Interaction with Vehicle Aerodynamics - CFD Vs Wind Tunnel Tests
Dipl.-Ing. Michal Kulak, Dr.-Ing. Maciej Karczewski, Lodz University of Technology, POLAND

F2014-LWS-069*
Flow around Rotating Wheels and its Interaction with Vehicle Aerodynamics - CFD Vs Wind Tunnel Tests
Dipl.-Ing. Michal Kulak, Dr.-Ing. Maciej Karczewski, Lodz University of Technology, POLAND

F2014-LWS-049*
The Relative Damage Calculating of Belgium Roads in Different Proving Ground Based On Road Load Data
Dr. Liling Zhang, Mr. Ming Zhuo Liu, Mr. Xue Feng Chen, Mr. Jian Lou, Beijing Automotive Technology Center, CHINA

F2014-LWS-076*
Checking Propeller Shaft Length with Pro/E Sensitivity Analysis
Mr. Xiaodong Yan, Mr. Hong Zhu, Mr. Hongliang Yu, CHINA FAW Corporation Ltd. R&D Center, CHINA

F2014-LWS-040*
Modeling of Roads Impacts for Life Prediction of Light Commercial Vehicles Parts
Mr. Denis Zeyoulin, Dr. Sergey Ogorodnov, Mr. Vladimir Makarov, Mr. Andrew Vashurin, NNSTU, RUSSIAN FEDERATION

F2014-LWS-044*
The Modeling of Gasoline Permeation through New Polymeric Materials
Prof. Ilya Vorontsyev, Prof. Vladimir Vorontsyev, Prof. Alexandr Groshev, Mr. Andrew Vorontsyev, Nizhny Novgorod State Technical University n.a. RY. Alekseev, RUSSIAN FEDERATION

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F2014-LWS-045*
Numerical Analysis of Plastic Cooling Tube for Automotive Weight Reduction
Mr. JunHo Lee, Mr. GeeSoo Lee, Mr. SangWook Han, Mr. HyunChul Kim, Korea Automotive Technology Institute, REPUBLIC OF KOREA

15:30 - 17:30
NVH3 - Tyre-Dyn: Tyre and Chassis NVH

F2014-NVH-078
Executive Summary on the Experimental and Numerical Tire Dynamic Characterization
Ir. Stijn Vercammen, Dr. Peter Kindt, Goodyear Innovation Center, LUXEMBOURG

F2014-NVH-077
Non-Linear Contact Stiffness and Dynamic Contact Filter for Rolling Contacts
Mr. Oskar Lundberg, KTH, Royal Institute of Technology, SWEDEN

F2014-NVH-051
Analysis of Tire Noise Generation
Mechanism Based On Tire Surface Shape Scanning and FEM Modeling
Prof. Dr. Masao Ishihama, Mr. Takayuki Kagaya, Mr. Junnya Wachi, Mr. Yuhdai Komagamine, Kanagawa Institute of Technology, JAPAN

F2014-NVH-084
Simplified Rotating Tire Models Based on Cylindrical Shells with Free Boundary Conditions
Dr. Neven Alujevic, Dr. Bert Pluymers, Prof. Paul Sar, Prof. Wim Desmet, KU Leuven, BELGIUM
Dr. Nuri Campillo-Davo, Universidad Miguel Hernández, SPAIN
Dr. Peter Kindt, Goodyear Innovation Center, Smith, LUXEMBOURG

F2014-NVH-073
The Complexity of Road-to-Rig Approaches and Discussion of Influencing Parameters on the Example Chassis Dyno
Dipl.-Ing. Rolf Hetzel, Prof. Dr.-Ing. Albert Albers, Dipl.-Ing. Alexander Schwarz, Karlsruhe Institute of Technology (KIT), GERMANY

F2014-NVH-075
CAE-Based Design Approach for Durability Test Rigs
Ir. Antonio Maresa, DAF Trucks NV, NETHERLANDS

F2014-TMH-003
Recent Material Developments for Further Optimization of the Pushbelt CVT
Mr. Gonçalo Duarte, Mr. Alexandre Rosca, Dr. Gonçalo Gonçalves, Dr. Patricia Baptista, Dr. Tiago Farias, IDMEC - Instituto Superior Técnico, Universidade Técnica de Lisboa, PORTUGAL

F2014-TMH-043
Introduction of Ratio Control System Using Sliding Mode Control in CVT
Mr. Seiichiro Takahashi, Mr. Hiroyasu Tanaka, Mr. Hideaki Suzuki, Mr. Masahiro Yamamoto, Mr. Tetsuya Izumi, JATCO Ltd., JAPAN

F2014-TMH-008
Prediction of Power Loss in a Pushing Metal V-Belt Continuously Variable Transmission
Dr. Yeonmin Cheong, Hyundai Motor Company, REPUBLIC OF KOREA

F2014-TMH-048
Test Cycles for Light-Duty Vehicles Based On Real-World Driving
Mr. Harry Charles Watson, University of Melbourne, AUSTRALIA

F2014-TMH-026
Development of a CVT for Medium Duty Electric Trucks
Dr. Bram Bonsen, Prof. Dr. Andrew Alfonso Frank, Efficient Drivetrains Inc., UNITED STATES

F2014-TMH-047
The Benefits of All Electric Parasitics in a Highly Optimised Hybrid in NEDC and Look-Ahead Driving
Prof. Harry Charles Watson, University of Melbourne, AUSTRALIA
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08:30 - 10:00
AST4 - Precrash - Incrash - Postcrash Accidentology and Aspects in the Light of Safety

F2014-AST-023
Potential Effectiveness of a Stability Control System for Passenger Cars after an Initial Side Impact
Prof. Dr.-Ing. Bengt Jacobson, Prof. Dr.-Ing. Mathias Lidberg, Chalmers University of Technology; Dr.-Ing. Derong Yang, Dr.-Ing. Mikhail Tho, Volvo Car Corporation, SWEDEN
Dr.-Ing. Jianbo Lu, Ford Motor Company, UNITED STATES

F2014-AST-081
Toolbox for the Benefit Estimation of Active and Passive Safety Systems in Terms Of Injury Severity Reduction and Collision Avoidance
Dipl.-Ing. Henrik Liers, Accident Research Institute at the University of Technology Dresden, Dr.-Ing. Lars Hannawald, Verkehrsunfallforschung an der TU Dresden GmbH, GERMANY

F2014-AST-030
A Study on the Timing of Activation of an Acoustic Warning System to Avoid Rear-End Collision Using Driver Model of Neural Network
Dr. Eng. Toshiya Hikose, Mr. Yuichi Kaneko, Prof. Dr. Nobuyo Kasuga, Dr. Prof. Dr.-Ing. Toshiyuki Sawada, Shibaura Institute of Technology, JAPAN

08:30 - 10:00
CET4 - Fuel Injection and Sprays

F2014-CET-024
Securing the Future - Technologies Supporting Emission and CO2 Improvement in Real World for Diesel Engines
Mr. Ken Uchiyama, Mr. Katsuhiro Takeuchi, Mr. Takashi Kikutani, Mr. Taryomon Tsuki, DENSO CORPORATION, JAPAN

F2014-CET-093
The Influence of Gasoline Nozzle Geometry on Spray Formation and Piston Wetting
Dipl.-Ing. Florian Schulz, Universität Magdeburg, Dr.-Ing. Wolfgang Samenfink, Robert Bosch GmbH, GERMANY

F2014-CET-119*
Experimental Evaluation of the Static Magnetic Force and Dynamic Investigation of the Solenoid Valve of a Common Rail Diesel Injector
Dr.-Ing. Benedikt Huber, Prof. Dr.-Ing. Heinz Ulbrich, Technische Universität München, GERMANY

F2014-CET-107*
Development of a Mathematical Observer to Control the Rail Pressure of Fuel Metering System for Fuel Injection System
Mr. Himadri Das, Mrs. Naga Kavitha Kommun, Dr. Samraj Jabez Dhinagar, TVS Motor Company, INDIA

F2014-CET-123*
The Impact of EGR Valve Construction on the Parameters of the Agricultural Tractor Engine using Genetic Algorithm
Prof. Dr.-Ing. Jaroslav Mamula, Opolu University of Technology, POLAND

F2014-CET-166*
Multi-Body Analyses of Libralato Rotary Engine under Inertial Loads
Dr. Prof. Dr.-Ing. Gabriel Anghelache, Dr.-Ing. Raluca Mosescu, University POLITEHNICA of Bucharest, ROMANIA

F2014-CET-167*
Design and Matching Process of Turbochargers for Passenger Car Gasoline Engines

08:30 - 10:00
CET4.1 - Design & Simulation I

F2014-CET-164*
Comparison of Spray Characteristics from Different Nozzles and Fuels in a Non-Reactive Medium
Mr. Radboud Pos, Dr. Lionel Ganippa, Brunel University, UNITED KINGDOM

F2014-CET-116*
Thermal Partial Oxidation for High Formation of Synthesis Gas by Thermal Fluid CAE Team, REPUBLIC OF KOREA

F2014-CET-123*
The Impact of EGR Valve Construction on the Parameters of the Agricultural Tractor Engine using Genetic Algorithm
Prof. Dr.-Ing. Jaroslav Mamula, Opolu University of Technology, POLAND

F2014-CET-093
The Influence of Gasoline Nozzle Geometry on Spray Formation and Piston Wetting
Dipl.-Ing. Florian Schulz, Universität Magdeburg, Dr.-Ing. Wolfgang Samenfink, Robert Bosch GmbH, GERMANY

F2014-CET-156*
Development of Simulation Method for Optimization of Electrically Controlled Cooling System for Lower Fuel Consumption
Dr. Kyungsub Sung, HMC PowerTrain Thermal Fluid CAE Team, REPUBLIC OF KOREA

F2014-CET-053*
Influence of Cam Profile and Timing Phase on the Engine Emissions and Fuel Consumption
Mr. Junjie Ma, Mrs. Jinyu Liu, China FAW Corporation Limited R&D Center, CHINA

F2014-CET-089*
Fuel Economy Optimization of a Divided Exhaust Port Concept Engine using Genetic Algorithm
Mr. Bo Hu, Dr. Chris Brace, Dr. Colin Copeland, Dr. Sam Akehurst, University of Bath; Dr. James Turner, Jaguar Land Rover Limited, UNITED KINGDOM

F2014-CET-062
Formation of Synthesis Gas by Thermal Partial Oxidation for High Temperature Fuel Cells
Prof. Dr.-Ing. Sang Soon Hwang, Dr.-Ing. Pili Hyong Lee, Mr. Chun Loon Cha, Incheon National University, REPUBLIC OF KOREA

F2014-CET-063
Energy Management for Fuel Cell Hybrid Vehicles; On Road Evaluation

Team, R&D Div, Hyundai Motor Company, REPUBLIC OF KOREA
Mr. Salvatore Battaglia, TNO Automotive Safety Solutions (TASS), GERMANY

F2014-AST-036*
Simulation and Testing of Advanced Driver Assistance System Based On Environmental Model of Pedestrian-Vehicle-Road Jie Bai, Ning Bian, Jian Peng Shi, Yu Tan Zhang, Ling Jia, Dong Feng Motor Corporation Technical Centre, CHINA

F2014-AST-053*
Cardiac Pulse Measurement using Machine Learning from In-vehicle On-road Videos
Dr. Devin Kochhar, Ford Motor Company, Dr. Yiu Murphey, University of Michigan, UNITED STATES

F2014-AST-060*
Embedded System for Driver Drowsiness Monitoring with Audio Visual Alarm
Prof. Dr. Ivando Diniz, Prof. Dr. Fernando Marafão, Universidade Estadual Paulista (UNESP); Ms. Wesley Souza, University of Campinas (UNICAMP), BRAZIL

F2014-AST-036*
Simulation and Testing of Advanced Driver Assistance System Based On Environmental Model of Pedestrian-Vehicle-Road Jie Bai, Ning Bian, Jian Peng Shi, Yu Tan Zhang, Ling Jia, Dong Feng Motor Corporation Technical Centre, CHINA

F2014-AST-067*
Detection of Driver’s Short-Term Reduction of Lane-Keeping Ability within Several Seconds
Dr. Hideki Sakai, Former Toyota Motor Company; Dr. Yilu Murphey, Dr. Devin Kochhar, Ford Motor Corporation Technical Centre, CHINA

F2014-AST-081
Toolbox for the Benefit Estimation of Active and Passive Safety Systems in Terms Of Injury Severity Reduction and Collision Avoidance
Dipl.-Ing. Henrik Liers, Accident Research Institute at the University of Technology Dresden, Dr.-Ing. Lars Hannawald, Verkehrsunfallforschung an der TU Dresden GmbH, GERMANY

F2014-AST-049
Prediction of the Crashworthiness Improvement in Real World for...
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**F2014-EPT-070**
Studies on the Cathode Humidification and Stack Cooling by Water Direct Injection for Automotive PEM Fuel Cell
Mr. Seong-Hoon Hwang, Prof. Min Soo Kim, Seoul National University, REPUBLIC OF KOREA

**F2014-EPT-012**
Running Costs Evaluation of the Fuel Cell Hybrid Powertrain Using Li4Ti5O12 Battery
Mr. Xunig Feng, Dr. Xiangming He, Dr. Languang Lu, Prof. Dr. Minggao Ouyang, Tsinghua University, CHINA

**F2014-IVC-043**
Electric Driving Force Distribution Controller for In-Wheel-Motor Electrical Vehicle
Mr. He Zhengyi, China Automotive Engineering Research Institute, CHINA

**F2014-IVC-111**
Electronic Differential Strategy Based On Slip Ratio Robust Control for Electric Vehicle with Rear Motorized Wheels
Mr. Yunbing Yan, Mr. WeiQiang Wang, Mr. Hao Wu, Wuhan University of Science and Technology, CHINA

**F2014-IVC-092**
Traction Control of an Electric Formula Student Racing Car, Modeling, Implementation and Validation
I. Jan Loof, Technische Universität Eindhoven, NETHERLANDS

**F2014-IVC-005**
Study on Driving Force Distribution and Power Consumption in Steady State Cornering - Formulation and Validation Using In-Wheel Motor Vehicle -
Mr. Takao Kobayashi, Toyota Central R&D Labs., Inc.; Mr. Etsuo Katsuyama, Toyota Motor Corporation, JAPAN

**F2014-IVC-036**
Optimal Design of Off-Center Steering Characteristics Based on Subjective Evaluations
Mr. Jingche Zhao, Prof. Dr. Hui Chen, Dr. Liming Lou, Dr. Shrou Nakano, R&D Center, JTEKT Co., Ltd., JAPAN

**F2014-IVC-089**
Study of Torque Vectoring Control for Active Safety in Rear-Wheel-Driven Vehicles
Mr. Yoonkab Noh, Mr. Moonyong Choi, Prof. Sebum Choi, Korea Advanced Institute of Science and Technology (KAIST), REPUBLIC OF KOREA

**F2014-IVC-040**
New Testing Concepts and Thermal Management for Electrically Driven Trains
Prof. Dr.-Ing. Montiz Gretschel, Aalen University, GERMANY

**F2014-IVC-106**
Multirate Obstacle Sensor Fusion with Vision and Radar
Mr. Young Seop Son, Mando Corporation, REPUBLIC OF KOREA

**F2014-IVC-015**
Improving Shift Quality by Controlling Duty of Damper Clutch
Mr. Dohyun Kwon, Mr. Chanho Lee, Continental Automotive Systems Corp., REPUBLIC OF KOREA

**F2014-MVC-003**
ELVA Project - New Approaches for Electric Vehicle Design
Mr. Arturo Davila, Mr. Emilia Romero, Mr. Javier Gutierrez, Applsys+IDADA, SPAIN

**F2014-MVC-034**
Service Oriented E/E Architecture - A New E/E Design Approach for Future Vehicle Systems
Dipl.-Ing. Joerg Kuesen, Dipl.-Ing. Janek Hudecek, Prof. Dr.-Ing. Lutz Eckstein, Institut für Kraftfahrzeuge RWTH Aachen University (Ika), GERMANY

**F2014-MVC-001**
Rethinking the Automobile
Ralph Panhuyzen, SEV Platform, NETHERLANDS

**F2014-MVC-014**
A Multi-Sensor Fusion Software Architecture for Automobile Industry
Dr. Jeongo Son, ETRI, REPUBLIC OF KOREA

**F2014-MVC-027**
Sustainable Cars and the Future of Manufacturing: How Concern for the Environment and the Revolution in 3D Printing Can Improve Automotive Design
Mr. Jim For, NCR EcoLogic Inc., CANADA

**F2014-MVC-020**
Development of a High Efficient Hydraulic System for NEW Continuously Variable Transmission
Mr. Masumi Fujikawa, Jatco Ltd., JAPAN

**F2014-MVC-029**
Integrated Control of Engine and Hydro-Mechanical Transmission for a Tractor in Working Condition
Mr. SungHyun Ahn, Mr. Seokhwan Choi, Dr.-Ing. Sungyu Hong, Mr. Chulho Song, Prof. Changhyun Choi, Sungkyunkwan University; Mr. Soochul Kim, Dr. Yonggoo Kim, LS Mtron Ltd., REPUBLIC OF KOREA

**F2014-MVC-014**
Sound Quality of Turn Indicator Sounds - Use of a Multi-Dimensional Approach in the Automotive Product Development
Dr. Verena Wagner, Institut für Bildungsforschung und Psychologisches Qualitätsmanagement (IFB); Prof. Dr. K. Wolfgang Kallus, Karl-Franzens-University Graz, AUSTRIA

**F2014-MVC-045**
Active Suspension System Control Using Neural Network Model to Reduce Passengers' Whole-Body Vibration
Dipl.-Ing. Dragan Stamenkovic, Prof. Dr.-Ing. Vladimir Popovic, Prof. Dr.-Ing. Ivan Biagovic, University of Belgrade, Faculty of Mechanical Engineering, SERBIA

**F2014-MVC-044**
Non-Linear Dynamic Modeling and Analysis of Shift Quality of Vehicle Powertrain
Prof. Dr. Changle Xiang, Prof. Wei He, Prof. Dr. Hui Liu, Beijing Institute of Technology, CHINA

**F2014-TMH-041**
Development of a High Efficient Hydraulic System for a New Continuously Variable Transmission
Mr. Masumi Fujikawa, Jatco Ltd., JAPAN

**F2014-TMH-020**
Integrated Control of Engine and Hydro-Mechanical Transmission for a Tractor in Working Condition
Mr. SungHyun Ahn, Mr. Seokhwan Choi, Dr.-Ing. Sungyu Hong, Mr. Chulho Song, Prof. Changhyun Choi, Sungkyunkwan University; Mr. Soochul Kim, Dr. Yonggoo Kim, LS Mtron Ltd., REPUBLIC OF KOREA

**F2014-TMH-071**
Reversible Variable Transmission - High Fuel Efficiency & Dynamics
Mr. Filip De Maziere, Mazer Design Group, BELGIUM

**F2014-NVH-045**
Sound Quality of Turn Indicator Sounds - Use of a Multi-Dimensional Approach in the Automotive Product Development
Dr. Verena Wagner, Institut für Bildungsforschung und Psychologisches Qualitätsmanagement (IFB); Prof. Dr. K. Wolfgang Kallus, Karl-Franzens-University Graz, AUSTRIA

**F2014-NVH-044**
Non-Linear Dynamic Modeling and Analysis of Shift Quality of Vehicle Powertrain
Prof. Dr. Changle Xiang, Prof. Wei He, Prof. Dr. Hui Liu, Beijing Institute of Technology, CHINA

**F2014-NVH-049**
Warning Sounds for Electric Vehicles
Prof. Etienne Parizet, Dr. Ryan Robart, Laboratoire Vibrations Acoustique INSA-Lyon; Ing. Jean-Christophe Chambard, PSA Peugeot Citroën, FRANCE

**F2014-NVH-047**
Active Suspension System Control Using Neural Network Model to Reduce Passengers' Whole-Body Vibration
Dipl.-Ing. Dragan Stamenkovic, Prof. Dr.-Ing. Vladimir Popovic, Prof. Dr.-Ing. Ivan Biagovic, University of Belgrade, Faculty of Mechanical Engineering, SERBIA

**F2014-NVH-048**
Non-Linear Dynamic Modeling and Analysis of Shift Quality of Vehicle Powertrain
Prof. Dr. Changle Xiang, Prof. Wei He, Prof. Dr. Hui Liu, Beijing Institute of Technology, CHINA

**F2014-NVH-043**
Sound Quality of Turn Indicator Sounds - Use of a Multi-Dimensional Approach in the Automotive Product Development
Dr. Verena Wagner, Institut für Bildungsforschung und Psychologisches Qualitätsmanagement (IFB); Prof. Dr. K. Wolfgang Kallus, Karl-Franzens-University Graz, AUSTRIA

**F2014-NVH-042**
Non-Linear Dynamic Modeling and Analysis of Shift Quality of Vehicle Powertrain
Prof. Dr. Changle Xiang, Prof. Wei He, Prof. Dr. Hui Liu, Beijing Institute of Technology, CHINA
F2014-TMH-047* 6Din2D: Calculation and Representation Tool for Electric Vehicle's Performance Parameters with Given Motor  
Mr. Haresh Bhere, Tata Motors Ltd., INDIA

F2014-TMH-059* Solar in Motion  
Dr. Utz Tauber, Dr. Juliane Klas, Inversity GmbH, GERMANY

F2014-TMH-036* The Role of MEMS Technology in Hybrid Vehicle Braking Systems  
Mr. Laurent Otte, Melexis, BELGIUM

F2014-TMH-056* Dog Clutch Gearshift Mechanism for Automatised Passenger Car Gearboxes  
Dr.-Ing. Gabriela Achtenova, Ing. Jilj Pakosta, Czech Technical University in Prague, CZECH REPUBLIC

F2014-TMH-044* Simulation and Testing Of Hybrid Vehicles in Transient Driving Cycles  
Ing. Amir Barak, Dr.-Ing. Vojtech Klej, CTU in Prague, Faculty of Mechanical Engineering, Vehicle Centre of Sustainable Mobility, CZECH REPUBLIC

F2014-AHF-004 Subjective Ride Comfort Prediction of Different Drive Modes of Converted Electric Vehicle  
Dr.-Ing. Sarawut Lerspalungkanti, National Metal and Materials Technology Center (MTEC), THAILAND  
Prof. Dr.-Ing. Albert Albers, Institute of Product Engineering, GERMANY

Mr. Tatsuya Iwasa, Mr. Toshihiro Hashimoto, Mr. Hisayuki Nagashima, Honda R&D Co., Ltd., JAPAN

F2014-AHF-041 Driving Style Detection Algorithm for HEV Control Application  
Dr. Tae Soo Kim, Mrs. Jung Eun Kim, Mr. Gyu Sung Kim, Mr. Jong Han Oh, Hyundai Motor Company, REPUBLIC OF KOREA

F2014-AHF-055 Research on an Indirect Vision Driving System for Special Vehicles  
Dr. Zhi-cheng Wu, Dr. Yu-xu-huang Zhao, Beijing Institute of Technology, CHINA

F2014-AHF-053* The Research and Modeling of Drowsy Driving Behavior  
Mr. Gang Li, Mr. Hong-fang Ling, Ms. Fang Qian, Guangzhou Automobile Group Co., Ltd., CHINA

F2014-AHF-060* Utility Factors Derived From Beijing Passenger Car Travel Surveys  
Mr. Xiaobin Zhang, Prof. Hewu Wang, Tonghua University, CHINA

F2014-AHF-048* Contemporary Disappearance of Electro-Mobile Concepts: Caused by Gender Based Affinities?  
Dr.-Ing. Petra Susanne Rosen, g.e.o.th, GERMANY

F2014-AST-040 Development of a Multi-Body Model of the Thor Test Dummy  
Mr. Richard Lancashire, Ms. Cindy Charlot, Mr. Eric Hovenga, Mr. Bart van Vliet, TASS International, NETHERLANDS

F2014-AST-044 Finite Element Modeling and Injury Analysis of a Six-Year Old Human Head Subject To Frontal Impact  
Dr. Jesse Ruan, Ford Motor Company, UNITED STATES

F2014-AST-007 Design, Development and Validation of High Performance and Sustainability Concrete Barrier  
Dipl.-Ing. Eloi Boix, Dipl.-Ing. René Molina, Dipl.-Ing. Xavier Latore, Applius-I DAOA, Dipl.-Ing. Eva Campmob, Dr. Carolina Rios, Servia Cantó, Mr. Ginés Antolinos, GIVASA, Dipl.-Ing. María Elena Hidalgo, EIFFACE, SPAIN

F2014-AST-013 Experimental and Field Accident Analysis Study of Factors Effecting Rear Seated Child Occupant Injury Risk and Safety in Rear Impacts  
Dr. Ing. Kenneth Saczalski, Environmental Research & Safety Technologists, Inc., Mr. Mark Pozzi, Solaris Safety Sciences, Mr. Todd Saczalski, TKS Consulting, Dr. Joseph Burton, Burton & Associates, UNITED STATES

Dipl.-Ing. Pet. Rogov, Prof. Dr. Lev Orllov, Dipl.-Ing. Andrey Vashurin, Dr.-Ing. Anton Tumaiov, Mr. Mikhail Zelenov, Mr. Rinat Shabrov, Nizhny Novgorod State Technical University n.a. R.E. Alekseev, RUSSIAN FEDERATION

Prof. Dr.-Ing. Rita Silva, Prof. Dr. Maria Alzira Nunes, Prof. Dr.-Ing. Alessandro de Sousa Oliveira, University of Brasilia, BRAZIL

F2014-AST-032* A Study for Analysis Technique for Ensuring the Head Injury Criterion and Ejection Mitigation Performance of Curtain Airbag  
Mr. Bae Young Kim, Mr. Kang Wook Lee, Mr. Jeong Keun Lee, Mr. June Young Song, Hyundai Mobis/CAE Team, REPUBLIC OF KOREA

F2014-AST-003* Safety and Optimal Design for Monocoque Coach Body Upper Structure  
Mr. Wei Lu, Mr. Hongjun He, Mrs. Xiaoping Xiong, Mrs. Dongmei Chai, Mr. Lizhou Gong, China FAW Corporation Limited R&D Center, CHINA

F2014-AST-088* Sideimpact CAE Simulations with SideStep and Extreme Door Concept  
Mr. Anand Jirli, Mr. Santosh Kumar, Tata Technologies Limited (TTL), INDIA

F2014-AST-064* Overall Assessment on Crash Correlation and Validation Based on Weighted Factor  
Mr. Derek Wu, Mr. Xiangling Chen, Great Wall Motors Co., Ltd, CHINA

F2014-AST-078* Side Airbag Optimization for Side Impact Occupant Protection  
Mr. Mandar Katneshwarkar, Mr. Kedar Hendre, Tata Technologies, INDIA

F2014-AST-091* Numerical Modeling of Multi-Layered Materials Used In Automobile Interior Parts  
Prof. Heon Young Kim, Kangwon National University / Department of Mechanical and Biomedical Engineering; Mr. Youngwan Kim, Mr. Daeyoung Kim, Mr. Eunyul Kwon, Kangwon National University, REPUBLIC OF KOREA

F2014-CET-040 Performance Evaluation of Passenger Car, Fuel and Powerplant Options  
Dipl.-Ing. Jukka Nuuttimäki, Dr. Eng. Juhani Laurikko, Prof. Nils-Olof Nylund, VTT Technical Research Centre of Finland, FINLAND

F2014-CET-045 Development of High Performance Diesel Piston Using Bowl Edge Re-Melting Technology  
Mr. Sangwook Han, Mr. Chonghui Kim, Dr. Geesoo Lee, Dr. Hyunchul Kim, Korea Automotive Technology Institute; Mr. Younsul Yoo, Dongguh Industrial Co., Ltd., REPUBLIC OF KOREA

F2014-CET-058 A Comparison of Light-Duty Vehicle Emissions over Different Test Cycles and in Real Driving Conditions  
Mr. John May, Mr. Dirk Bosteels, Mr. Cecile Favre, Association for Emissions Control by Catalyst (AEEC), BELGIUM

F2014-CET-080 Modernizing the Opposed-Piston Engine for Clean, More Fuel Efficient Transportation  
Mr. David Johnson, Mr. John Kozicki, Acharis Power, Inc., UNITED STATES
Technical Programme – Wednesday, 4 June 2014

10:30 - 12:30
CETS.1 - Design & Simulation II

F2014-DMO-090
Beyond Hyboost - Potential Development Paths of Gasoline Engine Mild Hybridization
Technologies to 2020 and Beyond
Mr. Jason King, Ricardo UK, UNITED KINGDOM

F2014-CET-005
Universal Diesel Engine Simulator (UNiDES) and its Application to Transient Performance Prediction of a Multi-cylinder Engine
Dr. Matsue Ueda, Dr. Kazuhsa Inagaki, Toyota Central R&D Labs., Inc.; Mr. Yusuke Takanasu, Toyota Motor Corporation; Mr. Toshihiro Tani, Toyota Industries Corporation, JAPAN

F2014-CET-017
Detailed Modeling of SI-Engines in Driving Cycle Simulations for Fuel Consumption Analysis
Dipl.-Ing. Manuel Dorsch, Dr.-Ing. Jens Neumann, BMW Group; Prof. Dr.-Ing. Christian Hesse, TU Bergakademie Freiberg, GERMANY

F2014-CET-030
An Efficient Methodology for the Borderline Design of Diesel Engine Cylinder Heads
Dipl.-Ing. Christoph Sazaz, Avish Dhongde, Institute for Combustion Engines (VKA) - RWTH Aachen University, Dr.-Ing. Sven Lauer, FEV GmbH, GERMANY

F2014-CET-121
Response Surface for Model Predictive Control of Mega-Knock in Super-Charged Gasoline Engines
Prof. Dr.-Ing. Norbert Peters, Mr. Bruno Kerschgens, RWTH Aachen University, GERMANY

F2014-CET-082
Development of Vortex Generator for EGR Cooler
Mr. Mitsuji Inasaka, Mr. Junichiro Hara, Calsonic Kansei Corp.; Prof. Dr. Isuru Honda, University of Hyogo, JAPAN

F2014-CET-095
Modeling the Combustion of (M) Ethanol in Spark-Ignition Engines
Mr. Jeroen Vancalle, Mr. Louis Sileghem, Prof. Dr. Sebastian Verheet, Ghent University, BELGIUM

10:30 - 12:30
LVCS - Vehicle Dynamics and Intelligent Vehicle Controls
Full details on p16

10:30 - 12:30
LWS5 - Design Optimisation

F2014-LWS-001
Rear Multi-Link Suspension Optimization: Unified Approach
Dr. Youngwoo Hahn, Mr. Jegan Chinmaraj, Mr. Vaibhav Deshpande, Mr. Sandeep Urarkar, Dassault Systemes SIMULIA, UNITED STATES

F2014-LWS-015
Aircharge Estimation by Neural Networks on a Highly Variable Engine
Ing. Wimno Merts, Hogeschool van Antwerpen en Nijmegen (HAN), NETHERLANDS; Dr.-Ing. Andreas Gotter, FEV Inc., GERMANY

10:30 - 12:30
EPT5 - Range Extenders

F2014-EPT-025
Thermal Management of Heat Sources and Sinks in Electric Vehicles in Various Climatic Conditions and on Various Driving Cycles
Ir. Xavier Tsequin, Prof. Dr.-Ing. Pierre Duyns, Dr.-Ing. Vincent Lemort, University of Liège, BELGIUM

F2014-EPT-054
Power Semiconductors: Key Components for HEV/EV
Prof. Dr. Felix Huening, University of Applied Science Aachen, GERMANY

F2014-EPT-066
Twinspeed Powershift Gearbox for Full and Range Extended EVs
Dr.-Ing. Alex F.A. Serafim, Punch Powertrain, NETHERLANDS

F2014-EPT-088
Research on the Stability of Anti-Directional-Dual-Rotor Motor Based On Small Signal Model
Mr. Yutaro Luo, Mr. Zhong Ye, South China University of Technology, CHINA

F2014-MVC-048
Methodology for Building-Up Technological Core Competencies Using the Electric Power Train of Vehicles as an Example
Ms. Danuta Wówczerko, WZL of the RWTH Aachen, GERMANY

F2014-NVH-002
Driver Style Influence in the Vehicle Acoustic Emissions in Urban Traffic
Prof. Dr. Jose A. Calvo, Dr. Carolina Alvarez-Caldas, Dr. Jose Luis San Roman, Universidad Carlos III de Madrid; Dr. Pedro Cobo, Centro de Acústica Aplicadas y Evaluación No Destructiva (CAEN), CISCUPM, SPAIN

F2014-NVH-060
Effect of Eco-Driving on Vehicle Noise Emission
Ir. Erik de Graaff, Dr. Gijswan van Blokland, M+P Consulting Engineers, NETHERLANDS; Dipl.-Ing. Irène Schlachter, Bundesamt für Umwelt, SWITZERLAND

F2014-NVH-076
Contribution of Air Intake Noise to the Pass-By Noise of Trucks
Dr. Jos van Heek, DAF Trucks, NETHERLANDS

F2014-NVH-004
Experimental Reproduction of Intake and Exhaust Source Noise
Mr. Mohit Kohli, Mr. Venkateswarao Manchi, Mahindra and Mahindra Ltd., INDIA

F2014-NVH-071*
Development of a Pass-By Noise Prediction Model for Heavy Trucks
Dr. Lingzhui Li, Dr. Jun Li, Mr. Bingwu Liu, Mr. Yingjie Liu, Ms. Yan Zhang, China FAW Co., Ltd. R&D Center, CHINA

F2014-NVH-016*
Optimization on Exhaust Tailpiece Noise Based on a Section Car
Mr. Tan Miao, Mr. Li Diankun, Brilliance Automotive Engineering Research Institute, CHINA

F2014-NVH-027*
RASP Noise Analysis of Exhaust Muffer Shell
Mr. Kuo-xiang Liu, Dr. Jian Pang, Mr. Xia-hong Kuang, Mr. Shuo Zhang, Mr. Jie Li, Changan Automobile Company Limited, CHINA

F2014-NVH-042*
Analysis of Flow Structure around Cooling Fan Blade Using POD
Mr. Yoji Kobayashi, Dr. Hideaki Nagano, Prof. Dr. Isuhi Kozhi, Tokyo City University; Mr. Kenji Yoshida, DENS CO. CORP., JAPAN

10:30 - 12:30
TMHS - EV & Powertrain Controls

F2014-TMH-016
Development of a Range Extender Engine Family
Dr. Marco Warth, Dr. Mike Bassett, Dassault Systèmes, NETHERLANDS

* Indicates papers presented in poster session.
For over a hundred years, automobiles have been designed to be driven by humans, but now computers are poised to take a larger role. This is a significant change for the automotive business with deep impacts not only on the technology front, but also on regulation and on society. This plenary session will explore the wide-ranging effects of automated driving as the technology moves from research to reality.

- What are the key potential benefits of automated driving? What are the largest challenges?
- Can these features be made reliable and affordable?
- Will the changes be introduced in an evolutionary or revolutionary manner?
- How will drivers react to these features? How will the role of the driver change?

Key decision makers and world class experts have been invited to speak in this plenary session. The panel will include authorities from inside and outside the automotive industry. Please see the FISITA Congress website for the latest information.
F2014-EPT-026*  The Research of Indexes of Operational Characteristics of Electric LCV  
Dr. Alexander Blokhin, Mr. Alexey Yardhemsky, Ms. Tatyana Kozlova, Mr. Alexey Shatlov, NSTU, RUSSIAN FEDERATION

F2014-EPT-011*  The Performance Characteristics of Electric Vehicles (EVs) According to the Diverse Driving Conditions and Test Methods  
Dr. Eng. Minho Lee, Mr. Junghwan Kim, Dr. Choongsub Jung, Korea Petroleum Quality & Distribution Authority; Mr. Kyungwan Roh, Korea Energy Management Corporation, REPUBLIC OF KOREA

F2014-EPT-018*  Economy Analysis of a Range-extended Electric Bus in Different Chinese City Driving Cycles  
Mr. Xiaogang Wu, Mr. Zelong Wang, GEELY AUTOMOBILE RESEARCH INSTITUTE, CHINA

F2014-EPT-023*  Assessment of Electric Mobility Technologies  
Prof. In-Soo Suh, KAST, REPUBLIC OF KOREA; Mr. Riccardo Barbieri, UNIFI, ITALY

F2014-EPT-046*  Analysis and Verification of Solutions to the EMC Problems Caused by the Converter in HEV  
Mr. Zhao Zhao, Chongqing University, State Key Laboratory of Mechanical Transmission, CHINA

F2014-EPT-035*  Driving Force Hierarchical Control for an Electric Vehicle with In-Wheel-Motors  
Dr. Shaopeng Zhu, Mr. Binbin Qiu, Mr. Zhijun Wu, Power Machinery & Vehicular Engineering Institute, Zhejiang University, CHINA

Dr. Eng. Wenxue Zhang, Prof. Dr. You tong Zhang, Beijing Institute of Technology, CHINA

F2014-IVC-083  Intelligent Control Strategy for Electronic Parking Brake System Based on Current Model in X-By-Wire Technology  
Mr. Leon Huang, Ms. Min Long, Ms. Fen Zhang, Mr. Wei Xu, GAC ENGINEERING, Guangzhou Automobile Group, Co., LTD., CHINA

F2014-IVC-120  Model Based and Scalable Functional Safety Engineering Methodology for On- and Off-Highway Vehicles  
Dr.-Ing. Dariusz Szymanski, Flanders’ Drive; Mr. Bert Dexter, Mr. Marc Van Vlimmeren, Mr. Yoann Descas, Flanders’ Drive cvba-so, BELGIUM

F2014-IVC-051  Design and Simulation of Electro-Rheological Dampers for a Tilting Three Wheeled Vehicle  
Mr. Frank Wil, Deakin University, GERMANY

F2014-IVC-038*  Test Driven Model Based Series Software Development for Automotive Systems  
Dr.-Ing. Axel Schlößer, Dr.-Ing. Marco Jentges, FEV GmbH, GERMANY

Mr. Daniel Wanner, Prof. Lars Drugge, Prof. Anna Stensson Trigell, KTH Vehicle Dynamics, SWEDEN

Dr. Giordano Greco, Magneti Marelli; Geert van Grootveld, European Commission Joint Research Centre, ITALY

F2014-IVC-037*  Study of Energy Efficiency of Electric Vehicle by Coupling a Vehicle Dynamic Model with the Electric Component Dynamics  
Mr. Ngoc-Tuan Vu, Mr. Sébastien Mortorelle, Mr. Lionel Mauffrey, Prof. Dr.-Ing. Didier Remond, Laboratory LAMCOS; Mr. Wilfrid Marquis-Favre, Laboratory AMPERE, FRANCE

Dr. Eng. Yang Liu, Prof. Zechang Sun, Tongji University, CHINA

F2014-IVC-012*  Simulation and Parametric Analysis on Composite ABS Control Strategy for EV  
Mr. Lin Hui, Mr. Feng Wanjing, Brilliance Automotive Engineering Research Institute, CHINA

Innick Son, Prof. Dr. Jeonghun Cho, Kyungpook National University; Mr. Kabsu Han, Korea Automotive Technology Institute, REPUBLIC OF KOREA

F2014-LWS-056*  Lightweight Design Method of BIW Based on Multi-Objective Optimization  
Mr. Wang Lei, Mr. Liu Ying, Brilliance AUTOMOBILE RESEARCH INSTITUTE, CHINA

F2014-LWS-058*  Research on Electric Mobility Technologies  
Prof. In-Soo Suh, KAST, REPUBLIC OF KOREA; Mr. Riccardo Barbieri, UNIFI, ITALY

F2014-LWS-037*  Conceptual Design of Vehicle Based on Implicit Parametric Technology  
Mr. Hui Tang, Mr. Yongxin Men, Mr. Ravi Kiran Cheni, Maruti Suzuki India Ltd, INDIA

F2014-LWS-034*  A Novel Approach of Aerodynamic Optimization on Long-Distance Transportation Trucks  
Mr. Severin Stadler, Prof. Dr. Mario Hirz, Graz University of Technology, AUSTRIA

F2014-LWS-036*  An Improved Heavy Duty Aerodynamics  
Mr. Petr Laine, Dr. Juhani Laurikko, VTT Technical Research Centre of Finland
### Technical Programme – Wednesday, 4 June 2014

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<td>15:30 - 16:15</td>
<td>MV8 - Others</td>
<td>Impact Factors Analysis on the Accuracy of Aerodynamic Performances for Passenger Vehicle</td>
<td>Mr. Chenglong Wei, Geely Automobile Research Institute, CHINA</td>
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<td>15:30 - 16:15</td>
<td>MV8 - Others</td>
<td>Optimization for Front-End Flow Field of Vehicle Underhood Based On CFD</td>
<td>Mr. Shukai Dai, Ms. Hui Lin, GAC ENGINEERING, Guangzhou Automobile Group Co., Ltd., CHINA</td>
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<td>15:30 - 17:30</td>
<td>TMH6 - Hybrids</td>
<td>Optimized Rule-Based Energy Management Strategy for the Toyota Plug-In Hybrid Using Dynamic Programming</td>
<td>Dr. Eng. Charbel Mansour, Lebanese American University, UNITED STATES</td>
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<td>15:30 - 17:30</td>
<td>TMH6 - Hybrids</td>
<td>Integrating Battery Management System with Energy Management in Hybrid Electric Heavy-Duty Trucks</td>
<td>Ir. T.H. Pham, Prof. P.I.J. van den Bosch, Eindhoven University of Technology; Dr. J.T.B.A. Kessels, Dr. R.G.M. Huisman, DAF Trucks N.V., NETHERLANDS</td>
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<td>15:30 - 17:30</td>
<td>TMH6 - Hybrids</td>
<td>Model Predictive Control-Based Power Management Strategy for Power-Split Two-Mode HEVs</td>
<td>Dr. Weida Wang, Prof. Dr. Hui Liu, Beijing Institute of Technology, CHINA</td>
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<td>15:30 - 17:30</td>
<td>TMH6 - Hybrids</td>
<td>Dynamic Modeling Study on Electromechanical Coupling of Power Split Hybrid Drive System</td>
<td>Mr. Li-jin Han, Prof. Hui Lu, Beijing Institute of Technology; Yun-Long Qi, Key Laboratory of Vehicle Transmission, CHINA</td>
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<td>15:30 - 17:30</td>
<td>TMH6 - Hybrids</td>
<td>Multi-Objective Optimization of the Two-Drive-Transmission for a Hybrid Electric Vehicle</td>
<td>Mr. Ruben König, Prof. Dr.-Ing. Stephan Rinderknecht, TU Darmstadt, GERMANY</td>
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*Based on HS data*
Technical Programme – Thursday, 5 June 2014

08:30 - 10:00 Executive Track
AHF7 - Automotive Human Factors
Full details on p16

08:30 - 10:00
AST7 - Protection of Vulnerable Road Users

F2014-AST-051* Requirements for Testing Pedestrian AEB Systems - Results from the AsPeCSS FP7 Project
Dr.-Ing. Patrick Senigger, Bundesanstalt für Straßenwesen (BASt), Dr.-Ing. Thomas Schaller, BMW AG, GERMANY

F2014-AST-045* Vulnerability Classification of Generic Object Hypotheses Using a Visual Words Approach
Dr. Joachim Denzler, Friedrich-Schiller-University Jena; Mr. Maxim Arbitmann, Continental AG, Division Chassis & Safety, Advanced Engineering, GERMANY

F2014-AST-046* Simulating the Impact of Automatic Brake on Real Pedestrian Collisions
Dr. Javier Pérez Ayuso, Mr. Arturo Furonos, INSA-UPM, SPAIN
Mr. Alejandro Badía, Jaguar Land Rover Ltd., UNITED KINGDOM

F2014-AST-063* Design of Flex-PLI Leg Impact Complaint Bumpers Using Thermoplastic Energy Absorbers
Mr. Ahmad Darzi, Vehicle, Fuel and Environment Research Institute; Mr. Ahmad Jawaheri, Prof. Dr. Vahed Esfahanian, School of Mechanical Engineering, College of Engineering, University of Tehran, IRAN (ISLAMIC REPUBLIC OF)

Dr.-Ing. Lin Li, Tongji University, Prof. Dr. Xichan Zhu, Tongji University, CHINA

F2014-AST-062* Friction Reduction of Engine Bearings with Solid Lubricant Overlay
Mr. Shu Kamyia, Mr. Toshiyuki Chitose, Dr. Toru Desaki, TAIHO KOGYO CO., LTD., JAPAN

F2014-AST-019* Adhesion Mechanism of Internal Diesel Injector Deposit
Mr. Yuki Amano, Mr. Satoshi Bunne, Mr. Kouchi Yamada, Mr. Noriyuki Suzuki, DENSO Corporation, JAPAN

F2014-AST-007 Hybrid Electric Vehicles
Dr. John Whaley, Bombardier
Dr.-Ing. Jing Gao, Bombardier

08:30 - 10:00
CET7 - Diagnostics

F2014-CET-007 High Temperature Miniature Static/Dynamic Pressure Transducer with Wide Pressure and Frequency Range
Dr. Marek Wlodarczyk, Optrans, Inc., UNITED STATES

Prof. Roger Cracknell, Shell Global Solutions UK, UNITED KINGDOM

F2014-CET-015 Experimental Study of Flame Propagation Limits Resulting From Mixture Dilution in Methane Fueled Gas Engines
Prof. Dr.-Ing. Rik Baert, Dr. Erik Doosje, TNO, NETHERLANDS

F2014-CET-022* Synthesis and NOx Gas Sensing Properties of NiO-YSZ Nano Composite Fiber
Mrs. Jinxing Wang, Mr. Kejin Zhang, Mrs. Mei Kang, Mr. Wei Wang, Mr. Youqun Zhao, Ms. Jiyun Hu, Dr. Delin Guo, Tongji University, Prof. Dr. Ziming Wang, Chief Engineer, FAW Corporation Limited R&D Center, CHINA

F2014-CET-079* Experimental Study of Flame Propagation Limits Resulting From Mixture Dilution in Methane Fueled Gas Engines
Prof. Dr.-Ing. Rik Baert, Dr. Erik Doosje, TNO, NETHERLANDS

Prof. Roger Cracknell, Shell Global Solutions UK, UNITED KINGDOM

F2014-CET-015 Experimental Study of Flame Propagation Limits Resulting From Mixture Dilution in Methane Fueled Gas Engines
Prof. Dr.-Ing. Rik Baert, Dr. Erik Doosje, TNO, NETHERLANDS

F2014-CET-022* Synthesis and NOx Gas Sensing Properties of NiO-YSZ Nano Composite Fiber
Mrs. Jinxing Wang, Mr. Kejin Zhang, Mrs. Mei Kang, Mr. Wei Wang, Mr. Youqun Zhao, Ms. Jiyun Hu, Tongji University, Prof. Dr. Ziming Wang, Chief Engineer, FAW Corporation Limited R&D Center, CHINA

08:30 - 10:00
EPT7 - Charging Infrastructure and Smart Grid Technology

Mr. David Barker, EM, AUSTRALIA

Dr. Kazuhide Togai, Mitsubishi Motors Corporation; Prof. Hisashi Tamaki, Kobe University, JAPAN

08:30 - 10:00
IVC7 - Vehicle Dynamics - Subjective/Objective Correlations

F2014-IVC-033 EPS for Improving Steering Feel Performance
Mr. Manok Jeong, Mr. Seung-Hoon Woo, Chassis CAE Team, Hyundai Motor Company, REPUBLIC OF KOREA

F2014-IVC-002* On Optimal Control Time Overtaking Problem Based through Measures within the Wheel Subsystem
Ir. Sebastiaan van Putten, Dipl.-Ing. Jan Kubenz, Prof. Dr.-Ing. Günther Prokop, Dresden University of Technology; Hendrik Abel, Dipl.-Ing. Robert Clauss, AUDI AG, GERMANY

Dipl.-Ing. Maria Dolores Gretzher Lopez, Prof. Dr.-Ing. Javier Garcia de Jalón, INIA-Technical University of Madrid (UPM), SPAIN

F2014-IVC-005* Integral Analysis about Vehicle Dynamics and Control Logic of EPS for Improving Steering Feel Performance
Mr. Monak Jeong, Mr. Seung-Hoon Woo, Chassis CAE Team, Hyundai Motor Company, REPUBLIC OF KOREA

F2014-IVC-077* Testing Effect of the Tyre on Lateral Handling Behaviour
Mr. Wenshui Luo, Mr. Shi Wang, Mr. Chuanzhua Ma, Guangzhou Automobile Group Co. Ltd., CHINA

F2014-IVC-016* Research on Handling Inverse Dynamics of Vehicle Minimum Time Overtaking Problem Based On Optical Control
Mr. Wei Wang, Mr. Youqun Zhao, Ms. Hui Yang, College of Energy & Power Engineering, Nanjing University of Aeronautics and Astronautics, CHINA

F2014-IVC-002* Data Acquisition and Advanced Engine Management for Road Racing Motorcycles
Mr. David Barker, EM, AUSTRALIA

08:30 - 10:00
EPT7 - Charging Infrastructure and Smart Grid Technology

Mr. David Barker, EM, AUSTRALIA
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<td>Mr. Eric Verhulst, Mr. Peter van Schalk, Altreonic NV</td>
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<td>TMH7 - Automatic Transmission &amp; Hybrids</td>
<td>Mr. Yuchuan Gu, Mr. Peilong Hu, Mr. Zhaohao Zeng, Guangzhou Automobile Group Co., Ltd., CHINA</td>
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<td>NVH7 - HEV-NVH</td>
<td>Mr. V. Prasad Atluri, General Motors, UNITED STATES</td>
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<td>Executive Track AC8 - New Mobility: Vehicle and Control Concepts</td>
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<td>10:30 - 12:30</td>
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Development of the Hot Stamping Tubular Bumper Frame for Automotive
Mr. Hyun Kyung Kim, Mr. Sang Cheon Park, Hyundai Motors; Mr. Seung Ha Lee, Hyundai Steel; Mr. Dong Hak Kim, Hyundai Hysco, REPUBLIC OF KOREA

**F2014-LWS-074**
Mass Saving Potential of DP800HyperForm® for BIW Applications
Dr. Chris Lahaije, Tata Steel, NETHERLANDS

**F2014-LWS-061**
Effect of Rapid Heating on Coating Behavior during Press Hardening
Mr. Changwook Lee, Posco, REPUBLIC OF KOREA; Mr. Dong Hak Kim, Mr. Hyun Kyung Kim, Mr. Sang Cheon Lee, Hyundai Hysco, REPUBLIC OF KOREA

**F2014-MVC-003**
4WD Economic and Environmentally Friendly Vehicles with Front Small, Turbocharged, Direct Injection Engines and Rear Kinetic Energy Recovery System
Prof. Dr.-Ing. Alberto Boretti, RMIT, AUSTRALIA

**F2014-MVC-008**
Research Consortium Develops Lightweight Body for Electric Vehicles
Dipl.-Ing. Björn Hören, Institute of Automotive Engineering RWTH-Aachen University (ika), GERMANY

**F2014-MVC-039**
Multi-Objectives Optimization of A Modular Platform for Electric and Conventional Vehicles
Mr. Li Wu, Mr. Xin Lin Duan, Mr. Hongyang Li, GAC ENGINEERING, CHINA

**F2014-MVC-028**
Early Stage Vehicle Concept Design using One-Dimensional Simulation
Mr. Katsuya Minami, Mr. Yasuhiro Yoshimi, Honda R&D Co., Ltd., JAPAN

**F2014-MVC-041**
Scalable Mobility: A Holistic Systems and Safety
Mr. Raviteja Chanumolu, Dr. Ashitava Ghosal, Indian Institute of Science, INDIA; Mr. V. Prasad Atluri, General Motors, UNITED STATES

**F2014-MVC-045**
Evaluation of Dynamical Behavior of Long Heavy Vehicles using Performance Based Characteristics
Mrs. Malinhe Sadeghi Kati, Prof. Jonas Fredriksson, Prof. Bengt Jacobson, Chalmers University of Technology; Dr. Leo Laine, Volvo GTT, SWEDEN

**F2014-NVH-046**
Applying the Source-Transfer-Receiver Principle to Achieve Optimal NVH Performance on Long-Haul Vehicles
Ing. Benjamin Meuk, Ing. Colin Andersson, Dr. Herman Van Der Auweraer, LMS International, BELGIUM

**F2014-NVH-070**
Sensor-Bearing Optimization for Efficient and Smooth Asynchronous Motor Control
Ms. Susanne Blokland, Mr. Mathieu Hubert, SKF France, FRANCE

**F2014-NVH-082**
Electro-Vibro-Acoustic Analysis of Electric Powertrain Systems
Mr. Mathieu Maurice Sarrazin, Dr. Eng. Karl Janssens, Wilfried Claes, Prof. Dr.-Ing. Herman Van der Auweraer, LMS International NV, BELGIUM

**F2014-NVH-056**
Research on Beat Noise of the 4WD Hybrid Vehicle
Mr. Yuan Liu, Mr. Lishou Wang, Zhejiang Gou, GAC ENGINEERING, Guangzhou Automobile Group Co., Ltd., CHINA

**F2014-NVH-057**
Research on Strategies for the Mount System of Extended-Range Electric Vehicle
Mr. Peilong Hu, Mr. Zhaozhao Zeng, Mr. Yuchuan Gu, GAC ENGINEERING, Guangzhou Automobile Group Co., Ltd., CHINA

**F2014-TMH-055**
Balance Design Method on Wet Multiple Plate Clutch According to Load Form
Dr. Eng. Kazunari Okabe, MHI Sagami High-Tech Ltd, Prof. Dr. Haruo Houjou, Tokyo Institute of Technology, JAPAN

**F2014-TMH-030**
Increase in Durability of Frictional Control of the Tracked Vehicle Transmission
Dipl.-Ing. Alexander Taratorkin, Bauman Moscow State Technical University; Dr. Eng. Viktor Derzhanski, Dr. Eng. Igor Taratorkin, Institute of Engineering Science of the Ural branch of the Russian Academy of Sciences (IES UB RAS), RUSSIAN FEDERATION

**F2014-TMH-049**
Development of Shift-Pattern Tuning Software in Auto-Cruise Vehicles
Mr. Hyunsuk Lee, Prof. Wonsik Lim, Seoul National University of Science & Technology; Prof. Sukwon Cha, Mr. Changwoo Shin, Seoul National University/Mechanical Aerospace engineering; Mr. Yongdal Lee, Mr. Jongwook Kim, Hyundai Motors, REPUBLIC OF KOREA

**F2014-TMH-054**
The Strategy of Optimising Gear Shifting Patterns and Torque Converter Clutch Engaging Map with Fuel Economy and Engine Performance Perspective
Ms. Yoonjung Kim, Mr. Wooyoung Seo, Mr. Sungchul Shin, Continental Automotive Systems Corporation, REPUBLIC OF KOREA

**F2014-TMH-033**
State of the Art of Pneumatic and Hybrid Powertrain Systems
Mr. V. Prasad Atluri, General Motors, UNITED STATES

**F2014-TMH-035**
Experimental Comparison of Two Different Hybrid Propulsion Systems
Mr. Raviteja Chanumolu, Dr. Ashitava Ghosal, Indian Institute of Science, INDIA; Mr. V. Prasad Atluri, General Motors, UNITED STATES

**F2014-TMH-062**
Application of Blended Approach Power Management Strategy Based On Driving Information for Series Plug-In Hybrid Transit Bus
Dr. Ing. Jongdae Choi, Dr. Ing. Jongryeol Jeong, Dr. Ing. Howon Seo, Prof. Dr. Yeong-i Park, Prof. Dr. Suk Won Cha, Seoul National University, REPUBLIC OF KOREA

F2014-AHF-039* Analysis of Heat Transfer Characteristics of Thermal Manikin Classified with Flow Pattern Mr. Kyotaka Mizukami, Dr. Hideaki Nagano, Prof. Dr. Isshu Kohri, Tokyo City University; Mr. Kazukiho Matsunaga, Isuzu Motors Limited, JAPAN

10:30 - 12:30 CET8 - Liquid Fuel and Lubrication II

F2014-CET-048 Corrosive Effect of Ethanol Fuel on Engine Components (PCU) Mr. Omar Mian, MAHLE Engine Systems UK Ltd, UNITED KINGDOM Mr. Matheus dos Santos Ferreira, MAHLE Metal Leve S.A., BRAZIL

F2014-CET-102 Effects of Ethanol on Gaseous and PM Emission in 2-Stroke CAI Combustion Mr. Mohammed Moore Ojapah, Prof. Hua Zhao, Dr. Yan Zhang, Brunel University London, UNITED KINGDOM

F2014-CET-043* A Comparative Study of Biodiesels derived from Soy and Tallow Prof. Keshav Varde, Mr. Subha K. Veeramachineni, University of Michigan-Dearborn, UNITED STATES

F2014-CET-050* Effect of Biodiesel Blend on Lubricants Characteristics Prof. Dr. Snezana Petkovic, Mr. Zeljko Djuric, University of Banja Luka, Faculty of Mechanical Engineering; Mr. Omer Kocz, Dr. Pero Duac, Ms. Jadranka Vujica, Oil Refinery Modrica, CHRO

F2014-CET-061* Evaluation of Oxidation Stability of Fish Oil Biodiesel Mr. Shubham Sharma, Mr. Sahil Gupta, Mr. Siddhant Kumar, Delhi Technological University, INDIA

F2014-CET-163* Performance and Emissions of Dual Fuel Diesel Engine Operated with Eucalyptus Biodiesel and Natural Gas Dr. Ilyas Tarabet, Ecole Militaire Polytechnique, ALGERIA

F2014-CET-178* NOx Emission Reduction of a CI Engine Running with Diesel and Biodiesel Using Water Injection Dr. Betachev Tesla, Dr. Fengshou Gu, Prof. Andrew Ball, University of Huddersfield, UNITED KINGDOM

F2014-CET-012* Real-World Emissions and Energy Use of Different Heavy-Duty Vehicle Categories Dr. Eng. Johani Lautikko, Mr. Petri Laine, Mr. Kimmo Erkkilä, VTT Technical Research Centre Finland, FINLAND

F2014-CET-026* Engine Performance and Emissions of Valeric Biofuels Prof. Dr.-Ing. Francesco Contino, Vrije Universiteit Brussel, BELGIUM Dr. Philippe Dagaut, Dr. Guillaume Dayma, CNRS; Prof Dr.-Ing. Fabien Haber, Prof. Dr.-Ing. Fabrice Foucher, Prof. Dr.-Ing. Christine Mounaim-Rousselle, Université d’Orléans, FRANCE

F2014-CET-053* Research on Engine Solid-Liquid Hybrid Lubrication Technology Mr. Yupeng An, Mrs. Xinyan Mi, Mrs. Dan Wang, Mr. Kejin Zhang, China FAW Corporation Limited & R&D Center, Changchun, Mr. Junyan Zhang, Mr. Bin Zhang, State Key Laboratory of Solid Lubrication, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, CHINA

F2014-CET-071* The Identification and Engine Testing of Potentially Renewable Liquid Biofuels from Microbes for the Aviation and Road Transport Sectors Mr. Roedri Jenkins, Mr. Chris Chuck, Mr. Chris Bannister, University of Bath, UNITED KINGDOM


10:30 - 12:30 CET8.1 - Combustion Control


F2014-CET-072 Virtual Test Bed of a Cascaded PCCI Combustion Control Loop with Underlying Air Path Controller and Multi-Zone Combustion Model Mr. Rene Zwiegel, Mr. Thivaharan Albin, Dr.-Ing. Frank-Josef Hessele, Institute of Automatic Control, RWTH Aachen University, Mr. Bernhard Jochim, Prof. Dr.-Ing. Heinz Pittsch, Institute for Combustion Technology, RWTH Aachen University, GERMANY

F2014-CET-076 Model-Based Fuel Path Control for Diesel Engines Dipl.-Ing. Joschka Schaub, Prof. Dr.-Ing. Stefan Pischinger, Institute for Combustion Engines, RWTH Aachen University, Dr.-Ing. Thorsten Schnorbus, Dr.-Ing. Bastian Holderbaum, Dipl.-Ing. Thomas Körfer, FEV GmbH, GERMANY

F2014-CET-078 Numerical Investigation of Cycle-to-Cycle Fluctuations at Gasoline Controlled Auto-Ignition Engines Mr. Bastian Morcinkowski, Mr. Bastian Lehrheuer, Institute for Combustion Engines RWTH Aachen University, Mr. Thivaharan Albin, Institute of Automatic Control RWTH Aachen University, Dr.-Ing. Jens Ewald, FEV GmbH, GERMANY

F2014-CET-129 Investigation of Robust Control for Gasoline HCCI Engine Mr. Kenichiro Ogata, Hitachi, Ltd. Hitachi Research Laboratory, JAPAN

F2014-CET-132 A Study of Autoignition and Combustion Behavior in a Supercharged HCCI Engine by using in-cylinder Spectroscopic Measurements Dipl.-Ing. Hansjorg Kapeller, Dipl.-Ing. Dr. Akira Iijima, Prof. Hideo Shoji, Nihon University, Mr. Abe Yasuhide, Mr. Yuma Ishizawa, Mr. Go Emori, Nihon University Graduate School; Mr. Kazuhiro Misawa, Mr. Kenji Yamamoto, Mr. Hiroki Kojima, Mr. Kenjiro Nakama, Suzuki Motor Corporation, JAPAN

F2014-CET-029* Auto-Ignition Behaviors of Unsteady Spray at Low Temperature Condition Dr. Seung Yeon Yang, King Abdullah University of Scientist and Technology; Prof. Suk Ho Chung, KAUST, SAUDI ARABIA

F2014-CET-127* Analysis of Effect of Hot and Cooled EGR on Knocking in Direct Injection Gasoline Engine Mr. Kengo Kumanou, Mr. Shiro Yamaoka, Mr. Yoshihiro Sukegawa, Mr. Yusuke Kihara, Hitachi, Ltd., JAPAN

F2014-CET-152* Just In Time Calculation of CA50 and IMEP Engine Performance Parameters Mr. Michiel Esvelt, Ing. Johan Esvelt, GyrSense BV, NETHERLANDS

10:30 - 12:30 EPT8 - Plug-In Vehicles

F2014-EPT-040 Lightning Impact on Electronic Systems in Plug-In Hybrid and Electric Vehicles Prof. Dr. Shigeru Oho, Nippon Institute of Technology, JAPAN

F2014-EPT-053 E4WD Vehicle Control Strategy Based On Optimization of Overall HEV Powertrain Efficiency Prof. Dr. Xiangdong Huang, Dr. Jack Xu, GAC Engineering, Guangzhou Automobile Group Co., Ltd., CHINA

F2014-EPT-065 Ultra-Capacitor Based Hybrid Energy Storage and Energy Management for Mild Hybrid Vehicles Mr. Swantan Kulkarni, Mr. Naga Amancharla, Mr. Srinivasan Govindarajan, Tata Technologies, INDIA

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<td>Mr. Mohammad Mehdi Dawari, Mrs. Jenny Jeremelid, Mrs. Annika Stensson</td>
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<td>Trigell, Mr. Johannes Edelrin, KTH Royal Institute of Technology, SWEDEN</td>
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<td>Dr. Sammy Damaos, Macquarie University, AUSTRALIA</td>
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<td>F2014-IVC-082: A Study on Braking Stability of Tractor Semi-Trailer Commercial Vehicles</td>
<td>Mr. Zikai Liu, Mr. Wei Xu, GAC Engineering, CHINA</td>
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<td>F2014-IVC-006: A Nonlinear Viscoelastic Constitutive Model for Dynamic Behaviors of Rubber</td>
<td>Mr. Long Phan Vinh, Mr. Satoshi Ito, Mr. Kouhei Shintani, Toyota Motor Corporation, JAPAN</td>
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<td>Dr. Manfred Baeker, Ing. Axel Gallein, Dr. Andrey Gisztullin, Fraunhofer ITWM, GERMANY</td>
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<td>Dr. William Prescott, LMS, A Siemens Business, UNITED STATES</td>
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<td>Mr. Josselin Paturaud, Dr. Anne-Gaëlle Villemiane, Valeo-THS, FRANCE</td>
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<td>F2014-LWS-009*: Fatigue Study on Complex Structures of Brazed Heat Exchangers: Wöhler Curves of Aluminium Mock-Ups</td>
<td>Mr. Hyeong-Ho Yu, Prof. Sung-Tae Hong, University of Ulsan; Prof. Heung-Nam Han, Seoul National University, REPUBLIC OF KOREA</td>
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<td>F2014-LWS-063*: The Electroplastic Behaviour of Aluminium 6061 Alloys with Different Heat Treatment Conditions Under a Pulsed Electric Current</td>
<td>Mr. Hyun-Woo Lee, MS AUTOTECH; Mr. Hyeong-Ho Yu, Prof. Sung-Tae Hong, University of Ulsan; Prof. Heung-Nam Han, Seoul National University, REPUBLIC OF KOREA</td>
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<td>F2014-LWS-002*: Development of Cu/Al/Cu Clad Metal Sheets for Bus-Bar</td>
<td>Mr. Deukkyu Hwang, Mr. Keeyang Lee, Mr. Yong Chun, Hyundai Mobis; Mr. Minjoong Kim, Korea Clad Tech; Mr. Changyul Shin, Ifitech, REPUBLIC OF KOREA</td>
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### NVH8 - Brake Squeal and Friction

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<td>F2014-NVH-059: The Effect of Contact Area of Brake Pad on Disc Brake Squeal</td>
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<td>F2014-NVH-065*: Research on the Effects of Key Parameters on Brake Squeal Considering the Acting Process of Brake Pressure</td>
<td>Ms. Yuhan Zhao, Prof. Xiandong Liu, Prof. Yingchun Shan, Beihang University, CHINA</td>
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<td>F2014-NVH-068*: Analysis of Friction-Induced Stability, Bifurcation, Chaos and Stick-slip Vibration and their Impacts on Wiping Effect of Automotive Wiper System</td>
<td>Ms. Meng Huang, Shanghai General Motors Co., LTD, CHINA</td>
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<td>F2014-NVH-007*: Finite Element Analysis on Mechanical Elastic Wheel Dynamic Characteristics</td>
<td>Mr. Chen Li, Zhejiang University, CHINA</td>
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2014 CONVERGENCE
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Through the Transformation of Electronics

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Technical Programme – Thursday, 5 June 2014

F2014-TMH-057
Composite Transmission Casing for Volume Production
Mr. Ian Westall, Drive System Design, UNITED KINGDOM

F2014-TMH-031
Reduction in Dynamic Loading of the Hydromechanical Transmission of the Special Wheeled Chassis
Dr. Eng. Igor Taratorkin, Dr. Eng. Viktor Derzhanski, Institute of Engineering Science of the Ural branch of the Russian Academy of Sciences (IES UB RAS), Dipl.-Ing. Alexander Taratorkin, Bauman Moscow State Technical University, RUSSIAN FEDERATION

F2014-TMH-058
Reduction of Torque Oscillations in Wet Running Clutch Systems
Dipl.-Ing. Christian Denda, Karlsruhe Institute of Technology (KIT); Dipl.-Ing. Heimo Schreier, AVL List GmbH, AUSTRIA

F2014-TMH-034
Development of Gear Shifting Strategy Based on Driver Acceleration Demand
Dr.-Ing. Chang-Woo Shin, Dr.-Ing. Jongdae Choi, Prof. Dr. Suk-Won Cha, Seoul National University; Dr. Beomsoo Kim, Hyundai Motors Company; Prof. Dr. Wonsik Lim, Seoul National University of Science and Technology, REPUBLIC OF KOREA

F2014-TMH-064
Characterization of Torque Converter Dampers: a novel Method for Exciting Dampers through Torque Pulsation Generation
Ms. Amyce Aurora-Smith, Dr. Sam Akehurst, Dr. Chris Bracey, Dr. Chris Bainster, University of Bath, UNITED KINGDOM

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TMH8 - Automatic Transmissions

F2014-AHF-005
Psycho-Physical Studies on the Perception of Vehicle Vibrations in Passenger Vehicles
Mr. Rui Ca, Dr.-Ing. Rainer Spengler, Daimler AG, GERMANY; Prof. Dr.-Ing. Albert Albers, Dr.-Ing. Matthias Behrendt, Karlsruhe Institute of Technology, GERMANY

F2014-AHF-064
Viscoelastic Analysis for Long-Term Deformation of Seat Foam
Prof. Heon Young Kim, Mr. Dae-Young Kim, Kangwon National University; Dr. Jeong Seok Oh, Mr. Kwon Yong Choi, Hyundai Kia Motors, REPUBLIC OF KOREA

F2014-AHF-032
Adaptive Seating Based On Single View Metrology for Automobiles
Mr. Aby Nesan Raj, Mr. Sumil Kunnath Raj, TATA ELXSI, INDIA

F2014-AHF-049
A New Fault Diagnosis Method Which is based on Chinese Five Lines of Reinforcing Each Other on Theory of Automotive Electrical Systems and Wiring Harness Design
Mr. Luo Chi, Sumiden Denso, CHINA

F2014-AHF-047*
A Human Driver as the Supervisory Controller in a Vehicle System
Dr. Kazuhide Togai, Mitsubishi Motors Corporation; Prof. Hisashi Tamaki, Kobe University, JAPAN

F2014-IVC-015
Validation of a Dual Fuel Combustion Model for Heavy Duty Diesel Engines
Ms. Zhiqin Jia, Prof. Ingemar Denbratt, Prof. Dr. Venal I. Golovtchev, Chalmers University of Technology, SWEDEN

F2014-IVC-031
A Multibody Systems Model for Investigation of the Effects of Hybrid Electric Vehicle Powertrains on Vehicle Dynamics
Mr. Matthew Bastin, University of Warwick, POLAND

F2014-IVC-032
A Multibody Systems Model for Investigation of the Effects of Hybrid Electric Vehicle Powertrains on Vehicle Dynamics
Dr. Peter Jones, University of Warwick, UNITED KINGDOM

F2014-IVC-033
Compatibility and Performance Testing of Hybrid Electric Vehicle Powertrains
Dr. Juyu Du, Prof. Minggao Ouyang, Tsinghua University, CHINA

F2014-CET-146
Delivery Evaluation of High Pressure Natural Gas Fuel Injection
Mr. Thomas Rogers, RMIT University, AUSTRALIA

F2014-CET-155
High Power and High Efficient Gas Engines for Commercial Vehicles
Dipl.-Ing. Heimo Schreier, AVL List GmbH, AUSTRIA

F2014-CET-096
Unburned Alcohol, Legislated Emissions and Ozone Forming Potential from a Car Fuelled with Gasolines A22, A85 and Pure Ethanol (HER)
Dr. Eng. Renato Pententeau, P&K Consulting; Prof. Dr. Sergio Correa, Universidade do Estado do Rio de Janeiro; Mrs. Katia Silva, Mr. Luiz Daemme, Ms. Valeria Macedo, LACTEC, BRAZIL

F2014-EPT-057
Evaluating and Modelling the Energy Usage of the TU/e Lupo EL BEV
Ir. Jiquan Wang, Dr. Igo Besselink, Prof. Dr. Henk Nijmeijer, Eindhoven University of Technology, NETHERLANDS

F2014-EPT-067
A Prototype Emission Free Cooling Trailer
Dr. Bram Veenhuizen, Ing. Menno Marts; Ing. Hui Lin; Dr. Edwin Tazelaar, HAN University of Applied Science; Ir. Erik Vermeer, TMC, NETHERLANDS

F2014-EPT-072
Design and Implementation of Vehicle Control Software for Hybrid Electric City Bus
Mr. Amin Salehi, Mr. Mohsen Esfahanian, Mr. Hassaan Nehzati, Mrs. Zeinab Pourbafarani, VFERI, IRAN (ISLAMIC REPUBLIC OF)

F2014-EPT-049*
XEV Incentive Program: Analysis and Proposed Way to Maximize Saving in Fuel Consumption Per Every $ Spend, in Indian Context
Mr. Haresh Bhire, Mr. Vinay Ranganath, Tata Motors Ltd., INDIA

F2014-EPT-055
A New Validation Concept for the Future Automotive Development
Mr. Yin You, Prof. Dr.-Ing. Albert Albers, Karlsruhe Institute of Technology, GERMANY

F2014-EPT-041*
Review of Electric Bus Energy Supplying Modes and Typical Case Cost-Benefit Analysis Of in China
Dr. Juyu Du, Prof. Minggao Ouyang, Tsinghua University, CHINA
F2014-IVC-105
Sensitivity Study of “Grip” Relative to Suspension Spring and Damper Characteristics
Mr. Georgios Chryssakis, Dr. Gary Wood, Prof. Mike Bundell, Mr. Damian Harty, Coventry University, UNITED KINGDOM

F2014-IVC-076
Design for Vehicle Dynamic Behavior under Force Control
Dr. Hidetsuki Sakai, Kinki University, JAPAN

F2014-IVC-078*
Dynamic Simulation Model of the Collapsing Seal of a Brake Cylinder
Dr. José Ramón Valdés, Dr. José Manuel Bieba, Mr. Carlos Bernad, ITA, SPAIN
Dr. Thomas Pütz, TRW, GERMANY

F2014-IVC-057*
Problems with Tyre Regulation in Europe
Prof. Dr.-Ing. Christian von Glasner, Europe

F2014-IVC-118*
In Gear of Performance Test Study on HBB Based on the Engine Speed Control Strategy
Mr. Hanbin Liu, Mr. Yong Yi, Mr. Wenyi Jiang, Mr. Jianming Zheng, China FAW Corporation Limited R&D Center, CHINA

F2014-IVC-121*
Evaluation of Dynamic Parameters Mismatch of Vehicle Equipped with Skidcar System
Mr. Vidas Zurasalis, Dr. Edgar Sokolovskij, Vilnius Gediminas Technical University, LITHUANIA

F2014-LWS-003
Composites Lightweight Body Components for Innovative City Mobility Concepts
Mr. Hugo de Winter, Recticel, BELGIUM

F2014-LWS-004
Design and Application of New Polymeric Materials for Light of Gasoline Permeation through the Experimental Investigation
Ms. Li Wang, Ms. Liqun Guo, China FAW Corporation Limited R&D Center, CHINA

F2014-LWS-046*
The Experimental Investigation of Gasoline Permeation through New Polymeric Materials for Light Weight
Mr. Andrew Vorotyntsev, Prof. Ilya Vorotyntsev, Prof. George Mochalov, Nizhny Novgorod State Technical University n.a. R.Y. Alekseev, RUSSIAN FEDERATION

F2014-MVC-006
Cross-Sensory Interaction in the Perception of Materials for the Vehicle Interior
Mr. Michael Haverkamp, Ford Werke GmbH, GERMANY

F2014-MVC-010
Definition of Room Functionality for Automotive Development
Ms. Lisa-Magdalena Schmid, Prof. Dr.-Ing. Udo Lindemann, Lehrstuhl für Produktentwicklung, Technische Universität München, Mr. Maximilian Amereill, BMW Group, GERMANY

F2014-MVC-047
Evaluation of Tires Influence to Vehicles Energy Consumption and a Review on European Union’s Tire Labelling Regulations 1222/2009 Test Methods
Dipl.-Ing. Jukka Nuottimäki, Dipl.-Ing. Hannu Kuurtti, Dr.-Ing. Juhanu Laurikko, VTT Technical Research Centre of Finland, FINLAND

F2014-MVC-018
A Business Analysis of OLEV Applications for Bus Rapid Transit
Prof. In-Soo Suh, Mr. James Fishelson, KAIST, REPUBLIC OF KOREA

F2014-MVC-021*
Life Cycle Assessment of a New Vehicle Concept for Urban Mobility
Dipl.-Ing. Helmut Brunner, Dr. Mario Hirz, Institute of Automotive Engineering / Graz University of Technology, AUSTRIA

F2014-MVC-024*
Business Case Electric Driving
Dr. R. Prasath, Mahindra and Mahindra Ltd., INDIA

F2014-NVH-033*
Structural Analysis of Automotive Components Considering the Anisotropic Material Properties of Carbon Fiber Reinforced Plastic
Mr. Chao Ren, Ms. Yingying An, Mr. Chao Ren, GAC ENGINEERING, Guangzhou Automotive Group Co Ltd., CHINA

F2014-NVH-058*
Mode Identification of Trimmed Body Based On Frequency Response Function in Finite Element Analysis
Mr. Mohit Kohli, Mr. S Nataraja Moorthy, Mr. Venkateswararao Manichi, Mr. R Prasath, Mahindra and Mahindra Ltd., INDIA

F2014-NVH-064*
Lightweight and Low-Noise Design for Car Body with Structural-Acoustic Sensitivity Analysis
Dr. Xirrui Chen, Dr. Yongxin Men, Mr. Qingfeng Feng, Zhejiang Geely Research Institute CO. LTD., CHINA

F2014-NVH-014*
Study on Vibration Isolation and Optimization of Commercial Vehicle Sub-Systems
Mr. Georgios Chryssakis, Dr. Dmitry Siskos, Mr. George Vlachos, Mr. Konstantinos Skolaris, BETA CAE Systems S.A., GREECE

F2014-NVH-024*
Experimental Determination of Acoustic Cavity Resonances of Vehicle Sub-Systems
Prof. Dr. Ing. Mark Wesseling, Dipl.-Ing. Frank Müller, Dipl.-Ing. Helmut Brunner, Graz University of Technology, AUSTRIA

F2014-NVH-053*
Optimization of Absorption and Insertion Loss of Sound Package using Statistical Energy Analysis
Mr. Binyu Zhang, Mr. Ran Xie, GAC ENGINEERING, Guangzhou Automotive Group Co Ltd., CHINA

F2014-NVH-059*
Acoustic Cavity Resonances of Vehicle Sub-Systems
Mr. Chao Ren, Ms. Yingying An, Mr. Chao Ren, GAC ENGINEERING, Guangzhou Automotive Group Co Ltd., CHINA

F2014-NVH-024*
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Mr. Georgios Chryssakis, Dr. Dmitry Siskos, Mr. George Vlachos, Mr. Konstantinos Skolaris, BETA CAE Systems S.A., GREECE
Technical Programme – Thursday, 5 June 2014

F2014-NVH-001*
Structural characteristic Study on Engine Covers for Structure-borne Noise Reduction
Dipl.-Ing. Lei Zhang, China Automotive Engineering Research Institute, CHINA

F2014-NVH-018*
An Experimental Research for the CVT Oil Pump Noise
Mr. Moosuk Kim, Mr. Hyun Ku Lee, Hyundai-Motors Company, REPUBLIC OF KOREA

F2014-NVH-037*
A Study on Rattle Noise of Stabilizer-Bar-Link frequently occurred in the Very Cold
Mr. Hoseong Moon, Mr. Wonwook Jung, Hyundai Motor Company, REPUBLIC OF KOREA

F2014-NVH-083*
Harnessing Noise Vibration
Holly Billik, Avery Dennison Corporation, UNITED STATES

F2014-NVH-085*
Driving Condition
Mr. Hoseong Moon, Mr. Wonwook Jung, Hyundai Motor Company, REPUBLIC OF KOREA

F2014-TMH-053
High Torque MRF-based Clutch Avoiding Drag Losses for Applications in Hybrid Electrical Vehicles
Prof. Dr.-Ing. Juergen Maas, Control Engineering and Mechatronics; Mr. Dirk Gueth, Mr. Markus Schamoni, Ostwestfalen-Lippe University of Applied Sciences, GERMANY

F2014-TMH-055
Harnessing Noise Vibration
Holly Billik, Avery Dennison Corporation, UNITED STATES

F2014-TMH-057
Design and Realisation of an In-Wheel Electric Motor for a Hybrid Urban Delivery Vehicle
Dr. Laurentiu Encica, Dr. Johan Paulides, Advanced Electromagnetics B.V., NETHERLANDS
Dr. Piet Vanassche, Triphase NV, BELGIUM

F2014-TMH-059
Operation Strategies for Plug-In Hybrid Electric Vehicles to reduce Fuel Consumption and Emissions by Means of Hybrid-Powertrain-in-the-Loop Potentials
Prof. Dr.-Ing. Albert Albers, Dr.-Ing. Matthias Behrendt, Dipl.-Ing. Kevin Matros, IPEK - Institute of Product Engineering at Karlsruhe Institute of Technology (KIT), Dr. Heidelinde Holzer, Dipl.-Ing. Wolfram Bohne, Mr. Timo Jachnik, Dipl.-Ing. Tilmann Horst, BMW AG, GERMANY

F2014-TMH-061
Average-Value Model of Induction Motor Drive for Cost Effective HIL Testing of Motor Controller for Mild Hybrid Application
Mr. Vinay Ranganath, Tata Motors Limited, INDIA

F2014-TMH-063
Operation Strategies for Plug-In Hybrid Electric Vehicles to reduce Fuel Consumption and Emissions by Means of Hybrid-Powertrain-in-the-Loop Potentials
Prof. Dr.-Ing. Albert Albers, Dr.-Ing. Matthias Behrendt, Dipl.-Ing. Kevin Matros, IPEK - Institute of Product Engineering at Karlsruhe Institute of Technology (KIT), Dr. Heidelinde Holzer, Dipl.-Ing. Wolfram Bohne, Mr. Timo Jachnik, Dipl.-Ing. Tilmann Horst, BMW AG, GERMANY

Closing Ceremony
5th June, 16:00-17:15

Congress Summary, Presentation of FISITA Awards and Handover of Flag

Handover of FISITA Presidency, Announcement of FISITA 2016

Farewell Reception
17:15-19:00
Innovation is in our DNA.

The spark of an idea can ignite a network of innovation, which in turn reveals a world of possibilities. Delphi salutes FISITA for creating intelligent transport to solve future mobility, safety and environmental challenges.

delphi.com

YOUR FUTURE IN AUTOMOTIVE

THE ESSENTIAL WEBSITE FOR STUDENTS AND YOUNG ENGINEERS

Engineers working in automotive are finding solutions for the world’s most important issues: climate change and new propulsion technologies, saving lives by developing new safety technologies and so much more.

If you are studying engineering and want a career that can take you anywhere, where you can design, shape and engineer the future, visit Your Future In Automotive.

www.yourfutureinautomotive.com
For a Future Where Cars Are Part of the Solution

Driving DENSO’s leading-edge commitment to environmental and safety technologies is a sense of urgency. By 2025, global output of carbon dioxide will exceed the amount that the Earth can absorb by more than threefold. And traffic accidents are increasing at an alarming pace as vehicle ownership increases worldwide.

DENSO’s engineers want cars to be part of the solution to environmental and safety issues. So they are working around the clock to put the brakes to global warming—helping improve combustion efficiency in conventional engines, for example, while pursuing advances in hybrid power and exploring possibilities in alternative energies. They are also achieving improvements in safety—active safety features for preventing accidents and passive safety features for protecting driver, passengers, and pedestrians when accidents occur. DENSO is bringing greener and safer technologies to you.

DENSO is a leading global supplier of advanced automotive systems and components for thermal management, powertrain control, electronics, information and safety.
The FISITA 2014 Congress has put together a series of Special Sessions which offer delegates an opportunity to explore current issues with leading engineers, scientists and specialists. Four Special Sessions are offered. In-depth discussions are expected to stimulate debate amongst engineers on site and inspire creative ideas towards future development of the global automotive industry.

Special Session 1: Fuel Consumption and CO2 Emission for Future Trucks in the World
Tuesday 3rd June, 15:30 – 17:30

Organiser:
Dr. Li Jun
China FAW Corporation Limited
R&D Centre

Speakers:
Peter Hanzhi Huang
TNO
Stefan Larsson
ACEA
Ir. Loek van Seeters
Assistant Chief Engineer
DAF
Dr. Li Jun
China FAW
Tom Reinhart
Institute Engineer
of SwRI

According to statistics, road transportation accounts for around 16% of global man-made CO2 emissions. In order to reduce the emission of green house gases, trucks must also do their part to reduce CO2 emissions, which is partly the responsibility of truck OEMs.

In 2006 Japan was the first in the world to issue fuel consumption limits for heavy commercial vehicles. In 2011, the United States announced fuel economy and green gas emission limits for heavy duty vehicles and engines from 2014-2018. In 2009, the European Union also initiated the study on CO2 emissions from heavy duty commercial vehicles, China also issued fuel consumption limits for heavy-duty commercial vehicles (discussion) in 2012.

With the increasing pressure on CO2 emission reduction from motor vehicles, automobile manufacturers are continuing to invest billions in research and development, endeavouring to find solutions for low carbon technologies, even during ongoing economic and financial crisis.

FAW have summoned a selected group of technology leaders, government officials, international NGOs, and university professors from around the world to participate in this special session.

Regulations regarding CO2 emission and fuel consumption and future trends will be discussed and analysed, various engineering solutions and future technology strategies will be presented and discussed during the session.

The goal of the session is to generate fresh ideas and directions, formulating a technology roadmap for reducing CO2 emissions from trucks via presentation and debate among leaders. Solutions for harmonious development of low carbon trucks, which are key to future sustainable development for OEMs, will include innovation of traditional powertrains and hybrid powertrains, alternative fuel systems, radical changes in vehicle design and aerodynamics, low rolling resistance tires, and so on. We hope that this session will be of significant interest to participants from governmental and engineering sectors.
Special Sessions

**Special Session 2: Vehicle Dynamics Control for Fully Electric Vehicles – ‘Outcomes of the European Project E-VECTOORC’**

Wednesday 4th June, 15:30 – 17:30

Organiser:
The participants of the European FP7 project E-VECTOORC (Electric-Vehicle Control of Individual Wheel Torque for On- and Off-Road Conditions)

Speakers:

- Dr. Aldo Sorniotti
  University of Surrey
- Dr. Phil Barber
  Jaguar Land Rover
- Dr. Leonardo De Novellis
  University of Surrey
- Johan Theunissen
  Flanders’ Drive
- Javier Orus
  Instituto Tecnologico de Aragon
- Dr. Thomas Pütz
  TRW Automotive
- Dmitry Savitski
  Ilmenau University of Technology

The E-VECTOORC project (www.e-vectoorc.eu) brings together 11 complementary participants from industrial and research backgrounds to address the individual control of the electric motor torques of fully electric vehicles to enhance safety, comfort and fun-to-drive in both on- and off-road driving conditions. The session will present a selection of:

- Yaw movement control for fully electric vehicles
- Electric Drivetrain with switched reluctance motors
- Active vibration control for torsional oscillations in electric drivetrains
- Electric and friction braking control systems
Special Session 3: Towards a Global Strategic Research Agenda for Road Safety
Thursday 5th June, 10:30 – 12:30

Organiser:
The European PROS project

Speakers:

Dr. Peter Urban fka Aachen
Prof. Dr. Jac Wismans SAFETEQ/The Netherlands and Chalmers University Gothenburg
Dr. Adrian K. Lund Insurance Institute for Highway Safety (IIHS) and the Highway Loss Data Institute (HLDI)
Dr. Bernd E. Gottselig Ford Werke GmbH

With more than one million road fatalities per year and no indication of a downward trend, worldwide accident statistics are alarming. Progress achieved in Europe is to a large extent based on intensive public research, the focus of which is currently moving away from road safety and towards the greening of road transport as a result. The PROS project has been established to develop commonly agreed European priorities in road safety research. The objective of this special session is to present the priorities identified in PROS, discuss future opportunities of global research cooperation in this field and explore the potential of a global road safety research agenda.

Special Session 4: Main Trends from 60 Years of FISITA Congresses
Thursday 5th June, 13:30 – 15:30

Organiser:
TU Eindhoven

Speakers:

Dr. Ing. Gijs Mom Eindhoven University of Technology
Prof. Ann Johnson University of South Carolina

The presentations within this session will report on the principal results of a project set up by Dr. Ing. Gijs Mom of Eindhoven University of Technology, in cooperation with Prof. Ann Johson of the University of South Carolina, with assistance from students of two Master’s degree classes. During the academic year 2012-2013 an initial investigation was carried out into the general trend overview from over half a century of FISITA Congresses, which will be followed up in the current academic year with detailed partial trend research.

Each talk will be followed by a short presentation from a group of students, focussing on specific trends, including Automation, Scientification, Engine, Chasis, Drive Train, Safety and Environment.
Educators Seminar & Educators Technical Session

Educators Seminar
‘Educating engineers for the global automotive industry – trends, challenges and solutions’
15:30 - 17:30, Wednesday 4 June

The Educators Seminar addresses crucial issues for engineering education, covering the latest trends and developments from both education and industry perspectives.

FISITA 2014 will bring together a carefully selected panel of leading figures from the automotive industry and academia to discuss engineering education trends and the global skills agenda with in-depth analysis and lively debate. Speakers will provide specific perspectives on education, HR and recruitment, graduate experience and learning and professional development.

The seminar will enable educators, students and stakeholders from all areas of the automotive industry and supply chain to share experience, knowledge and lessons learned in order to help improve opportunities for those graduates pursuing a career in automotive. It will help educators to ensure the relevance of their courses and the employability of their graduates.

Session chaired by:
Prof. Peter White
Associate Dean – Engineering and Computing, Coventry University, UK
Prof. John Fieldhouse
Visiting Professor, Bradford University, UK

Find out more at www.fisita2014.com/ed-seminar

Speakers:

Owen Carless
Red Bull Racing & Formula Student
UK

Radu Mavrodin
Renault, Romania

Prof. Dr. Ir. Maarten Steinbuch
Eindhoven University of Technology, The Netherlands

Dr. Kevin Perry
SAE International, USA

Tim Hartzema
Mitsubishi Turbocharger and Engine Europe B.V.
The Netherlands

Educators Technical Session
13:30 – 15:30, Thursday 5 June

The Educators Technical Session aims to bring industry and educators together in order to exchange novel and interesting ideas and best practice.

The session will feature presentations on innovative ways to educate our automotive engineers and engineers working in the automotive environment and will explore:

- Student exposure to real engineering problems which are supplied and supported by the industry, OEMs and Tier 1 suppliers
- “Hands-on” activities, typically design and build
- Examples of successful collaboration with industry
- The effective use of industrial standard equipment to aid the learning process and bring industry into the universities
- Effective internship
- Demonstrations of industry being actively, and successfully, involved in the delivery of modules, specific topics and courses and research.

The Educators Technical Session will conclude with a discussion panel which will provide delegates with the opportunity to investigate possible ways to ensure the future development of effective courses with industry involvement.

For full details on speakers and presentations please see: www.fisita2014.com/E_T_S.
Progress is a Matter of Detail

From the engine to the transmission to the chassis, our engineers analyze every detail of the automobile system. The many ideas we get from this analysis are translated into innovative products created by working closely with manufacturers. In everything we do, our main objective is to increase the performance, safety, and economy of today’s automobiles.

Our ability to respond quickly to specific requirements is what makes us a renowned partner for the automobile industry. But it is our in-depth understanding of systems that has made us successful. That is why we will continue to focus on systems in the future – with uncompromising attention to detail.
The FISITA World Automotive Congress includes programmes specifically designed for students and young engineers: the Student Congress, the Travelling Fellowship and the Islands of Excellence.

**Student Congress**

The FISITA 2014 Student Congress takes place alongside the Main Congress from 3-4 June and gives students from around the world a unique opportunity to present their own papers addressing the Congress topics.

As well as sharing knowledge with other international students, participants will also have the opportunity to attend the Main Congress and network with senior engineers, scientists and industry professionals.

Prizes will be awarded at the Closing Ceremony for the best three student papers presented at the Congress.

- **First Prize:** 1000 EUR + Certificate
- **Second Prize:** 700 EUR + Certificate
- **Third Prize:** 500 EUR + Certificate

The prestigious Manuel Junoy Memorial Prize (1000 EUR) will be awarded to the best student paper written and presented at the Congress by an author under the age of 35 years. The committee will be looking for originality in the design, research or other work described in the paper and how it addresses the advancement of automotive technology.

**FISITA Travelling Fellowship**

FISITA and The Royal Dutch Society of Engineers offer young engineers and students under the age of 35 a once-in-a-lifetime opportunity to participate in a week-long programme of cultural and technical visits across Belgium, Germany and the Netherlands. This provides an unparalleled introduction to the international automotive industry of the region, as well as the opportunity to participate in the FISITA Student Congress, to present a paper, network and learn from industry and academic professionals and peers.


**Deadline for applications:** 28 February 2014
Career Zone to premiere at FISITA 2014

FISITA’s website for students and engineers: www.yourfutureinautomotive.com has joined forces with Careers in Automotive Worldwide to launch a new Career Zone at the FISITA 2014 World Automotive Congress.

The aim is to provide an open forum for OEMs, suppliers and technology companies to offer information and guidance on future career development and recruitment opportunities.

Features will include: Company Interview Zone, International Job-wall for vacancies, Face-to-face career consulting, Career-related presentations.

An additional feature is the Careers Day for student and recent graduate engineers on Thursday 5th of June 2014 from 10am-4pm. Company representatives will be on-hand to offer students and young engineers information about current vacancies, skill requirements and recruitment programmes.

Packages are available for companies interested in participating, with additional discounts for FISITA 2014 exhibitors!

Contact bettina.seehawer@marketingmoves.de to find out how your company can participate in the Career Zone or how students and professionals can benefit from this additional event.

Islands of Excellence

The ‘Islands of Excellence’ are an opportunity for academic institutions and their students to demonstrate their innovative automotive engineering projects to the many engineers, industry executives, academics and business leaders who attend the Congress. Universities compete to secure these demonstration spaces, which are provided free of charge to the most interesting projects. The Islands of Excellence concept has grown from 3 Islands at the 2012 Congress in Beijing to 5 Islands at FISITA 2014 in Maastricht.

Islands of Excellence successful applicants for FISITA 2014 are:

- TU Eindhoven: Automotive Student Teams of TU/e Automated & cooperative driving demonstrations
- HAN University of Applied Sciences: Go-4 Dakar, From Challenge to World Class Performance
- KU Leuven: Indupol one: Performance through reliability
- RWTH Aachen: DELIVER - Design of Electric Light Vans for Environment-Impact Reduction
- Czech Technical University in Prague: Autonomous driving algorithm in a scaled environment

See how students and their projects are addressing future trends, technologies and meet the future automotive engineers of tomorrow!

Get an idea of what to expect online: www.fisita2014.com/IOE.
The FISITA 2014 World Automotive Congress is one of the most important and prestigious gatherings of engineers and executives in the automotive calendar. This year’s exhibition has a strong focus on regional companies, with an array of stands introducing advanced mobility technology located within easy reach of the Maastricht area.

**Official Opening**
Monday, 2nd June 18.00

**Opening Hours**
- Monday, 2nd June 18.00 – 20.00
- Tuesday, 3rd June 09.00 – 18.00
- Wednesday, 4th June 09.00 – 18.00
- Thursday, 5th June 09.00 – 16.00

The exhibition runs from the evening of Monday 2 June until Thursday 5 June and is closely integrated into the world-class FISITA technical programme. The exhibition hall is conveniently situated close to the session rooms and coffee breaks will take place in the hall.

**Organiser**
Royal Dutch Society of Engineers
P.O. Box 30424
Post Code 2500 GK, The Hague
Phone: +31-70-391 9890
Fax: +31-70-391 9840
Email: exhibitions@fisita2014.com


Please note that the FISITA 2014 exhibition floor plan is subject to change. An updated version will be displayed in the final programme.
Arnold+Siedsma
Arnold + Siedsma is a specialist in the legal protection of your intellectual property rights. From the establishment of patents through to the registration and protection of trademarks, designs and other rights. Giving you the complete freedom to make a commercial success of your idea.

With more than thirty patent attorneys under one roof, you will always find a contact with the correct specialism at Arnold + Siedsma. This technical knowledge ensures that your rights are safeguarded in the best possible way. Examples of technical fields in which Arnold + Siedsma supports its clients include:
- Electrical engineering
- Physics
- Materials science
- Mechanics/Mechanical engineering
- Chemistry/biotechnology

AutoCluster.NRW
AutoCluster.NRW acts as a communicative nexus for the exchange of innovative ideas in vehicle technology. By pooling knowledge and expertise, it helps to connect the right partners in the automotive value-added chain and related clusters, unite industry and academia and provide the industry with much-needed support from within economic and political circles by appearing on various key panels and committees.

Applus

Applus IDIADA, global partner to the automotive industry worldwide, supports its clients in their product development activities by providing design, engineering, testing and homologation services.

Applus IDIADA’s expertise in both physical and virtual testing results in maximum efficiency in cost and time. A large team of more than 1700 engineers drawn from over 25 countries, as well as an international network of subsidiaries and branch offices in 23 countries, ensure clients will be given fast and customized services.

Bekaert Solaronics
Bekaert Solaronics offers a wide range of standard and customized infrared and air solutions of the highest quality and performance for various industrial sectors. We are active in the automotive market and have a lot of experience in the scorching process of brake pads. To guarantee the unmatched uniformity of your brake pads surface, we have developed a robust, compact and safe solution - the GemScorcher.

Our production platform for infrared and air drying equipment is headquartered in France and supported by offices in the USA, Indonesia, China and Brazil, as well by a local agent network.

AutomotiveNL
AutomotiveNL remains the driving force behind all automotive activities in the Netherlands. The organisation represents the Dutch automotive industry and focuses on innovation, education and knowledge transfer, validation, manufacturing and internationalisation. The FISITA 2014 World Automotive Congress is the perfect opportunity for the Dutch high tech automotive industry to present themselves.

Powered by AutomotiveNL, the Automotive Campus will also be present. A high-tech Campus, specifically aimed at the automotive sector, for R&D and business in top gear, it is located in Helmond, Brainport region. An international Campus, it offers a location for businesses, knowledge- and educational institutes with world-class research and testing facilities.

The heart of our Dutch booth is the coffee corner. Take a break surrounded by the companies who represent the automotive industry and technology from the Netherlands. We, at AutomotiveNL, look forward to welcoming you!

For more information, please see www.AutomotiveNL.com
Exhibition

### Career Zone
Career Zone to launch at FISITA 2014 World Automotive Congress.

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### DAF
DAF Trucks N.V. is a wholly owned subsidiary of the North-American corporation PACCAR Inc. DAF Trucks’ core activities are focused on the development, production, marketing and sale of medium and heavy-duty commercial vehicle.

Another core activity focuses on the marketing and sale of light trucks manufactured by Leyland Trucks Ltd. in the UK, which is likewise a wholly owned subsidiary of PACCAR Inc. All DAF and Leyland products are backed up by a full range of services. DAF Trucks also produces components for third parties, ranging from axle assemblies to complete engines for buses and coaches and special vehicles. DAF works according to the ‘Build to Order’ principle. This means that all vehicles are built to satisfy each customer’s individual wishes, but production only starts after the order is received from the customer.

This is very important, because DAF builds tens of thousands of different vehicle versions which are all built to meet each customer’s individual specifications and transport requirements. The customer is DAF’s top priority. Low costs per kilometre, high quality, driver comfort, low fuel consumption, minimal impact on the environment and high transport efficiency characterise all DAF products. DAF Trucks has production facilities in Eindhoven, the Netherlands and in Westerlo in Belgium. Thanks to its high efficiency and the world class manufacturing and products, the company has established a strong competitive position on the European market.

### FAW
China FAW Group Corporation, commonly referred to as FAW due to its original name of First Automotive Works, broke ground for its first factory on July 15, 1953. FAW produced China’s first Jiefang commercial truck in 1956, and in 1958 China’s first Dongfeng car rolled out of the prototype workshop and the first Hongqi luxury sedan hit the market.

FAW Group is a leading company in China with a 50 year history of automobile manufacturing and innovation. We employ 118,000 people and sell products in over 70 countries. FAW is a diversified maker of quality light, medium, and heavy-duty trucks, sedans, municipal buses and luxury tourist coaches, custom bus chassis, and mini-vans with total sales in excess of 7 million vehicles worldwide, and over one million units per year. We maintain the lead market position within China while continuing to expand into new international markets, executing a carefully planned strategy to build a comprehensive global organization.

### FlandersDrive
The automotive industry is facing greater challenges than ever before and innovation is the keyword. Thanks to the know-how of an experienced team and a high-tech infrastructure, Flanders’ DRIVE is your ideal partner for innovation.

Flanders’ DRIVE offers players in the automotive industry:
- support in setting up research projects
- visibility and participation in a national and international knowledge network
- access to advanced research infrastructure and test tracks
- help with technological problems
- access to knowledge, events, contacts, training, etc.
- building up competencies based on the industry’s needs.
Magna International is a leading global automotive supplier with 296 manufacturing operations and 88 product development, engineering and sales centres in 26 countries. Our 115,000 employees are focused on delivering superior value to our customers through innovative processes and World Class Manufacturing. Our product capabilities include body, chassis, interiors, exteriors, seating, powertrain, electronics, mirrors, closures and roof systems and modules, as well as complete vehicle engineering and contract manufacturing. For further information about Magna, visit our website at www.magna.com.

Melexis
Engineering the sustainable future - Melexis has a strong commitment to the on-going protection of the environment. The company imagines, creates and delivers leading-edge mixed signal integrated circuits that enable the implementation of more energy efficient automotive, industrial and consumer electronics systems. Using its unique, proprietary technology, Melexis has made major market impact through its innovative magnetic sensors, CMOS imaging devices, high accuracy pressure sensors, infrared sensing arrays, accelerometer devices, sophisticated BLDC motor drivers, infrared thermometry devices, LIN/CAN in-vehicle networking chips, MEMS sensors, NFC/RFID wireless semiconductor devices and sophisticated optoelectronic solutions for human machine interfaces.

Punch Powertrain N.V
Punch Powertrain N.V. is an independent O.E.M. developer and manufacturer of automatic transmissions (CVT) and electrical and hybrid powertrains for passenger cars. Optimum performance, minimum fuel consumption, low emissions and driving pleasure are key criteria during the development of the new generation CVT, electrical and hybrid powertrains. Punch Powertrain N.V. operates worldwide. It has production facilities in Sint-Truiden (Belgium) and Nanjing (China).

RWTH Aachen +
The Institute for Automotive Engineering (ika) of RWTH Aachen University, directed by Professor Lutz Eckstein, is doing teaching as well as research and development in terms of automotive engineering. Starting from the idea to innovative concepts for components and systems up to vehicle prototypes more than 130 members of staff and about 200 student assistants create and design the future vehicle. In cooperation with car manufacturers and suppliers the ika is making an acknowledged contribution to help solve current and future global challenges.

Toyota
Since its foundation, Toyota has conducted business activities under the guiding principle of 'contributing to the development of a prosperous society through the manufacture of automobiles.' Aiming to help build a sustainable society in the future, Toyota works in the three areas of research and development, manufacturing and social contribution.

WK Automotive
WK Automotive B.V. specialises in all communication for the car and motorcycle industry, which differentiates us from every other translation and communication agency. WK Automotive provides a full package of (technical) documentation and information. In every language. We work for the global car and motorcycle industry, suppliers or other companies with interfaces to engine or drive technologies. Our customers are located all over the world.

Our challenge? To bring full (technical) information to the end-user as clearly and efficiently as possible in consultation with the customer. Whatever the language.
Technical Tours

Technical Tour 1: One Day Tour
AutomotiveCampusNL/Inalfa/DAF
Friday 6 June, (9:00 – 17:00, includes lunch)

AutomotiveNL represents the interests of the Dutch automotive industry. Smart Mobility and Future Powertrain are the main focus areas. AutomotiveNL focuses on innovation, education and knowledge transfer, validation, manufacturing and internationalization. In addition we encourage the introduction of new companies and educational activities through AutomotiveCampusNL, which is part of AutomotiveNL.

Technical Tour 2: Half Day Tour
RWTH University Aachen (IKA)
Friday 6 June, (9:00 – 13:00, including lunch)

The Institute for Automotive Engineering (IKA) of RWTH Aachen University, directed by Professor Lutz Eckstein, provides teaching and mentoring along with research and development in terms of automotive engineering. From concept innovation for components and systems to vehicle prototypes, over 130 members of staff and around 200 student assistants create and design future vehicles. Working in cooperation with car manufacturers and global suppliers, the IKA has made an acknowledged contribution to aid in solving current and future global challenges.

Technical Tour 3: Half Day Tour
Umicore Belgium
Friday 6 June, (9:00 – 13:00, including lunch)

Inalfa Roof Systems is one of the world’s biggest providers of vehicle roof systems. Inalfa designs, develops and manufactures sunroofs and open-roof systems for the automotive industry, such as BMW Group, Daimler, Chrysler Group, Ford, General Motors, Volkswagen, Audi, Volvo, Citroen, Chery, Geely, Hyundai Kia, Honda, Land Rover, Renault, Nissan and many others. Inalfa Roof Systems is a reliable engineering and assembly partner. Inalfa Roof Systems’ global footprint helps to leverage its revenues from customers and its relationship to suppliers. Due to a global presence Inalfa is always in close proximity to its customers’ production lines. Inalfa Roof Systems stands for innovation, technological competence and quality. Inalfa Roof Systems has its headquarters in Venray, the Netherlands, and has a global footprint with facilities in Poland, Slovakia, USA, Brazil, Mexico, South Korea, China and Japan.

DAF Trucks N.V. is a wholly owned subsidiary of the North-American corporation PACCAR Inc. DAF Trucks’ core activities are focused on the development, production, marketing and sale of medium and heavy-duty commercial vehicles. A tour of the factory and a presentation will be offered.

Umicore is a global materials technology and recycling group. It focuses on application areas where its expertise in materials science, chemistry and metallurgy makes a real difference. Its activities are centred on four business areas: Catalysis, Energy Materials, Performance Materials and Recycling. Each business area is divided into market-focused business units offering materials and solutions that are at the cutting edge of new technological developments and essential to everyday life.

Booking Information
Please reserve your place on the tour(s) when you complete your registration online. For more information email: info@fisita2014.com
Social Programme

Welcome Reception
Congress Venue (MECC)

Monday 2 June, 18:00 - 20:00
Free of Charge

All participants of the Congress (delegates, exhibitors and accompanying persons) are invited to join the official opening of FISITA 2014. Get to know your fellow participants over drinks and snacks at the Congress venue and pick up your Congress badges and bags.

Gala Dinner
Rederij Stiphout,
Maaspromenade 58

Wednesday 4 June, 20:00 - 23:00
Price: EUR 95.00 per person incl. VAT

The Gala Dinner will take place aboard one of Rederij Stiphout’s beautiful and unique passenger ships for a luxurious cruise along the Meuse. A relaxing evening of fine dining will be complimented by a riverside view of some of Maastricht’s most impressive sights, such as the historic St. Servaas Bridge, the Basilica of Our Lady, and a portion of the first city wall of Maastricht, dating back from 1229.

Please reserve your seat for the gala dinner when you complete your registration online. For more information email info@fisita2014.com

Farewell Reception
Congress Venue (MECC)

Thursday 5 June, 17:30 - 19:00
Free of Charge

All participants are invited to attend the Farewell Reception at the Congress venue where you will have the opportunity to say goodbye to new friends in a relaxing atmosphere, reflect on your experiences in Maastricht and make plans to keep in touch.
Cultural Tours

Cultural Tour 1 - One Day Tour

Daytrip to Aachen

Tuesday 3 June 09:00 - 17:00 (approx 8 hrs)
EUR 80.00 (incl. lunch)

The tour begins with a scenic journey through Southern Limburg, passing charming Valkenburg and taking in the impressive Drielandenpunt (Three-Country Point), the summit between Germany, Belgium and the Netherlands.

The next stop on the tour will be the German town of Aachen, an important Spa in the days of the Romans. It was here that King Charlemagne built his main palace over a thousand years ago, and where his remains are kept.

Following lunch you will have the opportunity to explore the town independently. The ‘Emperor’s Cathedral’ is the oldest building of its kind in northern Europe and is one of the most famous examples of occidental architecture. The Cathedral has seen the coronation of 42 German monarchs, and is home to an array of religious masterpieces, as well as Aachen’s most treasured sacral relics, including Christ’s swaddling clothes.

Other cultural attractions include The Elisa Fountain (Elisenbrunnen), a symbol of the healing waters that ran through Aachen throughout the centuries, the Lous Mountain (Lousberg) that offers a striking panoramic view of the whole city, and an array of museums and galleries. Amongst them is the unique International Newspaper Museum, showcasing historically important editions of the international press and home to one of the world’s largest media archives.

Cultural Tour 2 - Half Day Tour

Maastricht Guided Walking Tour

Tuesday 3 June 14:00 - 17:00 (approx 4 hrs)
EUR 50.00 (excl. lunch)

Beginning in Maastricht’s historical centre, the tour features a short stop at the Basilica of Our Lady, the oldest monument in the town. Continuing through the oldest part of the city, the Stok quarter, you will be able to appreciate restored houses from the 17th and 18th Centuries before settling into the Vrijthof, the largest square in the Limberg capital with its impressive collection of national monuments, museums and cafés. The Vrijthof is home to the Basilica of Saint Servatius, the oldest church in the Netherlands, and the grand end to the tour of historical Maastricht. With its gothic and baroque architecture, the church features an array of cloisters and crypts, and you will also visit the Schatkamer, a treasure chamber believed to be one of the richest in Europe.
A unified knowledge base laying the foundation for advanced study and research in automotive engineering

Encyclopedia of Automotive Engineering

The Encyclopedia of Automotive Engineering provides for the first time a large, unified knowledge base laying the foundation for advanced study and in-depth research. Through extensive cross-referencing and search functionality it provides a gateway to detailed but scattered information on best industry practice, engendering a better understanding of interrelated concepts and techniques that cut across specialized areas of engineering. Beyond traditional automotive subjects the Encyclopedia addresses green technologies, the shift from mechanics to electronics, and the means to produce safer, more efficient vehicles within varying economic restraints worldwide.


- Authoritative coverage of the wide-ranging specialist topics encompassed by automotive engineering
- An accessible point of reference for entry level engineers and students who require an understanding of the fundamentals of technologies outside of their own expertise or training
- Invaluable guidance to more detailed texts and research findings in the technical literature
- Developed in conjunction with FISITA, the umbrella organisation for the national automotive societies in 37 countries around the world and representing more than 185,000 automotive engineers
- Available both as a fully searchable, updating online resource, and in a print edition comprising six volumes and over 4,000 pages

Publishing electronically April 2014 and in print January 2015

Cultural Tour 3 - One Day Tour

Daytrip to Brussels

Wednesday 4 June  09:00 - 17:00 (approx 8 hrs)
EUR 80.00 (incl. lunch)

Journeying by coach, the tour will introduce Brussels with a scenic drive through the city, allowing you to take in some of Brussels’ most famous architecture and sights. Travelling through the Heyzel district you will see the striking Atomium, a multi-level structure originally built for the World’s Fair in 1958, along with the Royal Residence, Chinese Pavilion and Japanese Tower.

The journey through Belgium’s capital continues into the Cinquantenaire district where you will see the Triumphal Arch, an extravagant monument erected to celebrate the anniversary of Belgium’s independence. Passing through the heart of the European Union and in front of the EU Commission and European Parliament, the tour enters the Sablon area with views of the Royal Palace and the Royal Square.

Stepping out into the streets of Brussels you will be taken on a two hour guided sampling tour of Brussels’ favourite chocolate shops. A local guide will provide insight into the history of Brussels and explain why the Belgium capital has always been synonymous with chocolate.

Heading through the “old town” will take you to the Grand Place, a former market square and one of Brussels’ most memorable landmarks. Just off the square you will find the legendary sculpture Manneken Pis and his cheeky counterpart Jeannetke Pis. Both the Town Hall and the Maison du Roi (King’s House) are located on the square. The King’s House is home to the Brussels City Museum, which, amongst other delights, houses a collection of the dainty costumes placed on the Mannekin Pis throughout the year. There will be plenty of opportunity to explore the square and surrounding area before leaving Brussels and returning to Maastricht.

Cultural Tour 4 - Half Day Tour

St. Pietersberg Cave Tour by Boat

Wednesday 4 June  10:00 - 13:00 (approx 3 hrs)
EUR 50.00 (excl. lunch)

This tour will take you by boat along the Meuse River to the extensive network of underground caves at St. Pietersberg (St. Peter’s Mountain), where you can step into history and explore the Northern Corridor System made here from centuries of marl limestone quarrying. You will learn about how the “block breakers” worked and be able to study inscriptions and drawings, many of which are centuries old and offer a fascinating cultural history of Maastricht. The temperature in the caves is a constant 10°C, so warm clothing and robust footwear is advised.
Cultural Tour 5 - One Day Tour
Daytrip to Amsterdam

Thursday 5 June 08:00 - 18:00 (approx 10 hrs)
EUR 80.00 (incl. lunch)

On the journey to Amsterdam, this tour will take in the small, charming town of Thorn, a 10th Century principality known as “the white village” for its white-washed brick houses in the town’s centre. Once in Amsterdam, you will be taken on an extensive tour of the Netherland’s capital, viewing the city from both its cobbled streets and its maze-like network of canals.

The city of Amsterdam has a long and rich cultural history and the boat tour will offer you the opportunity to take in merchant’s mansions, churches and warehouses, many of which still possess their 17th Century architecture, before disembarking at the city’s harbour which dates back to the 13th Century.

Once on shore, you will be able to explore the city for yourself. Amsterdam is home to a collection of world famous museums and attractions, including the recently reopened Rijksmuseum where you can view classical masterpieces by Rembrandt and Vermeer, as well as the Van Gogh Museum which features over 700 works by the Dutch artist. If shopping is what takes your fancy, you will have time to visit De Bijenkorf, a deluxe temple to high end brands, or perhaps the Magna Plaza, Amsterdam’s original shopping centre located in a 19th Century former post-office building.

Cultural Tour 6 - Half Day Tour
Hoensbroek Castle

Thursday 5 June 09:00 - 12:30 (approx 3.5 hrs)
EUR 50.00 (excl. lunch)

Hoensbroek Castle is one of the largest castles in the Netherlands. Located on a moat along trading routes to Maastricht, Aachen and Cologne, the castle was a vital stronghold that underwent several expansions over the centuries, today offering an array of architectural styles. Containing over fifty halls, rooms, living quarters and dungeon chambers, a tour through this monument to the Hoen family is a tour through the history of the Netherlands.

Booking Information
Please reserve your place on the tour(s) of your choice when you complete your registration online. For more information email: info@fsita2014.com
Welcome to Maastricht

Maastricht, sitting modestly at the foot of the Netherlands in the region of Limburg, is the country’s oldest city, and arguably its most picturesque. Visitors will be rewarded with a wealth of historical architecture, quality museums and art galleries, first class food and easily accessible attractions.

Two prominent squares dominate Maastricht’s centre. Vrijthof, presided over by the brilliant St. Servaas Basilica, is characterised by its majestic churches and thriving bar/café scene. Markt is renowned for its bustling markets selling everything from fresh seasonal produce to antiques, brightening up the square on almost a daily basis with flower lined streets and live performances from local musicians.
Maastricht is home to the best food in Holland, with several Michelin starred restaurants and an exquisite assortment of cuisine that reflects the city’s diverse history. Maastricht even hosts its own food festival, Preuvenemint, which thousands flock to every year.

The Casemates are one of the most impressive sights of the city. For hundreds of years, Maastricht faced a barrage of attacks and sieges from foreign rulers, keen to occupy such a well located and strategically positioned riverside hub. As such, fortifications became a vital and frequent occupation for the city’s residents, and, alongside the walls and moats constructed above ground, an intricate maze of tunnels were developed underground between 1575 and 1825 that were used to advance on and surprise the enemy from below. Large enough to house an army of 5000, these labyrinthine passageways are still accessible, and guided tours can be arranged.

A noticeable consequence of these regular invasions is the variety of architecture that can be seen in the city to this day. Escaping war damage, Maastricht boasts a breathtaking array of buildings, bridges and ancient structures dating back from Roman times and encompassing Spanish, French and German influences.

A short bicycle ride out of the city offers up a host of attractive villages, tree lined paths and vineyards that were planted in Roman times.

Friendly and peaceful, vibrant and exciting, this excellently situated Central European city has entertainment for all, and anyone who pays a visit will be unable to resist its charms.
General Information

Venue
The 2014 FISITA World Automotive Congress will take place at the Maastricht Exhibition & Conference Centre (MECC) in Maastricht, the Netherlands. The MECC is within walking distance of all major shops, restaurants and attractions, and offers both state-of-the-art technology and professional services.

MECC Maastricht
Forum 100
6229 GV MAASTRICHT NL

For information on travel to the MECC see: www.mecc.nl

Entry into the Netherlands

EU-Citizens
No visa required. Entry is allowed with both passport and id-card.

Non-EU-Citizens
Any foreign visitor entering the Netherlands must have a valid passport. Visitors from countries whose citizens require visas should apply to the Netherlands consulate or diplomatic mission in their own country. Requests for official invitations in support of visa applications should be sent to: info@fisita2014.com

Air Travel
The Maastricht-Aachen Airport is a 15 minute taxi ride away from the MECC and serves direct flights from select cities in Europe including Barcelona, Florence and London.

Maastricht can be reached by train from a number of nearby airports including Amsterdam (2½ hours), Brussels (2 hours), Charleroi (2 Hours), Cologne-Bonn (2½ hours), Düsseldorf (via Heerlen, 2½ hours), and Eindhoven (1 hour). For schedules see www.ns.nl and www.railcom.eu. For more travel information please visit the fisita2014 website.

Transport to the MECC Maastricht

Public Transport
Maastricht is best explored on foot, but there is a strong bus network, with bus timetables displayed at every bus stop. Free public transport to delegates will be available during congress dates by showing congress badge. Information is available from the Public Transport Travel Information Operator (+31 (0) 43 0900 1475). Car parking is scarce in the city centre, but spaces are available at the Congress venue.

Taxis
It is forbidden to flag down a taxi cab in Maastricht. Taxis are available from airports and rail stations, by telephone (+31 (0) 43 0900 8734682) or online (www.taxi.nl). Official taxis have a blue number plate and often will not accept short fares.

Language
The official language of the conference is English.

Programme Changes
The organisers are not liable for any changes made to the programme. Please visit the web site regularly for updates.

Final Programme
The final programme will be provided on-site in the delegate bag.

Climate
The average temperature in Maastricht during early June ranges from minimum 11°C / 52°F to a maximum 20°C / 68°F with the possibility of occasional rain showers.

Time Zone
Maastricht is in the Central European time zone. Daylight saving time lasts from the last Sunday in March to the last Sunday in October. During this time, clocks are set back one hour.

Currency
The official Netherlands currency is the EURO. Credit cards are widely accepted at hotels, department stores, shops and restaurants. Shops frequently levy a 5% surcharge on credit card to offset commissions charged by card providers. Only Euro is accepted in regular stores. All convertible foreign currencies are exchangeable at all major banks. Business hours of most banks are 09:00 – 18:00 (Mon-Fri).

Tipping
Service charges and VAT are generally included in the price. In many service sectors, it is customary to tip anyway. A tip is either rounded up to the nearest Euro or up to 10%.

Shopping
 Shops in central Maastricht are usually open Monday to Saturday from 10:00 – 18:00, with the exception of late shopping on Thursday evenings and an average opening time of 13:00 on a Monday. Large supermarkets and shopping centres are open until 20:00. On Sundays, shops are closed, but on the first Sunday of every month, shops are allowed to open between 12:00 and 17:00.

Chemists
Pharmacies are generally open from 09:00 – 18:00 weekdays, with Saturday and Sunday openings on a rota basis. Telephone 112 in the event of a medical emergency.

Tax
Value Added Tax included in all prices. Currently this tax is levied at 21%.

Communications
All Dutch mobile nets are UMTS-supported. GSM phones are also supported. W-lan is available at several hotspots in the city, and in the Congress venue. Many cafes, bars and restaurants also offer free wireless internet.

Electricity
Electric current in the Netherlands is AC 220-230V/50Hz. Sockets fit round two-pin plugs (use of adapters is necessary for all devices).

Insurance
Participants are strongly advised to obtain travel insurance (medical, personal accident and luggage) in their home country prior to departure.
We continue to explore the “delights” of driving on roads around the world.

That car may run on stone-paved streets in Europe.
That car may run on desert sand under scorching sun.
That car may run on icy roads in frozen regions.
Aisin Seiki’s special test course has every kind of street from around the world.
To deliver a single car that meets the satisfaction challenge under any kind of environment,
we learn how drivers and passengers feel by putting products mastered on computer through this test course.
Everything starts from the development stage of automotive parts and systems so that
we can learn the “delights” of people who drive and give a tangible shape to what they want.
Registration Information

Registration Fees (1):

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1. The registration fees include VAT.
2. World Bank List: reduced registration rates are available to delegates coming from Lower and Lower-Middle Income Countries as defined by the World Bank list.
3. This rate applies only to PhD students presenting in the Main Congress.
4. This rate applies only to Bachelor’s and Master’s students.

Registration fees include:
- Admission to the Opening and Closing Ceremonies
- Admission to All Plenary and Technical Sessions
- Admission to the Exhibition
- Abstracts (digital)
- Congress Proceedings (digital)
- Lunches
- Coffee / Refreshments
- Admission to Welcome and Farewell Receptions

Accompanying person registration includes:
- Admission to the Opening and Closing Ceremonies
- Admission to the Exhibition
- Admission to Welcome and Farewell Receptions
- One Cultural Tour

To register for FISITA 2014 please visit the website: www.fisita2014.com/registration
Six High-Quality Products and Technologies of Calsonic Kansei

We pursue world’s leading in innovation and “Monozukuri” as a global automotive company, while contributing to a sustainable society. Our high-quality products range over six fields:

1. Heat Exchange Systems
2. Compressors
3. Climate Systems
4. CPM & Interior Components
5. Electronic Systems
6. Exhaust Systems

In various fields for sound deadening, purification, and heat recovery.

With all these automotive products, safety, comfort and environment-friendliness are made possible.
### Accommodation

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<td>Bastion Hotel****</td>
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<td></td>
<td>115,00</td>
<td>115,00</td>
<td>14,00</td>
<td>City Centre</td>
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<tr>
<td>Hotel Derlon****</td>
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<tr>
<td></td>
<td>150,00</td>
<td>150,00</td>
<td>25,00</td>
<td>City Centre</td>
</tr>
</tbody>
</table>

All rooms are en suite with shower or bath and a toilet. Prices listed exclude breakfast and exclude tourist tax, rate 2014.
IF A PHONE DOES MORE THAN MAKE CALLS, SHOULDN’T A VEHICLE DO MORE THAN GO PLACES?

To find solutions, you have to turn the world on its head. General Motors is developing technologies and practices to propel the future with vehicles like the concept EN-V 2.0, Electric Networked Vehicle*, that makes driving smarter. We’re proud to be a part of the global transportation community and support the 35th FISITA World Automotive Congress.

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Employing technology for the environment, safety, and information, Hitachi Automotive Systems represents a global driving force of future automobiles.

Driving Force for Global Automobiles

At Hitachi Automotive Systems, we pursue new possibilities for automobiles with the aim of finding solutions for society and creating new value. Our commitment represents at four system businesses in three fields, in the environment field “Engine Management Systems” and “Electric Powertrain Systems” for environment protection, in the safety field, “Drive Control Systems” for safety improvement, and in the information field, “Car Information Systems” for comfort and convenience, Hitachi Automotive Systems is set to be a driving force for the global expansion of future automobiles.