

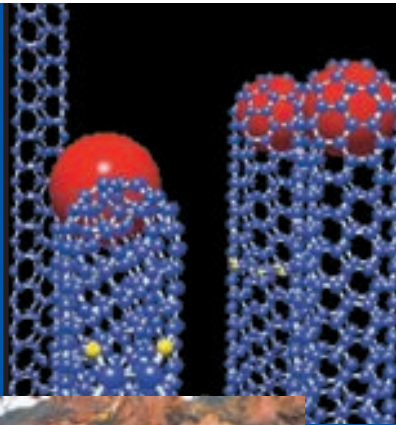
FISITA

2006

World Automotive Congress
22 - 27 October, Yokohama, Japan

Preliminary Programme

Yokohama, 22 - 27 October 2006



www.fisita2006.com

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Association



Welcome Message

Welcome to the programme for the 31st FISITA World Automotive Congress, organised by the Society of Automotive Engineers of Japan (JSAE) and FISITA.

FISITA was founded almost 60 years ago on the premise that it is only through international co-operation between engineers, societies and companies that the automotive industry can hope to meet the world's growing demand for mobility of people and goods on a sustainable basis.

The continuing pace of globalisation in the automotive industry drives us all to seek wider perspectives on every aspect of vehicle design,

From these the Technical Committee has assembled a programme of outstanding breadth and quality. In all, more than 650 papers will be presented during FISITA 2006.

For the opening plenary session we have assembled a panel of the top technical leaders from 5 global automakers to discuss the key issues they believe will drive the industry over the coming years. This will be followed during the week by plenary sessions focussing on Environment & Energy, Safety, Manufacturing & Logistics, Traffic Control & Transportation and Collaborative Engineering.



Daniel M. Hancock
FISITA President 2004-06
Vice President,
GM Powertrain,
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Prof. Yasuhiro Daisho
Congress Chairman
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development, production and usage. At the same time, the world urgently needs vehicle technologies that recognise the mobility requirements of rapidly developing automotive markets, where the issues of affordability, broad fuel quality tolerance, urban congestion, and rural infrastructure are paramount.

Today, with its uniquely powerful network encompassing the automotive engineering societies in 37 countries and the world's leading vehicle manufacturers and automotive companies, FISITA is the organisation best placed to bring the world's automotive professionals together to meet these challenges, and to improve transportation for the benefit of mankind.

We received a record number of submissions for this year's congress: almost one thousand technical paper offers from 39 countries.

In addition to the high-level 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, we have prepared an inviting programme of social events and cultural visits, the highlight of which will be the spectacular Gala Dinner.

The beautiful and vibrant city of Yokohama, with its rich history of culture and commerce, embodies the international outlook and dynamism of today's Japan, making it a perfect setting for the biggest congress in FISITA's history so far.

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

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Introducing FISITA

The Fédération Internationale des Sociétés d'Ingénieurs des Techniques de l'Automobile (FISITA) was founded in Paris in 1948 with the purpose of bringing engineers from around the world together in a spirit of cooperation to share ideas and advance the technological development of the automobile.

Today FISITA is the umbrella organisation for the national automotive societies in 37 countries around the world, representing more than 130,000 automotive engineers. We are supported by 51 of the leading global vehicle manufacturers and automotive companies through the FISITA Honorary Committee.

FISITA's mission is to help create efficient, affordable, safe and sustainable automotive transportation by providing a global forum for dialogue between engineers, industry, government, academia, environmental and standards organisations.

World Automotive Congress

The biennial FISITA World Automotive Congress is recognised as the leading international forum for the exchange of knowledge in all areas of automotive technology, attracting thousands of engineers, scientists and executives.

AutoTechnology

AutoTechnology is the official FISITA magazine with in-depth scientific articles covering all the latest developments in vehicle research, design, testing and manufacturing. AutoTechnology is now available in a new e-magazine format, with subscriptions free of charge for members of FISITA societies.



Technical Information

Our web site brings together technical information on automotive engineering topics from around the world. Engineers can find and instantly download individual papers, order full congress proceedings, books, journals, CD ROMs, magazines and other information.

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FISITA supports the training and development of young engineers through a variety of programmes including our Student Travel Bursaries, Student Congress and Travelling Fellowship.

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The FISITA Honorary Committee is a group of top industry leaders who support FISITA and its agenda to promote efficient, affordable, safe and sustainable automotive transportation.

FISITA gratefully acknowledges their support.

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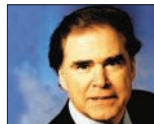
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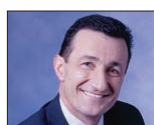
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Monday 23 October	Tuesday 24 October	Wednesday 25 October	Thursday 26 October
09:00 Opening Ceremony	09:00 Plenary Session – Environment & Energy	09:00 Plenary Session – Manufacturing & Logistics	09:00 DV-15 Driver-Vehicle Interface Information/Driveability
09:45 Coffee Break			DV-16 Human Comfort -2
09:55 Exhibition Official Opening	10:30 Coffee Break	10:30 Coffee Break	DV-17 Vehicle Security & Occupant Protection
10:45 Opening Plenary Session	11:00 Plenary Session – Safety	11:00 Plenary Session – Traffic Control & Transportation	PT-37 SI Engines: Component
12:30 Lunch	12:30 Lunch	12:30 Lunch	PT-38 CI Engines: Injection System
13:30 Poster Session One	13:30 Poster Session Two	13:45 VI-0S Enhancing Active Safety by New Scientific Approaches	PT-39 Hybrid & Electric Power Systems: Simulator/Management
		15:45	PT-40 SI Engines: Valve/Ignition/Bearing
14:00 DV-1 Driver Assistance -1	14:00 DV-5 Information Systems -1	13:45 DV-9 Thermal Management	PT-41 Alternative Fuel Engines: Ethanol/Hydrogen
DV-2 Noise & Vibration -1	DV-6 Noise & Vibration -3	DV-10 Information Systems -3	PT-42 Transmission Systems: Machine Elements
VSC1 Communications-enabled Vehicle Safety Applications and Requirements	VSC3 Technology and Standards Issues	DV-11 Communication & Informatics -1	PT-43 Powertrain Materials (PM Steel, Alloy Bearing)
PT-1 SI Engines: Combustion-1	PT-13 SI Engines: Combustion /Fuel System	PT-25 SI Engines: Engine Design & Modelling	TC-4 Safety -2
PT-2 CI Engines: HCCI -1	PT-14 CI Engines: Emission	PT-26 CI Engines: Emission/Aftertreatment	TC-5 Transportation - New Concepts and Standards
PT-3 CI Engines: EGR/Oil Cooling	PT-15 Hybrid & Electric Power Systems: Hybrid Vehicle -1	PT-27 Hybrid & Electric Power Systems: Battery & Electric Power System	VI-23 Braking
PT-4 Alternative Fuel Engines: Hydrogen	PT-16 Alternative Fuel Engines: Natural Gas/GTL	PT-28 Alternative Fuel Engines: Hydrogen/LPG	VM-16 Body Structures: Body & Structure -3
PT-5 Transmission Systems: AT	PT-17 Transmission Systems: CVT -1	PT-29 Transmission Systems: MT -1	VM-17 Manufacturing Systems: Forging/Welding
PT-6 Fuel Cell Systems: AUX Component	PT-18 Fuel Cell Systems: Stack	PT-30 Aftertreatment Systems: SCR/Catalyst	10:40 Coffee Break
VI-1 Vehicle Ride & Handling: Handling & Stability -1	VI-9 Vehicle Ride & Handling: Road & Vehicle	VI-17 Vehicle Ride & Handling: Motorcycle	11:15 Special Speech
VI-2 Vehicle Dynamics, Chassis Control -1	VI-10 Vehicle Dynamics, Chassis Control -3	VI-18 Power Steering, Active Steering -2	12:15 Closing Ceremony
VI-3 Tire -1	VI-11 Tire -2	VI-19 Tire -3	13:30 Farewell Party
VI-4 Intelligent Safety Systems: Intelligent Chassis Control	VI-12 Intelligent Safety Systems: Brake & Pre-Crash Safety	VI-20 Intelligent Safety Systems: Estimation/Sensing -2	15:00
VM-1 Aerodynamics: Design & Testing -1	VM-7 Aerodynamics: Design & Testing -2	VM-12 Body Structures: Body & Structure -1	
VM-2 Advanced Vehicle Design -1	VM-8 Recycling	VM-13 Manufacturing Systems: Process/Evaluation	
VM-3 Advanced Materials: Steel & Alloy	VM-9 Advanced Materials: Material/Coating		
15:40 Coffee Break	15:40 Coffee Break	15:25 Coffee Break	
		16:10 Plenary Session – Collaborative Engineering	
		17:40	
16:05 DV-3 Driver Assistance -2	16:05 DV-7 Information Systems -2	15:50 DV-12 Human Comfort -1	
DV-4 Noise & Vibration -2	DV-8 Noise & Vibration -4	DV-13 Driver Assistance -3	
VSC2 Legal, Regulatory and Safety Issues	VSC4 Cost-Benefit Feasibility	DV-14 Communication & Informatics -2	
PT-7 SI Engines: Combustion -2	PT-19 SI Engines: Emission/Catalyst	PT-31 SI Engines: Turbo (for SI&CI) / Super-Charging	
PT-8 CI Engines: HCCI -2	PT-20 CI Engines: Combustion Model & Control	PT-32 CI Engines: Variable Compression	
PT-9 CI Engines: Bio Diesel /New Type Engine	PT-21 Hybrid & Electric Power Systems: Hybrid Vehicle -2	PT-33 Hybrid & Electric Power Systems: Simulation Tool	
PT-10 Alternative Fuel Engines: Natural Gas/Fossil Energy Overview	PT-22 Alternative Fuel Engines: Bio-Diesel	PT-34 Alternative Fuel Engines: Diesel	
PT-11 Transmission Systems: Gears	PT-23 Transmission Systems: CVT -2	PT-35 Transmission Systems: MT -2	
PT-12 Aftertreatment Systems: Trends	PT-24 Aftertreatment Systems: Filter	PT-36 Powertrain Technology: Emission	
VI-5 Vehicle Ride & Handling: Handling & Stability -2	TC-1 Environment & Energy -1	TC-2 Safety -1	
VI-6 Vehicle Dynamics, Chassis Control -2	VI-13 Vehicle Ride & Handling: Ride Comfort	TC-3 Environment & Energy -2	
VI-7 Suspension & Braking -1	VI-14 Power Steering, Active Steering -1	VI-21 Power Steering, Active Steering -3	
VI-8 Intelligent Safety Systems: Driver Support & Sensing	VI-15 Suspension & Braking -2	VI-22 Suspension & Braking -3	
VM-4 Body Structures: Strength of Material	VI-16 Intelligent Safety Systems: Estimation/Sensing -1	VM-14 Body Structures: Body & Structure -2	
VM-5 Advanced Vehicle Design -2	VM-10 Aerodynamics: CFD	VM-15 Manufacturing Systems: Painting/Surface Touch	
VM-6 Advanced Materials: Composite/Magnesium	VM-11 Body Structures: Impact & Crash		
17:45	17:45	17:30	
18:00 Bus departs for Noh Performance		19:00 Gala Dinner	
19:00 Noh Performance			

Friday 27 October

Technical Visits - p54

- Powertrain Technology
- Vehicle Design & Manufacturing
- Vehicle Dynamics & Intelligent Control Systems
- Driver/Vehicle Interface, Information & Assistance Systems
- Transportation Challenges in Emerging Economies
- Special Sessions on Vehicle Safety Communications (VSC)

09:00 - 09:45 **Opening Ceremony**

Prof. Yasuhiro Daisho, Congress Chairman
 Daniel M. Hancock, President, FISITA
 President of JSAE
 President of JAMA

09:45 **Coffee Break**

09:55 **Exhibition Official Opening**

10:45 - 12:30 **Opening Plenary Session**



Lawrence D. Burns
 Vice President,
 Research & Development
 & Strategic Planning,
 General Motors



Jacques Lacambre
 Chief Technology Officer,
 Member of the
 Management Board,
 Renault



Motoatsu Shiraishi
 Senior Managing and
 Representative Director,
 Honda Motor Co., Ltd.
 President and Director of
 Honda R&D Co., Ltd.



Dr. Hyun-Soon Lee
 President of R&D Centre,
 Hyundai Motor Company



Prof. Dr.-Ing. Burkhard Goeschel
 Member of the Board of
 Management,
 BMW AG

12:30 - 13:30 **Lunch Break**

13:30 - 14:00 **Poster Session One**

14:00 - 15:40
DV-1 : Driver Assistance -1

F2006D041
Multi-situational Benefit for Lead Vehicle Gap Management of an Active Haptic Driver Support System

Nobuyuki Kuge, Mr. Tomohiro Yamamura, Nissan Motor Co., Ltd., JAPAN, Dr. Michael Manser, Dr. Nicholas Ward, University of Minnesota, Dr. Erwin Boer, LUEBEC, USA

F2006D062
Effectiveness of Emergency Brake Assist in Rear-end Accident Scenarios

Dr. Mohamed Kassaagi, Dr. Wajih Bouslimi, PSA Peugeot Citroën, Mr. Clément Val, GIST, Mr. Jean-Marc Bersac, Dr. Michèle Moessinger, Mr. Yves Page, Renault, FRANCE

F2006D132
Interactive Cruise Control - Cruising in Cooperation with an Assistance System

Dipl.-Ing. Klaus Kompass, Christoph Mayser, BMW Group, GERMANY

F2006D133
Critical Aspects and Challenges in the Introduction of Multifunctional Advanced Driver Assistance Systems

Dipl.-Ing. Klaus Kompass, Dr. Werner Huber, BMW Group, GERMANY

14:00 - 15:40
DV-2 : Noise & Vibration -1

F2006D088
Brake Noise Reduction on a Heavy Duty Vehicle Using Rotor Asymmetry
 Dr. John Fieldhouse, Dr. Chris Talbot, Mr. Naveed Ashrav, Huddersfield University, Mr. Sam Woods, JCB International, UK

F2006D095
The Correlation Investigation of Noise and Three-dimensional Vibration of Helical Gears for Automotive Transmission

Mr. Takeshi Watanabe, Mr. Yoshikazu Miyoshi, Dr. Kohei Saiki, Fuji Heavy Industries Ltd, JAPAN

F2006D180
Development of a Method for Measuring Noise/Vibration Sensitivity to Tire Contact Patch Inputs
 Dr. Shinichi Maruyama, Nissan Motor Co., Ltd., JAPAN

F2006D191
Particle Velocity Sensors for Separating Multi Incoherent Sound (Noise) Sources

Ir. Doekle Yntema, Ing. J.C. Winkel, Dr. H.E. de Bree, Dr. Ir. R.J. Wiegink, Prof. Dr. W.F. Druyvesteyn, University of Twente, NETHERLANDS

14:00 - 15:40
VSC1 - Communications-enabled Vehicle Safety Applications (VSC) and Requirements

F2006VSC001
Towards Field Testing of Vehicle Safety Communications Technology
 Dr. Ralf Guido Herrtwich, DaimlerChrysler AG, Germany

F2006VSC002
Paper Title to be confirmed
 Mr. Robert Lange, General Motors Corporation, USA

F2006VSC003
The Integrated Processing of Autonomous and Cooperative Vehicle Safety System
 Mr. Hideo Inoue, Toyota Motor Corporation, JAPAN

14:00 - 15:40
PT-1 : SI Engines: Combustion-1

F2006P053
Clarification of the Effect of Negative Temperature Coefficient on SI Engine Knock by Measuring Local Gas Temperature Using Two-Wired Thermocouple in RCM
 Prof. Yasuo Moriyoshi, Chiba University, JAPAN

F2006P147
Low Emission Combustion for Spray-guided Direct Injection Gasoline Engine
 Mr. Hiroshi Miyagawa, Mr. Tetunori Suzuoki, Mr. Makoto Koike, Toyota Central R&D Labs., Inc., Mr. Kouichi Mochizuki, Denso Corporation, JAPAN

F2006P153
Laminar and Turbulent Combustion of Methane-air and Propane-air Mixtures: An Examination and Correlation in Terms of Lewis Number
 Dr. Toshiaki Kitagawa, Dr. Andrew Smallbone, Kyushu University, JAPAN

F2006P168
A New Gasoline Combustion System

with High Thermal Efficiency by Rapid Piston-movement Near TDC
Mr. Koji Morikawa, Mr. Makoto Kaneko, Fuji Heavy Industries Ltd., Mr. Yasuo Mori-yoshi, Chiba University, JAPAN

14:00 - 15:40
PT-2 : CI Engines: HCCI -1

F2006P050
In-cylinder Temperature Distribution Measurement of HCCI Combustion
Mr. Morihiro Nagamine, Mr. Akihiko Kakuho, Dr. Tomonori Urushihara, Dr. Teruyuki Itoh, Nissan Motor Co., Ltd., JAPAN

F2006P056
Z-Engine, Having a Homogenous Combustion and the Atkinson Cycle, a New Way to Down-size the Car Engine
Mr. Timo Janhunen, Aumet Oy, FINLAND

F2006P109
HCCI Diesel Control Development and Real-time Calibration Based on Engine Simulation
Dr. Antoine Albrecht, Mr. Philippe Moulin, Dr. Olivier Grondin, Dr. Gilles Corde, IFP, FRANCE

F2006P285
Control of Diesel HCCI Modes Using Pressure-based Timing Metrics
Dr. Anupam Gangopadhyay, Dr. Frederic Matekunas, Mr. Paul Battiston, Mr. Patrick Szymkowitz, Dr. John Pinson, Mr. Gerhard Landsmann, General Motors, USA

14:00 - 15:40
PT-3 : CI Engines: EGR/Oil Cooling

F2006P154
Experimental and Numerical Investigation of Heat Absorption Characteristics by Engine Oil in Piston Cooling Channel
Mr. Yoshitaka Takeuchi, Mr. Kenta Akimoto, Toyota Industries Corporation, Dr. Takashi Noda, Mr. Yu Nozawa, Mr. Tomohisa Yamada, Toyota Central R&D Labs., Inc., JAPAN

F2006P228
The Influence of Exhaust Gases Dissolved in Diesel Oil on the Parameters of Diesel Engine's Performance
Prof. Jerzy Merksisz, Ph.D. M.E. Wladyslaw Kozak, M.Sc. E Maciej Bajerlein, Poznan University of Technology, POLAND

F2006P337
H_{inf} Precise Control for Transient EGR Control of a Turbocharged CI Engine
Dr. Hai Wu, Dr. Prof. Xinlei Wang,

University of Illinois at Urbana-Champaign, USA

F2006P372
NOx Reduction by EGR Super Cooling on Diesel Engines
Mr. Daisuke Shimo, Mazda Motor Corporation, JAPAN

14:00 - 15:40
PT-4 : Alternative Fuel Engines: Hydrogen

F2006P092
Combustion Strategies and NOx Emissions for Hydrogen Fuelled IC Engines
Dr. Sebastian Verhelst, Mr. Stefaan Verstraeten, Prof. Roger Sierens, Ghent University, BELGIUM

F2006P114
The New BMW 12-Cylinder Hydrogen Engine as Clean, Efficient and Powerful Vehicle Powertrain
Dr. Edgar Berger, Dr. Gerrit Kiesgen, BMW AG, GERMANY

F2006P131
Opportunities for Hydrogen in Motorsports
Mr. Daniel Hilscher, TÜV Automotive GmbH, GERMANY

F2006P368
Injection Strategy for a Direct-injection SI Hydrogen Engine
Prof. Ali Mohammadi, Prof. Masahiro Shioji, Mr. Yasuyuki Nakai, Mr. Wataru Ishikura, Kyoto University, Mr. Eizo Tabo, Mitsubishi Motors, JAPAN

14:00 - 15:40
PT-5 : Transmission Systems: AT

F2006P029
Dynamic Programming Based Motor Vehicle Shift Map Generation
Dr. Shushan Bai, Mr. Joel Maguire, GM, Prof. Huei Peng, Mr. Daekyun Kim, University of Michigan, USA

F2006P166
Dynamic Gearshift Scheduling Strategy to Integrate Fuel Economy Optimal and Driving Force Reservation
Mr. Kazuhide Togai, Mr. Kazuo Kido, Mitsubishi Motors Corporation, JAPAN

F2006P308
Implementing Lubrication and Friction Model in Flexible MBD Simulations of Gear Rattling Noise
Mr. Borislav Klarin, Mr. Mario Duras, AVL, AUSTRIA

F2006P343
Experimental Investigation into the Transient Response of an Automotive Powertrain with an Automatic

Transmission During Gear Shifts and Large Torque Reversals
Dr. Nong Zhang, The University of Technology, Sydney, AUSTRALIA

14:00 - 15:40
PT-6 : Fuel Cell Systems: AUX Component

F2006P138
Detailed Dynamic Modeling of Auto-Thermal Gasoline Fuel-Processors
Mr. Thomas Boehme, Swiss Federal Institute of Technology, Prof. Lino Guzzella, ETH Zurich, SWITZERLAND

F2006P316
High-Pressure Hydrogen Tank for FCHV
Mr. Motohiro Mizuno, Mr. Masayoshi Taki, Mr. Yoshimasa Negishi, Mr. Nobuyuki Ogami, Toyota Motor Corp., JAPAN

F2006P321
Improving the Commercial Viability of Fuel Cell Vehicles Through the Application of Integrated Whole Vehicle Control
Dr. James Marco, Prof. Nicholas Vaughan, Cranfield University, UK

14:00 - 15:40
VI-1 : Vehicle Ride & Handling: Handling & Stability -1

F2006V093
Optimisation of Steering Behaviour by Systematic Implementation of Customer Requirements in Technical Targets on the Basis of Quality Function Deployment
Mr. Bernhard Schick, TÜV Automotive GmbH, GERMANY

F2006V110
Development of Human Sensitivity Evaluation System of Vehicle Dynamics
Mr. Yuji Muragishi, Mr. Katsuhiko Fukui, Mr. Yasuo Asaga, Dr. Eiichi Ono, Toyota Central R&D Labs., Inc., JAPAN

F2006V137
A New Approach to Understanding Vehicle Dynamic Characteristics Based upon Jerk Information
Mr. Makoto Yamakado, Hitachi, Ltd., Prof. Masato Abe, Kanagawa Institute of Technology, JAPAN

F2006V165
Analysis of Steering Feel and Vehicle Handling
Mr. Manfred Harrer, BMW Group, GERMANY, Mr. Peter Pfeffer, Dr. D. Nigel Johnston, University of Bath, UK

14:00 - 15:40
VI-2 : Vehicle Dynamics, Chassis Control -1

F2006V040
Stabilisation of a Backward Driven Truck with Trailer
Dipl.-Ing. Helmut Martin Waser, Prof. Wolfgang Hirschberg, Institute of Automotive Engineering, AUSTRIA

F2006V080
Study of Vehicle Dynamics and Road Geometry Interactions
Mrs. Nadji Mounia, Mr. Michel Gothié, Regional laboratory of Pont and Chaussée (LRPC), Mr. Claude Henrie Lamarque, ENTPE, FRANCE

F2006V114
Roll Motion Analysis of a Full Vehicle Model Using Screw Theory
Prof. Jae Kyung Shim, Mr. Jae Kil Lee, Korea University, KOREA

F2006V224
Optimisation Techniques for Active Chassis Systems with Multiple Degrees of Freedom
Mr. Christophe Portaz, Mr. Eric Debernard, Renault, Prof. Philippe Boisse, Prof. Lionel Maiffredy, INSA Lyon, FRANCE

14:00 - 15:40
VI-3 : Tire -1

F2006V064
Developments in Low Noise and Extended Mobility Tire Technology
Dr. Ernst-Ulrich Saemann, Mr. Jürgen Buschmann, Continental AG, GERMANY

F2006V085
The Mechatronic Tyre for Online Determination of Tyre Contact Patch Forces
Mr. Harald Goertz, Mr. Thomas Hüsemann, Institut für Kraftfahrwesen, Aachen, GERMANY

F2006V104
The Possibility of Intelligent Tire (Technology of Contact Area Information Sensing)
Mr. Hiroshi Morinaga, Dr. Yasumichi Wakao, Mr. Yasushi Hanatsuka, Mr. Akira Kobayakawa, Bridgestone Corporation, JAPAN

F2006V122
Estimation of Tyre Cornering Stiffness Using Vehicle Measurements
Mr. Ari Juhani Tuononen, Helsinki University of Technology, Prof. Matti Juhala, Mr. Tero Lehtonen, TKK, FINLAND

14:00 - 15:40
VI-4 : Intelligent Safety Systems: Intelligent Chassis Control

F2006V057
Integrated Global Chassis Control - A Top-down Design Approach

Mr. Jingxin Shi, TTTech Germany GmbH, GERMANY

F2006V067

Integrated Commercial Vehicle Chassis Control

Mr. Péter Koleszár, Knorr-Bremse Sfn, USA

F2006V076

Intelligent Control of Vehicle Combination Braking Compatibility

Mr. Dragan Aleksendric, Prof. Cedomir Duboka, Prof Zivan Arsenic, University of Belgrade, YUGOSLAVIA, Prof. Gabriele Virzi Mariotti, University of Palermo, ITALY

F2006V190

Hierarchical Switching Control of Longitudinal Acceleration in the Presence of Large Uncertainties

Dr. Gao Feng, Prof. Keqiang Li, Tsinghua University, CHINA

**14:00 - 15:40
 VM-1 : Aerodynamics: Design & Testing -1**

F2006M035

Complementary Usage of Wind Tunnel, Simulation and Road Tests During the Aerodynamic Development of a New BMW SUV

Mr. Hans Kerschbaum, Dr. Norbert Gruen, BMW Group, GERMANY

F2006M046

Aerodynamic Design of the Vehicle Underbody: Reviews and Several New CFD Computations

Mr. Koza Kitoh, Koza Kitoh Technology, Inc., JAPAN, Mr. Timo Kuthada, Research Inst. of Automotive Engineering and Vehicle Engines Stuttgart, GERMANY

F2006M118

Effect of Flow Structures and Vehicle Performance with Spacing Two Different Scales of AHMED Car Models - A CFD and EFD Comparison

Mr. Gokul Krishnan Rajamani, Mr. Satya Prasad Mavuri, Mr. Riccardo Pagliarella, Prof. Simon Watkins, Prof. Jiyuan Tu, RMIT University, AUSTRALIA

F2006M157

Optimization of Vehicle Design Regarding Internal Airflow in the Aerodynamic Development Process

Dipl.-Ing. Jochen Thibaut, Dipl.-Ing. Holger Winkelmann, BMW Group, Prof. Dr.-Ing. Jochen Wiedemann, FKFS, GERMANY

**14:00 - 15:40
 VM-2 : Advanced Vehicle Design -1**

F2006M025

Haptic Technologies for the

Conceptual and Validation Phases of Car Design

Prof. Monica Bordegoni, Prof. Umberto Cugini, Prof. Giorgio Colombo, Politecnico di Milano, ITALY

F2006M045

Identification of Customer Requirements for the Optimized Vehicle Development Process

Prof. Ferit Kügükay, Mr. Markus Fugel, TU Braunschweig - Institute of Automotive Engineering, GERMANY

F2006M081

Innovative and Safe Front End Module, Compact and Compliant with Pedestrian Regulation

Mr. Sebastien Guinehut, Mrs. Anne-Laure Fontaine, Valeo Engine Cooling, FRANCE

F2006M239

Innovative Vibroacoustic Simulation and Optimization Techniques for Vehicle Sound Package Design in Low-Mid Frequency

Mr. Leonardo Ferrali, Nihon Rieter Automotive Acoustics Co., Ltd., JAPAN, Mr. Ciro Gaudino, Dr. Davide Caprioli, Mr. Claudio Bertolini, Rieter Automotive Management AG, SWITZERLAND

**14:00 - 15:40
 VM-3 : Advanced Materials: Steel & Alloy**

F2006M016

Effect of Nb on Mechanical Properties of Zn-coated DP Steel

Dr. Shunichi Hashimoto, CBMM Asia Co., Ltd., JAPAN

F2006M049

The Oxidation and Delta K Threshold at High Temperature in P122 Alloy

Mr. Si Yeon Bae, Prof. Byeong Soo Lim, Sungkyunkwan University, KOREA

F2006M146

Development of High Strength Steel Tubes with Excellent Formability for Automotive Suspension Parts

Mr. Shunsuke Toyoda, Mr. Masatoshi Aratani, Mr. Yoshikazu Kawabata, Dr. Koji Suzuki, Dr. Kei Sakata, Mr. Makio Gunji, Mr. Akio Sato, JFE Steel Corporation, JAPAN

F2006M151

Modern Crash Durable Structural Adhesives for Structural Car Body Applications

Dr. Andreas Lutz, Dr. Detlef Symietz, Colmar Wocke, Dow Automotive, SWITZERLAND

15:40 - 16:05 Coffee Break

**16:05 - 17:45
 DV-3 : Driver Assistance -2**

F2006D023

Driver Assistance for Motor Vehicles

Lighting - First Steps and Future
 Mr. Detlef Decker, Dr. Roland Lachmayer, Hella KGaA Hueck & Co., GERMANY

F2006D024

Auto-hold - A New Complex Function Between ESP and EPB in the New VW Passat

Dr.-Ing. Ralf Leiter, TRW LucasVarity GmbH, GERMANY

F2006D064

A Research on the Driver Assistant System by the Intermittency Movement Vision Sensor

Mrs. Huang Guiyun, Prof. Yang Jianming, Meijo University, JAPAN

F2006D185

Keeping the Focus on the Driver:

The BMW Approach to Driver Assistance and Active Safety Systems that Interact with Vehicle Dynamics

Dr. Joachim Steinle, Dr. Matthias Kopf, Dr. Andreas Pfeiffer, Dr. Soeren Hohmann, Mr. Martin Brandstaeter, BMW Group, GERMANY

**16:05 - 17:45
 DV-4 : Noise & Vibration -2**

F2006D112

Dynamical Design of an Outdoor Walking Aid

Prof. Masao Ishihama, Kanagawa Institute of Technology, JAPAN

F2006D124

Advances in Computational Aeroacoustics and Vehicle Design Optimization

Dr. David Freed, Dr. Siva Senthoooran, Dr. Bernd Crouse, Dr. Brad Duncan, Dr. Gana Balasubramanian, Exa Corp., USA, Mr. Swen Noelting, Exa Corp., GERMANY

F2006D165

Phase-Control Design for Idle Shake on FWD Cars

Mr. Koji Kadomatsu, Mitsubishi Motors Corporation, JAPAN

F2006D172

Vibration Analysis of Automobile Engines Based on Flexible Multibody Dynamics (Prediction of Crankshaft Torsional Vibration Considering Interactions with Piston-conrod Sub-systems)

Mr. Atsushi Kawaguchi, Dr. Atsushi Kawamoto, Mr. Takayuki Aoyama, Toyota Central R&D Labs., Inc., JAPAN

**16:05 - 17:45
 VSC2 - Vehicle Safety Communications (VSC) Legal, Regulatory and Safety Issues**

F2006VSC004

Enhancing Safety through Infrastructure-Vehicle Cooperative Systems

Mr. Setsuo Hirai, National Institute for Land and Infrastructure Management, JAPAN

F2006VSC005

Co-operative Systems Status in Europe, R&D and Policy Issues

Mr. André Vits, European Commission, BELGIUM

F2006VSC006

Vehicle to Vehicle Communication: A Means to Enhance Vehicle Safety

Dr. Joseph Kianianthra, National Highway Traffic Safety Administration, USA

**16:05 - 17:45
 PT-7 : SI Engines: Combustion -2**

F2006P198

A Hybrid Turbulent-Laminar Mixing Model for SI Engine Combustion and Comparison with Experiments

Prof. Kazuie Nishiwaki, Mr. Takayuki Nakayama, Ritsumeikan University, JAPAN

F2006P269

An Investigation of Two Different Methods of Initiating Controlled Auto-Ignition Using Optical Diagnostics

Dr. Nebojsa Milovanovic, Mr. Graham Pitcher, Mr. James Turner, Lotus Engineering, Dr. Graham Wigley, Mr. Phill Stansfield, Loughborough University, UK

F2006P370

Extending Stratified Operation Range in Load Map of DISI Engines by Boosting

Mr. Alexander Kneifel, Mr. Maurice Kettner, Mr. Benedikt Xander, Prof. Ulrich Spicher, Institute of Reciprocating Engines - Universitaet Karlsruhe, GERMANY

F2006P392

Comparison of the Phenomena of Autoignition in Highly Charged SI Engines with External and Internal Mixture Formation Regarding Influencing Variables, Mechanisms and Preventive Measures

Prof. Dr. Bernhard Geringer, Dr. Peter Hofmann, Dipl.-Ing. Georg Prochazka, Vienna University of Technology, AUSTRIA, Dipl.-Ing. Jürgen Willand, Dr. Christian Jelitto, Volkswagen AG, GERMANY

**16:05 - 17:45
 PT-8 : CI Engines: HCCI -2**

F2006P039

FPGA Based Engine Feedback Control Algorithms

Mr. Carl Wilhelmsson, Dr. Per Tunestål, Prof. Bengt Johansson, Lund Institute of Technology, SWEDEN

F2006P181

Expanding the Operational Range of a Natural Gas Fueled HCCI Engine by Controlling Internal/External EGR, and Charging Pressure

Mr. Hiroshi Kuzuyama, Toyota Industries Corporation, Dr. Kazuhiro Akihama, Toyota Central R&D Labs., Inc., JAPAN

F2006P206

Visualization of Laser Assisted HCCI Combustion with Natural Gas as Fuel

Mr. Andreas Vressner, Dr. Anders Hultqvist, Prof. Bengt Johansson, Lund Institute of Technology, SWEDEN, Dr. Martin Weinrotter, Prof. Ernst Wintner, Vienna University of Technology, Dr. Kurt Iskra, Prof. Theo Neger, Graz University of Technology, AUSTRIA

F2006P360

Study on Gasoline HCCI Engine Equipped with Electromagnetic Variable Valve Timing System - Increasing the Higher Load Driving Range with Dynamic Boost EGR System

Mr. Junichi Takanashi, Mr. Moriyoshi Awasaka, Mr. Takashi Kakinuma, Mr. Masanobu Takazawa, Mr. Yasuhiro Urata, Honda R&D Co., Ltd, JAPAN

16:05 - 17:45

PT-9 : CI Engines: Bio Diesel/New Type Engine

F2006P048

The Influence of Synthetic Oxygenated Fuel Additives on Diesel Light Duty Vehicles Exhaust Emissions

Dr. Piotr Bielaczyc, Dr. Andrzej Szczołka, BOSMAL Automotive R&D Center, Prof. Jerzy Merksiz, Dr. Miloslaw Kozak, Poznan University of Technology, POLAND

F2006P121

The Comparison of the Effect of Biodiesel Fuel from Palm Oil and Physic Nut Oil (Jatropha Curcas) on a Direct Injection (DI) Diesel Engine

Dr. Iman Reksowardojo, Mr. Ngoc Dung Nguyen, Mr. Tran Quan Tuyen, Mr. Sopheak Rey, Dr. Tirtto Prakoso Brodjoneoro, Dr. Tatang Hernas Soerawidjaja, Institut Teknologi Bandung, INDONESIA, Prof. Hideyuki Ogawa, Hokkaido University, JAPAN

F2006P380

Evaluation of Cottonseed Oil - Diesel Fuel Blends as Fuel for Automotive Diesel Engines

Prof. Zissis Samaras, Mr. George Fontaras, Dr. Leonidas Ntziachristos, Aristotle University, GREECE

F2006P421

Towards a New Type of the Hybrid Engine: Two-Stroke Free-Piston Compression Ignited Engine Modeling

Prof. Valeri Golovitchev, Luca Montorsi, Chalmers University of Technology, SWEDEN

16:05 - 17:45

PT-10 : Alternative Fuel Engines: Natural Gas/Fossil Energy Overview

F2006P089

Study of Compressed Natural Gas Direct Injection Engine

Mr. Satoshi Taniguchi, Mr. Yukihiro Tsukasaki, Mr. Akio Yasuda, Toyota Motor Corporation, JAPAN

F2006P096

Well to Wheel Analysis of Future Automotive Fuels and Powertrains in the European Context. An Up-date

Dr. Pierre Rouveiroles, Renault, FRANCE

F2006P128

Monovalent Natural Gas Vehicle Concept at 600 km Range by New Lightweight Construction Tanks

Prof. Dr. Ernst Pucher, Mr. Alexander Sekanina, Vienna University of Technology, AUSTRIA

F2006P230

Combustion Characteristics and Performance of Supercharged Micro-pilot Natural Gas Engine

Mr. Nobuhiko Fukatani, Osaka Gas Co., Ltd., Mr. Tetsuo Komoda, Mitsui Engineering and Shipbuilding, Co., Ltd., Prof. Eiji Tomita, Associate Prof. Nobuyuki Kawahara, Mr. Keiji Maruyama, Okayama University, JAPAN

16:05 - 17:45

PT-11 : Transmission Systems: Gears

F2006P088

The Development of the Carbonitriding Gear Steels with Tooth Surface Strength

Mr. Makoto Yoshida, Mr. Toshiyuki Tanaka, Mr. Masahiro Shinmyou, Mr. Shouji Seita, Jatco Ltd., Mr. Katsuhiro Iwasaki, Mr. Mutsuhisa Nagahama, Kobe Steel Ltd., Dr. Youichi Watanabe, Nissan Motor Co., Ltd., JAPAN

F2006P256

Classical Planetary Gear Train Problems Treated by Novel Powerful Analytical Methods

Prof. em. Mart Mägi, Chalmers University of Technology (CTH), SWEDEN

F2006P286

Effect of Surface Characteristics and Lubricants on Spur Gear Efficiency

Mr. Neil Anderson, GM Powertrain, Mr. Travis Petry-Johnson, Dr. Ahmet Kahraman, The Ohio State University, USA

F2006P290

Optimizing Gearset Durability in Double Pinion Planetary Transmissions

Dr. Avinash Singh, General Motors Corporation, USA

16:05 - 17:45

PT-12 : Aftertreatment Systems: Trends

F2006P023

Innovation Trends in the Field of Exhaust Gas Aftertreatment Systems of Internal Combustion Engines

Dr. Michael Boye, Dr. Marcus Döring, Dr. Frank van der Staay, European Patent Office, NETHERLANDS

F2006P214

A Study on Time-Resolved Laser Induced Incandescence Analysis Method for the Measurement of Primary Particle Size in Diesel Exhaust

Mr. Jong-il Park, Prof. Soonho Song, Prof. Jae Won Hahn, Prof. Kwang Min Chun, Yonsei University, KOREA

F2006P241

Soot Sensor for Diesel Emission Onboard Control Systems

Prof. Victor Gheorghiu, Hamburg University of App. Sciences, GERMANY

F2006P255

Diesel Emission Control Technologies in Review

Dr. Timothy Johnson, Corning Incorporated, USA

16:05 - 17:45

VI-5 : Vehicle Ride & Handling: Handling & Stability -2

F2006V210

Control of Multi-roll Chassis Dynamometer During All-Wheel-drive (AWD) Vehicle Road Load Testing with Cornering Simulation and Individual Tire Phase Control

Dr. Alan Davis, European Patent Office, NETHERLANDS

F2006V223

The Development of AGCS (Active Geometry Control System) for the New Hyundai Sonata

Prof. Un Koo Lee, Hyundai Motor Company, KOREA, Mr. Alexandre Catala, Applus+ IDIADA, SPAIN

F2006V226

On Furthering the Understanding of Vehicle Roll-over through State of the Art Test and Simulation

Prof. Un Koo Lee, Hyundai Motor

Company, KOREA, Mr. Alexandre Catala, Mr. Jonathan Webb, Applus+ IDIADA, SPAIN

F2006V249

Fundamental Study on Driving Pleasure Based on Driver's Operation

Miss. Yukika Toda, Prof. Ichiro Kageyama, Nihon University, JAPAN

16:05 - 17:45

VI-6 : Vehicle Dynamics, Chassis Control -2

F2006V024

Inverse Vehicle Dynamics Principles

Dr. Vladimir Vantsevich, Lawrence Technological University, USA

F2006V054

Autonomous Corner Modules as an Enabler for New Chassis Solution

Mr. Mats Lennart, Volvo Car Corporation/KTH, SWEDEN

F2006V134

Integrated Vehicle Dynamics Controls Using Steering and Braking

Dr. Peter Zegelaar, Dr. Roger Graaf, Dr. Oliver Nehls, Mr. Gilberto Burgio, Mr. Otto Hofmann, Ford Research Center Aachen, GERMANY

F2006V177

Study on the Chassis Control Integration Based on Tyre Slip Ratio Regulation and Active Steering Control

Mr. Xiaoming Shen, Mr. Daofei Li, Prof. Fan Yu, Jiao Tong University, CHINA

16:05 - 17:45

VI-7 : Suspension & Braking -1

F2006V044

Electro-mechanical Suspension Actuator with Energy Recuperative Feature

Mr. István Zádor, Mr. Bence Falvy, Mr. Dániel Horváth, Mr. Levente Balogh, Budapest University of Technology and Economics, HUNGARY, Dr. László Palkovics, Knorr Bremse Systems for Commercial Vehicles, GERMANY

F2006V045

Reduction of Braking Distance by Control of Active Dampers

Mr. Tobias Niemz, Prof. Dr. Hermann Winner, Darmstadt University of Technology, GERMANY

F2006V077

The Development of a Design Methodology to Reduce the Probability of Brake Judder and Drone Due to Thermo-elastic Instabilities of the Brake Rotor

Dr. David Bryant, Dr. John Fieldhouse, Dr. Rakesh Mishra, The University of Huddersfield, UK

F2006V141

A New and Innovative Low-cost Multi-link Suspension Architecture for Small Passenger Cars
 Mr. Barney Gerrard, Magneti Marelli Cofap Automotive Suspension, DENMARK

16:05 - 17:45

VI-8 : Intelligent Safety Systems: Driver Support & Sensing

F2006V047

Lane Changing Assist System Using Model Predictive Control
 Mr. Hikaru Nishira, Mr. Yoji Seto, Mr. Yoshinori Yamamura, Nissan Motor Co., Ltd., Prof. Taketoshi Kawabe, Kyushu University, JAPAN

F2006V055

Adapting Restraints by Predictive Safety Systems
 Mr. Uwe Beutnagel-Buchner, Robert Bosch GmbH, GERMANY

F2006V198

The Development of Far and Near Detection Range Millimeter-wave Radar System
 Mr. Yasuhiro Takagi, Toyota Motor Corp., JAPAN

F2006V252

Assessment of Lane Recognition

Systems

Dr. Dirk Dickmanns, Harald Graef, Martin Anderschitz, Eurospace, GERMANY

16:05 - 17:45

VM-4 : Body Structures: Strength of Material

F2006M064

New MX-5 Light Weight Body Structure with High Strength Steel
 Mr. Takayuki Kimura, Mazda Motor Corporation, JAPAN

F2006M211

Blow Molded Plastic Seat Backs for ECE 17 Compliance
 Dr. Luis Lorenzo, Dow Automotive, USA

F2006M231

Composite Space Frame Technology: New Advances in CFRP Body Structures for High Performance Cars
 Mr. Claudio Santoni, Mr. Alessio D'Alesio, ATR Engineering, ITALY

F2006M242

Uniaxial and Multi-Axial Fatigue Analysis of a Door Hinge Assembly
 Peyman Honarmandi, Prof. Jean W. Zu, University of Toronto, Prof. Kamran Behdinan, Ryerson University, CANADA

16:05 - 17:45

VM-5 : Advanced Vehicle Design -2

F2006M088

BMW Hydrogen 7 Series - A Safe Way to a Clean Future
 Dr. Stefan Danner, Dr. Sigmund Fuerst, BMW AG, GERMANY

F2006M156

Demands Contradicting Needs of Vehicle Safety Functions
 Prof. Lennart Strandberg, stop.se/Linkoping University, SWEDEN

F2006M164

Use of Fuel Cells as Auxiliary Power Unit for Air Conditioning of Industrial Vehicles
 Dr. Ing. Eugenio Pippione, Iveco SpA, Prof. Paolo Coppa, University of Rome, Dr. Ing. Daniela Magnetto, FIAT Research Center, ITALY, Mr. Wolfgang Krämer, Dr. Ing. Steffen Korfmann, Webasto AG, GERMANY

F2006M189

Legal Framework for the Introduction of Hydrogen in Europe
 Dr. Klaus Scheuerer, Dr. Juliane Wolf, Holger Braess, Dr. Roland Schwab, BMW AG, GERMANY

16:05 - 17:45

VM-6 : Advanced Materials: Composite/Magnesium

F2006M175

Study of Poly Lactic Acid (PLA) High-order Structure Control
 Mr. Takeshi Sekito, Mr. Nobutaka Honma, Mr. Yuichi Miyake, Toyota Motor Corporation, JAPAN

F2006M206

Corrosion Fatigue of Magnesium Alloy AE44
 Dr. Yansong He, Chongqing University, CHINA, Dr. Jinghong Fan, Alfred University, USA

F2006M229

Development of All Olefin Plastic Backdoor
 Mr. Katsuhiko Suzuki, Mr. Mitsuo Yamada, Mr. Takashi Gotsuu, Mr. Takao Oota, Mr. Takao Tanimoto, Nissan Motor Co., Ltd., Mr. Shigeo Suzuki, Mr. Taiji Shiraiishi, Hitachi Chemical Co., JAPAN

F2006M232

The Resistance on Thermal Shocks of Combustion Engine Pistons
 Dr. Barbara Sieminska, Prof. Antoni Jankowski, Institute of Aeronautics, Dr. Zenon Slawinski, Lublin University of Technology, POLAND



09:00 - 10:30 **Plenary Session - Environment & Energy**


Yoshihide Esaki
 Director,
 Energy Policy Planning Office,
 Agency for Natural Resources
 and Energy, Ministry of
 Economy, Trade and Industry



Jack Jacometti
 Vice President,
 Global GTL Development,
 Shell International Gas Ltd.



Prof. Dr. Herbert Kohler
 Vice President,
 Body & Powertrain Research
 and Chief Environmental Officer,
 DaimlerChrysler AG



Dr. Alan C. Lloyd
 Former Agency Secretary,
 California Environmental
 Protection Agency

10:30 - 11:00 Coffee Break

 11:00 - 12:30 **Plenary Session - Safety**


Prof Sunao Chikamori
 College of Engineering
 Shibaura Institute
 of Technology



Dr. Joseph N. Kanianthra
 Associate Administrator for
 Vehicle Safety Research,
 National Highway Traffic
 Safety Administration,
 US Department of
 Transportation (NHTSA)



Dr. Jean-Yves Le Coz
 Director, Road Safety Policy,
 Renault



Toshimi Yamano
 Chairman,
 Vehicle Safety Sub-Committee,
 Japan Automobile Manufacturers
 Association (JAMA),
 General Manager, Vehicle Planning Depart. No. 1
 Vehicle Design Eng. Div. No.1
 Nissan Motor Co. Ltd.

12:30 - 13:30 Lunch Break

13:30 - 14:00 Poster Session Two

14:00 - 15:40

DV-5 : Information Systems -1
F2006D028
ADAS Horizon - How Digital Maps Can Contribute to Road Safety

Mr. Vincent Blervaque, Ertico, BELGIUM

F2006D034
Method for Predicting Drowsiness

Mr. Masatoshi Yanagidaira, Mr. Mitsuo Yasushi, Pioneer Co., Ltd., JAPAN

F2006D081
A Study on Environment Recognition Method Using Motion Information

Dr. Hiroshi Takahashi, Mr. Seigo Watanabe, Mr. Hidekazu Nishiuchi, Dr. Yasuhito Sano, Mr. Hiroshi Satoh, Nissan Motor Co., Ltd., JAPAN

F2006D105
Windshield Display for Active Safety

Mr. Koji Nakamura, Dr. Nobuaki Kawahara, Mr. Hiroshi Ando, Denso Corporation, JAPAN

14:00 - 15:40

DV-6 : Noise & Vibration -3
F2006D020
A New Approach to Vibration of Car
Interiors Based on the CPhIR-concept and its Experimental Validation

Prof. Antonio Carcaterra, Dr. Antonio Culla, Mr. Dario Insolera, University of Rome "La Sapienza", ITALY

F2006D187
Description of Broadband Structure-borne and Airborne Noise Transmission from the Powertrain

Dr.-Ing. Gottfried K. Behler, Prof. Dr. Michael Vorländer, RWTH Aachen University, Dr.-Ing. Klaus Genuit, Dr. Roland Sottek, HEAD Acoustics GmbH, GERMANY

F2006D193
Energy Based Boundary Element Method for Computing the Exterior Acoustic Field for Vehicle Airborne Noise Analysis

Prof. Nickolas Vlahopoulos, Rula Sa, Michigan Engineering Services, LLC, USA, Dr. Ir. Koen De Langhe, LMS International, BELGIUM

F2006D206
The Application of Flexible Multi-Dynamic Body Models and Noise Transfer Path Analysis to Optimise Vehicle Sound Quality

Jason March, M. Poggi, RMS Maunder,

N. McGregor, N. Powell, G. Strong, Ricardo UK Ltd., M. Hara, Nissan Motor Co., Ltd., UK

14:00 - 15:40

VSC3 - Vehicle Safety Communications (VSC) Technology and Standards Issues
F2006VSC007
Vehicle Communications for Safety

Mr. Michael Noblett, Connexis, USA

F2006VSC008
The VSC Conundrum - Standards and a Practical Approach to Implementation

Mr. Bob Williams, Consultancy Services International (CSI), UK

F2006VSC009
Standardization Activities in Japan and Contribution to ISO/TC204

Prof. Hironao Kawashima, Keio University, JAPAN

14:00 - 15:40

PT-13 : SI Engines: Combustion/Fuel System
F2006P094
Study of Fuel Economy Improvement
Using Combined HCCI and SI Mode Operation in a Gasoline Engine

Dr. Nebojsa Milovanovic, Dr. Michael Bassett, Dr. Richard Pearson, Mr. James Turner, Lotus Engineering, UK

F2006P106
Analysis of the Fuel Liquid Film Thickness on the Intake Port and Combustion Chamber of a Port Fuel Injection Engine

Mr. Yukihiro Takahashi, Mr. Yoshihiro Nakase, Nippon Soken, Inc., Mr. Hiroki Ichinose, Toyota Motor Corp., JAPAN

F2006P172
Study on Multi-hole Plate Nozzle for Stoichiometric SIDI Engine

Mr. Shinji Sugiura, Denso Corporation, JAPAN

F2006P404
Development of Future Engines Using Combustion Diagnostics, Computational Fluid Dynamics, and Advanced Optical Diagnostics

Dr. Andreas Lippert, Dr. Rodney Rask, Dr. Gary Smyth, General Motors R&D and Planning, USA

14:00 - 15:40
PT-14 : CI Engines: Emission

F2006P020
Characteristics of Transient Nano-Particles Exhausted From Diesel Passenger Vehicle

Mr. Sang Il Kwon, Dr. Jong Choon Kim, Mr. Yong Hee Park, National Institute of Environmental Research, Prof. Chang Sik Lee, Hanyang University, KOREA

F2006P236
SOC Control for Common-rail Diesel Engines Using Cylinder Pressure Information

Mr. Byounggul Oh, Dr. Maru Yoon, Prof. MyoungHo Sunwoo, Hanyang University, KOREA

F2006P278
Combustion and Emission Formation Processes in D.I. Diesel Engine Under Various Injection Strategies

Prof. Keiya Nishida, Mr. Kazunori Hirabayashi, Mr. Katsuya Marushita, Mr. Wu Zhang, University of Hiroshima, Mr. Sadahiro Akiba, Yuge National College of Maritime Technology, JAPAN

F2006P298
Low NOx Diesel Combustion Using of High Boosted, Cooled and Wide Range EGR System

Dr. Yuzo Aoyagi, Mr. Hideaki Osada, Mr. Masahiro Misawa, New ACE Institute Co., Ltd., JAPAN

14:00 - 15:40
PT-15 : Hybrid & Electric Power Systems : Hybrid Vehicle -1

F2006P051
A Full Hybrid Vehicle with Parallel Hybrid Power Train and Electric Clutch

Mathias Deiml, Martin Rampeltshammer, Siemens VDO Automotive AG, GERMANY

F2006P160
Introduction of the "PLEO HEV" and Results of the Practical Endurance Test

Mr. Kenzo Watanabe, Fuji Heavy Industries Ltd., JAPAN

F2006P396
General Motors' Innovative Hybrid and Two Mode Hybrid Systems

Larry Nitz, General Motors Powertrain, USA

F2006P401
Control Development for a Parallel Mild Hybrid SUV with Infinitely Variable Transmission: Simulation and Vehicle Implementation

Mr. Baptiste Bonnet, Mr. Enrico Cacciatori, Prof. Nicholas Vaughan, Cranfield University, Mr. Phillip Jordan,

Dr. Matt Field, Mr. David Price, Torotrak, UK, Mr. Krzysztof Wejrzanowski, Newage AVK SEG, GERMANY

14:00 - 15:40
PT-16 : Alternative Fuel Engines: Natural Gas/GTL

F2006P058
Comparisons of Emission Characteristics Between GTL (Gas to Liquid) and Diesel Fuel in Single and Multi-cylinder Engines

Dr. Yonggyu Lee, Dr. Seung-hwan Choi, Mr. Kyonam Choi, Dr. Dongsoo Jeong, Korea Institute of Machinery and Materials, Mr. Donghee Kim, Myoungji University, KOREA

F2006P189
An Effect of the Fuel Supply Conditions on Combustion and Power Characteristics in a DI CNG Engine

Mr. Kang Jeongho, Prof. Jongyul Ha, Prof. Sungsik Chung, Prof. Jeongkuk Yeom, Mr. Jeongho Kang, Dong-A University, Prof. Soohan Yoon, Tongmyung University, KOREA

F2006P385
Combustion and Performance Analysis of a Direct Injection Diesel-Natural Gas Engine

Dr. Antonio Paolo Carlucci, Prof. Arturo de Risi, Prof. Domenico Laforgia, Dr. Fabrizio Naccarato, University of Lecce, ITALY

F2006P400
Performance of Spark Plug Fuel Injector (SPFI) System for Direct Injection of Methane in Spark Ignition Engine for Low Cost Conversion from Port Injection Engine

Mr. Taib Iskandar Mohamad, University Kebangsaan, MALAYSIA, Dr. Matthew Harrison, Cranfield University, Dr. Mark Jermy, University of Canterbury, UK

14:00 - 15:40
PT-17 : Transmission Systems: CVT -1

F2006P146
Efficiency and Stability of the Six Power-Roller Half-Toroidal CVT with 430Nm Torque Capacity

Mrs. Nozomi Toyoda, Dr. Hirohisa Tanaka, Yokohama National University, Mr. Takashi Imanishi, NSK Ltd., JAPAN

F2006P208
Shift Dynamics Modeling for Optimizing Slip Control in a Continuously Variable Transmission

Ir. Bram Bonsen, Mr. Sjoerd Simons, Dr. Bram Veenhuizen, Technische Universiteit Eindhoven, NETHERLANDS, Dr. Giuseppe Carbone, Politecnico di Bari, ITALY

F2006P277
The Design of Advanced Transmissions

Dr. Madhu Raghavan, Dr. Norman Bucknor, Mr. Joel Maguire, GM R&D Center, Mr. James Hendrickson, Mr. Tejinder Singh, GM Powertrain, USA

F2006P306
Suggestion for a Hydraulic-Mechanic CVT-Gearbox for a Truck

Prof. Dr. Hans-Heinrich Harms, Technical University of Braunschweig, GERMANY

14:00 - 15:40
PT-18 : Fuel Cell Systems: Stack

F2006P080
Development of Homogenization Structural Analysis Technology for Fuel Cell Stack

Mr. Takashi Harada, Mr. Makoto Fujiuchi, Toyota Motor Corporation, Dr. Kenjiro Terada, Dr. Masaki Yamada, Tohoku University, Mr. Yohei Wakisaka, JAPAN

F2006P270
A Study on Modeling of the Polymer Electrolyte Membrane Fuel Cell

Mr. Keonyup Chu, Mr. Junghwan Ryu, Prof. MyoungHo Sunwoo, Hanyang University, Dr. Seoho Choi, Dr. Taewon Lim, Hyundai Motor Company & Kia Motors Corporation, KOREA

F2006P352
Development of New FCX with Next-generation Fuel Cell Stack

Mr. Satoshi Kawasaki, Mr. Kenji Uchibori, Honda R&D Co.,Ltd., JAPAN

F2006P403
Hierarchical Approach for Modeling, Controlling and Designing SOFC-based Automotive Power Units

Dr. Pierluigi Pisu, Prof. Giorgio Rizzoni, Ohio State University, USA, Mr. Marco Sorrentino, University of Salerno, ITALY

14:00 - 15:40
VI-9 : Vehicle Ride & Handling: Road & Vehicle

F2006V082
Link-X Suspension

Mr. Daniel Brinker, Metaldyne, USA

F2006V095
3D-Track - Give the Simulation the Chance for a Better Work! Mobile, High-resolution Topology and Roughness Measuring of Road Surfaces to Create 3D Track Models

Mr. Bernhard Schick, TÜV Automotive GmbH, GERMANY

F2006V189
A Combined Model of Tire and Road Surface for the Dynamic Analysis of Motorcycles Handling

Prof. Roberto Lot, University of Padova, ITALY

F2006V227
Numerical Simulations of Vehicle Motion on Uneven Terrain with Rigorous Contact Condition Between Wheels and Road

Mr. Takashi Maruyama, Prof. Hiroshi Tokunaga, Kyoto Institute of Technology, JAPAN

14:00 - 15:40
VI-10 : Vehicle Dynamics, Chassis Control -3

F2006V021
A Controller Design for Rollover Prevention with ESP system

Mr. Youngjoo Cho, Dr. ByungHak Kwak, Dr. SeongHo Choi, Mando Corporation, KOREA

F2006V073
Networked Driveline, Steering, and Chassis Systems

Dr.rer.nat. Horst Krimmel, Mr. Harald Deiss, Dr. Christoph Pelchen, ZF Friedrichshafen AG, Dr. Mathias Eickhoff, ZF Sachs AG, Dr. Gerald Karch, ZF Lenksysteme GmbH, GERMANY

F2006V116
Model Based Fault Diagnosis of Advanced ESP System

Mr. Byoung-Joon Moon, Mr. Ho-Gi Jung, Ph.D Hyung-Jin Kang, Ph.D Pal-Joo Yoon, MANDO Corporation, Prof. Chong-Kug Park, Kyung-Hee University, KOREA

F2006V195
Electronic Stability Control (ESC) Coordinated with Electric Power Steering (EPS)

Mr. Yoshiyuki Yasui, Mr. Hiroyuki Kodama, Advics Co., Ltd., Mr. Minekazu Momiyama, Mr. Hiroaki Kato, Toyota Machine Works, Ltd., Mr. Wataru Tanaka, Aisin Seiki Co., Ltd., Dr. Eiichi Ono, Mr. Yuji Muragishi, Toyota Central R&D Labs., Inc., JAPAN

14:00 - 15:40
VI-11 : Tire -2

F2006V070
Application of Fluid/Structure Interaction Analysis to Tire Development

Dr. Shoji Oida, Eisuke Seta, Hisashi Heguri, Kenshiro Kato, Bridgestone Corporation, JAPAN

F2006V094
T³M-TÜV Tire Temperature Method - A Breakthrough Methodology for Evaluating Tire Robustness, Performance and Wear

Mr. Bernhard Schick, TÜV Automotive GmbH, GERMANY

F2006V126**Comparison of Different System of Measurement of Skid Resistance**

Dr. Pierre-Olivier Vandanjon, Dr. Minh-Tan Do, Dr. Yves Delanne, Mr. Patrick Daburon, Laboratoire Central des Ponts et Chaussées, FRANCE

F2006V127**Measuring Stiffness and Damping Properties of Heavy Tyres**

Mr. Tero Lehtonen, Mr. Heikki Pirjola, TKK - Helsinki University of Technology, FINLAND

14:00 - 15:40**VI-12 : Intelligent Safety Systems: Brake & Pre-Crash Safety****F2006V130****Collision Warning with Auto Brake**

Dr. Ir. Erik Coelingh, Volvo Car Corporation, SWEDEN

F2006V181**Autonomous Braking for Collision Mitigation Purposes by Means of Multi Sensor Perception**

Mr. Thomas Tatschke, FORWISS, University of Passau, Mr. Rudi Lindl, Mr. Leonhard Walchshaeusl, Mr. Vassilios Paraschoudis, BMW Group Research and Technology, GERMANY

F2006V199**Combined Active Passive Safety CAPS - Intelligent Side and Rear Crash Systems for Occupant Safety**

Mr. Thomas Lich, Dr. Reiner Marchthaler, Dr. Ulrich Sailer, Robert Bosch GmbH, GERMANY

F2006V241**Development of Pre-crash Safety System for Large Truck**

Mr. Toshiaki Ezoe, Mr. Hirokazu Okuyama, Hino Motors, Ltd., Mr. Kouichi Fujita, Toyota Motor Corp., JAPAN

14:00 - 15:40**VM-7 : Aerodynamics: Design & Testing -2****F2006M042****Optimal Layout of Heat Exchanger and Blower**

Prof. Jaewon Kim, CAERIS, KOREA

F2006M129**Experimental and Computational Studies of Ground Effect Automotive Aerodynamics**

Dr. Tracie Barber, Mr. Chris Beves, Mr. Sam Diasinos, Mr. Graham Doig, Prof. Eddie Leonardi, UNSW, Dr. Andrew Neely, UNSW-ADFA, AUSTRALIA

F2006M235**Modelling FSI Problems in FLUENT: a General Purpose Approach by Means of UDF Programming**

Dr. Marco Evangelos Biancolini, Tor Vergata University, Dr. Riccardo Baudille, University of Rome, ITALY

F2006M245**Aerodynamic Evaluation of a Modern Hypersports Motorcycle**

Mr. Riccardo M. Pagliarella, Dr. Angelo Tempia, Mr. John Karambalis, Mr. Sam Andrews, RMIT University, AUSTRALIA

14:00 - 15:40**VM-8 : Recycling****F2006M126****Mechanical Separation of Metallic Copper from PVC Coated Copper Wire of Wire Harness by Rolling**

Dr. Seiji Yokoyama, Mr. Sakae Takeuchi, Mr. Hirokuni Hashimoto, Prof. Masahiro Kawakami, Dr. Seijiro Maki, Toyohashi University of Technology, JAPAN

F2006M133**Calculation System of Recycling and Recovery Rates for Compliance of Recycling Legislation**

Mr. Jong-Rae Cho, Hyundai & KIA Motors, Mr. John-Hee Hong, Mr. Byeong-Kwon Hong, Mr. Sung-Won Choi, Hyundai Motors, KOREA

F2006M134**Development of Novel Recycling Technology for Automobile Rubber Waste**

Dr. Kenzo Fukumori, Mr. Mitsumasa Matsushita, Dr. Hirotaka Okamoto, Dr. Norio Sato, Toyota Central R & D Labs., Inc., Mr. Katsumasa Takeuchi, Toyoda Gosei Co., Ltd., Mr. Yasuyuki Suzuki, Toyota Motor Corp., JAPAN

F2006M192**Improvement in Efficiency of Dismantling Plastic Parts by Using FEM**

Mr. Hirokazu Higashi, Mr. Toshiyuki Ito, Kanto Auto Works Ltd., JAPAN

14:00 - 15:40**VM-9 : Advanced Materials: Material/Coating****F2006M032****An Advance Material for Enhancing Reliability and Protection of Automotive Electronics and Other Components.**

Dr. Rakesh Kumar, Specialty Coating Systems, USA

F2006M139**Development of Environmental Friendly High Throwing Power E-Coat.**

Mr. Tsutomu Shigenaga, Mazda Motor Corporation, Mr. Mitsuo Yamada, Nippon Paint Co. Ltd., JAPAN

F2006M150**Strengthening of Pistons in the Contemporary Diesel Engines by****Means of Covering by****Multicomponent Diffusional Coatings**

Alexey Chalov, Dr. Vladimir Artemyev, Mr. Aleksandr Sokolov, Mr. Eugenie Sokolov, Mr. Sergey Urchik, Kuban State Technological University, RUSSIA

F2006M162**Effect of HAZ Softening on Erichsen Value of Tailored Blanks**

Mr. Toshimasa Tomokiyo, Mr. Hirokazu Taniguchi, Mr. Riki Okamoto, Mr. Takashi Miyagi, Mr. Seiji Furusako, Nippon Steel Corporation, JAPAN

15:40 - 16:05 Coffee Break**16:05 - 17:45****DV-7 : Information Systems -2****F2006D019****AGORA-C on-the-Fly Location Referencing**

Mr. Kees Wevers, Navteq, NETHERLANDS

F2006D141**What Effects Does a Speed Information Display Have on Vehicle Speed?: A Study of Methods to Improve Driver Decision in Selecting Safer Speeds**

Dr. Keiichi Yamada, Toyota Central R&D Labs., Inc., JAPAN

F2006D152**Effects of Number of Layer in Automotive Display Menu Structure on Performance of Primary Driving and Secondary Task - Comparison between Young and Older Adults**

Prof. Atsuo Murata, Mr. Makoto Moriwaka, Hiroshima City University, Mr. Masanori Nagata, Toyota Gosei, JAPAN

F2006D154**Usability Evaluation of Automotive Console Box Using EMG Analysis and 3-dimensional Motion Analysis - Comparison between Young and Older Adults**

Mr. Makoto Moriwaka, Prof. Atsuo Murata, Hiroshima City University, JAPAN

16:05 - 17:45**DV-8 : Noise & Vibration -4****F2006D131****Vibroacoustic Modelling in the Mid-frequency Range of a 2D System for Structure-borne Noise Analysis**

Mr. Alessandro Pratellesi, Dr. Niccolò Baldanzini, Prof. Marco Pierini, Università di Firenze - DMTI, ITALY, Dr. Michel Viktorovitch, Rieter Automotive, SWITZERLAND

F2006D183**Method of Transfer Path Analysis for Vehicle Interior Sound with No Excitation Experiment**

Mr. Kousuke Noumura, Mr. Junji Yoshida, Honda R&D CO.,Ltd., JAPAN

F2006D209**An Investigation of Cylinder Imbalance Characteristics with a Time-based Engine Model**

Prof. Tielong Shen, Dr. Bin He, Sophia University, Mr. Junichi Kako, Mr. Akira Ohata, Toyota Motor Co., Ltd., JAPAN

F2006D210**Experimental Modal Analysis of Radial Tires and the Influence of Tire Modes on Vehicle Structure Borne Noise**

Mr. Peter Kindt, Mr. Filip De Coninck, Prof. Paul Sas, Prof. Wim Desmet, Katholieke Universiteit Leuven, BELGIUM

16:05 - 17:45**VSC4 - Vehicle Safety Communications (VSC) Cost-Benefit Feasibility****F2006VSC010**

To be confirmed

F2006VSC011

To be confirmed

F2006VSC012

To be confirmed

16:05 - 17:45**PT-19 : SI Engines: Emission/Catalyst****F2006P237****Performance of Three Way Catalytic Converter Containing Magnesium Oxide for SI Engines with Lean Mixtures**

Prof. Antoni Jankowski, Institute of Aeronautics, Stanislaw Kruczynski, Warsaw University of Technology, POLAND

F2006P276**Reducing HC in Gasoline Engine Warm-up**

Mr. Frank Raab, Prof. Helmut Tschöke, Dr. Detlef Hieber, Otto-von-Guericke-Universität Magdeburg,

F2006P304**Hydrocarbon Emissions from a Wall-controlled Direct Injection Gasoline Engine with a Partially Insulated Piston and its Fuel Economy.**

Mr. Makoto Koike, Mr. Naohisa Nishino, Mr. Tetsunori Suzuoki, Mr. Yu Nozawa, Toyota Central R&D Labs., Inc., Mr. Hiroshi Nomura, Mr. Shinichiro Nogawa, Toyota Motor Co., JAPAN

F2006P327**Super-intelligent Catalysts Having the Self-regenerative Function of Pd, Rh and Pt**

Mrs. Mari Uenishi, Dr. Hirohisa Tanaka, Mr. Isao Tan, Mr. Masashi Taniguchi, Mr. Nobuhiko Kajita, Daihatsu Motor Co., Ltd., Mr. Mareo Kimura, Mr. Keiichi Narita, Mr. Hiromasa Suzuki, Cataler Corporation, JAPAN

16:05 - 17:45
PT-20 : CI Engines: Combustion Model & Control

F2006P112
A 5-Zones Phenomenological Combustion Model for DI Diesel Engine for a Wide Range of Operating Conditions

Mr. Alain Maiboom, Dr. Xavier Tauzia, Prof. Jean-François Hetet, Mr. Mickaël Cormerais, Ecole Centrale de Nantes, Mr. Mourad Tounsi, PSA Peugeot Citroën, FRANCE

F2006P132
Determination of Cetane Number of a Fuel Based Upon Incylinder Parameters and Analysis of its Effect on CI Engine Performance and Emissions Using Artificial Neural Networks

Mr. J. Vijay Manikandan, Mr. Saikishan Suryanarayanan, Mr. G. Lakshmi Narayana Rao, Dr. S. Sampath, Sri Venkateswara College of Engineering, INDIA

F2006P251
Improving the Engine Transient Performance Using the Model-based Predictive Control

Dr. Milos Polasek, Prof. Macek Jan, Vitek Oldrich, Prof. Takats Michal, Dr. Vavra Jiri, Dr. Sika Zbynek, Prof. Valasek Michael, Czech Technical University in Prague, CZECH REPUBLIC

F2006P254
The Application of Vibration Methods in Misfire Detection in a Compression-Ignition Engine in the Aspect of the OBD System Realization in Diesel Locomotives

Prof. Jerzy Merkisz, M.Sc. Marek Waligórski, Dr Bartosz Czechyra, University of Technology in Poznan, POLAND

16:05 - 17:45
PT-21: Hybrid & Electric Power Systems : Hybrid Vehicle -2

F2006P283
Effects of Drivetrain Hybridization in a Series Hybrid Transit Bus

Dr. Mohesn Esfahanian, Isfahan University of Technology, Mr. Meisam Amiri, Mr. Farhad Sangtarash, University of Tehran, Mr. Masoud Valizadeh, Sharif University of Technology, IRAN, Dr. Ahmad Khanipour, Bradford University, UK

F2006P297
Development of Vibration Reduction Motor Control for Electrical 4WD Hybrid Vehicles
 Mr. Shuji Tomura, Mr. Yoshiaki Ito, Toyota Central R&D Labs., Inc., Mr. Shinichi Sugai, Toyota Motor Corp., JAPAN

F2006P311
Control Experiences and Energetic Optimization Studies for a Series Hybrid Electric Vehicle
 Dr. Giovanni Pede, ENEA - Italian National Agency for the Energy and the Environment, Prof. Massimo Ceraolo, University of Pisa, ITALY

F2006P330
Dual Mode Power Split Hybrid Diesel Powertrain
 Mr. Arnaud Villeneuve, Renault SAS, FRANCE

16:05 - 17:45
PT-22 : Alternative Fuel Engines: Bio-Diesel

F2006P015
Potential of Existing Emission Control Technologies for Diesel Engines Fuelled with Biodiesel

Dr. Koji Yamane, Dr. Kiyoshi Kawasaki, The University of Shiga Prefecture, JAPAN

F2006P054
The Changes of Burning Efficiency, Emission and Power Output of a Diesel Engine Fuelled by Bioethanol - Biodiesel-diesel Oil Mixtures
 Mr. Máté Zöldy, TUBE, HUNGARY

F2006P159
Comparative Study on Diesel Engine Performance Test by Using BDF and Vegetable Oil
 Dr. Takashi Tsuchiya, Dr. Ning Zhu, Shizuoka Institute of Science & Technology, JAPAN

F2006P258
Researches of CI Engine Fed with the Vegetable Fuel RME Oriented on Heat Release

Prof. Andrzej Ambroziak, Politechnika Swietokrzyska, Prof. Antoni Jankowski, Institute of Aeronautics, Prof. Stanislaw Kruczynski, Warsaw University of Technology, Dr. Stanislaw Orlinski, Radom University of Technology, POLAND

16:05 - 17:45
PT-23 : Transmission Systems: CVT -2

F2006P111
Prediction of Stress on Elements of

Metal Pushing V-belt for Fatigue Strength by Simulation of Dynamic Behavior
 Mr. Toshihiro Saito, Honda R&D Co., Ltd., JAPAN

F2006P161
Study on Power Loss in Pushing Metal V-belt CVT
 Jihun Lee, Mr. Yoshinori Shinagawa, Prof. Kazuya Okobo, Prof. Toru Fuji, Doshisha University, Mr. Ryuhei Kataoka, Mr. Hideaki Yoshida, Honda R&D., Ltd., JAPAN

F2006P218
Push Belt CVT Opens up New Fuel Economy Horizons
 Mr. Francis v.d Sluis, Mr. Gert-Jan van Spijk, Van Doorne's Transmissie b.v. Bosch Group, NETHERLANDS

F2006P245
Evaluation of the Impact CVT
 M.Sc. Tim Klaassen, Eindhoven University of Technology, NETHERLANDS

16:05 - 17:45
PT-24 : Aftertreatment Systems: Filter

F2006P156
The Effects of DOC and Sulfur Content in Diesel Fuel on the Performance of Metal Foam Diesel Particulate Filter
 Dr. Sangsu Lee, Mr. Jinhyun Kim, Dr. Hongsuk Kim, Dr. Yongil Jeong, Institute of Machinery and Materials, Mr. Kwonoh Oh, Mr. Euisung Lee, Korea Nickel Co., KOREA

F2006P247
Experimental Characterisation of Diesel Soot Regeneration in Catalysed Robust Cordierite Filters
 Prof. Marco Federico Pidria, Dr. Edoardo Merlone Borla, Centro Ricerche Fiat, ITALY

F2006P314
Characteristics of Real Time Nanoparticle Size Distribution Inside Exhaust Gas of Light-duty Diesel Engine
 Dr. Jinwook Lee, Mr. Gyubaek Cho, Dr. Hongsuk Kim, Dr. Yongil Jeong, Korea Institute of Machinery and Materials, Dr. Youngjae Lee, KIER, KOREA

F2006P342
Characterising Particle Emissions by Number Rather than Mass - Measurement Principles and their Benefits
 Dr. Markus Kasper, Matter Engineering AG, SWITZERLAND

16:05 - 17:45
TC-1: Environment & Energy -1

F2006T017
Intelligent Drive Technologies for Innovative Vehicle Concepts
 Dr. Margit Noll, Arsenal Research GmbH, AUSTRIA

F2006T018
Study on the Effects of Automobile Traffic on the Heat Island Mitigation in Nagoya City Urban Area, Japan in the Future
 Ms. Mamiko Yagi, Prof. Takayuki Morikawa, Nagoya University, JAPAN

F2006T048
Development of Microscopic Traffic Simulation Model for Estimation of Roadside Emissions in JCAP

Mr. Shigeo Terada, Mr. Iwao Tanahashi, Toyota Central R&D LABS., Inc., Mr. Seiji Hayashi, Japan Automobile Research Institute, Dr. Yasuo Yoshikawa, Nissan Motor Co., Ltd., Dr. Hitoshi Kunimi, Petroleum Energy Center, JAPAN

F2006T061
Future Powertrain Technologies to Meet Global Requirements
 Dr. Uwe Dieter Grebe, General Motors Powertrain, USA

16:05 - 17:45
VI-13 : Vehicle Ride & Handling: Ride Comfort

F2006V060
Multiobjective Optimisation of Control of Active and Semi-active Suspension Systems Using Jerk as a Measure of Comfort
 Mr. Ian Storey, Dr. Anna Bourmistrova, Prof. Aleksandar Subic, RMIT, AUSTRALIA

F2006V179
Integration of Yaw Stability Control and Active Suspension for Improved Vehicle Ride and Handling
 Mr. Chandrasekaran Rengaraj, Dr. Adam Adgar, Prof. Chris Cox, Prof. David Crolla, University of Sunderland, UK

F2006V216
A Philosophy to Enhance Ride Quality and its Application to 4-Bag Air Suspension of Heavy Duty Truck
 Mr. Shuichi Osano, Hino Motors Ltd., JAPAN

F2006V219
Seat Suspension Based on Variable Absorber System Stiffness for Enhanced Ride Comfort
 Mr. Sandip Kumar, Mr. Venkateswara Rao M., Ashok Leyland Ltd., INDIA

Mrs. Mari Uenishi, Dr. Hirohisa Tanaka, Mr. Isao Tan, Mr. Masashi Taniguchi, Mr. Nobuhiko Kajita, Daihatsu Motor Co., Ltd., Mr. Mareo Kimura, Mr. Keiichi Narita, Mr. Hiromasa Suzuki, Cataler Corporation, JAPAN

16:05 - 17:45
PT-20 : CI Engines: Combustion Model & Control

F2006P112
A 5-Zones Phenomenological Combustion Model for DI Diesel Engine for a Wide Range of Operating Conditions

Mr. Alain Maiboom, Dr. Xavier Tauzia, Prof. Jean-François Hetet, Mr. Mickaël Cormerais, Ecole Centrale de Nantes, Mr. Mourad Tounsi, PSA Peugeot Citroën, FRANCE

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 Dr. Giovanni Pede, ENEA - Italian National Agency for the Energy and the Environment, Prof. Massimo Ceraolo, University of Pisa, ITALY

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 Mr. Arnaud Villeneuve, Renault SAS, FRANCE

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Seat Suspension Based on Variable Absorber System Stiffness for Enhanced Ride Comfort
 Mr. Sandip Kumar, Mr. Venkateswara Rao M., Ashok Leyland Ltd., INDIA

16:05 - 17:45

VI-14 : Power Steering, Active Steering -1**F2006V133**

An EPS Control Strategy to Reduce Steering Vibration Associated with Disturbance from Road Wheels
 Akinobu Sugiyama, Masahiko Kurishige, Hanako Hamada, Takayuki Kifuku, Mitsubishi Electric Corp., JAPAN

F2006V191**Steer-By-Wire Design and Performance**

Mr. Shigeru Shutto, Lord Far East, Inc., JAPAN, Mr. Douglas F. LeRoy, Lord Corporation, USA

F2006V246**A Study on Cogging Torque of the Motor for EPS (Electric Power Steering)**

Mr. Atsuhiko Yoneda, Mr. Takashi Miyoshi, Mr. Yasuo Shimizu, Honda R&D Co.,Ltd JAPAN

F2006V251**Reduction of Cogging Torque on the DC Brushless Motor for EPS**

Mr. Takashi Miyoshi, Mr. Yasuo Shimizu, Mr. Atsuhiko Yoneda, Honda R&D Co.,Ltd., JAPAN

16:05 - 17:45

VI-15 : Suspension & Braking -2**F2006V117****Vehicle Suspension Model Including Neural Network Based Shock Absorber Model**

Mr. Boris Stojic, Faculty for Technical Sciences, YUGOSLAVIA

F2006V161**Co-Simulation Code Development for an Automotive Air Suspension System**

Prof. Jae-Cheon Lee, Keimyung University, KOREA

F2006V171**Assessing Ball Joint Load Capacity Through a Wear Prediction Model**

Mr. Michael Martyniak, Metaldyne, USA

F2006V184**Development of an Electric Active Stabilizer System Based on Robust Design**

Mr. Daisuke Yamada, Mr. Yuuki Ohta, Aisin Seiki Co.,Ltd., JAPAN

16:05 - 17:45

VI-16 : Intelligent Safety Systems: Estimation/Sensing -1**F2006V005****Investigation in Intelligent Active Safety Control Based on Software Fusion**

Dr. Valentin Ivanov, Mr. Sjarhei Kliuzovich, Mr. Uladzimir Siakhovich, National Technical University, Mr. Uladzimir Sarachan, Mr. Barys Shyrokau, National Academy of Sciences, BELARUS

F2006V014**Vehicle's Multi-sensor Data Fusion Model Based on the Idiotypic Network Theory**

Prof. Xinpeng Tang, Mr. Ming Yang, Huazhong University of Science and Technology, CHINA

F2006V018**Tire Road Friction Estimation**

Dr. Yves Delanne, LCPC-French Road and Bridges Central Laboratory, FRANCE

F2006V197**The Development of Stereo Image Obstacle Recognition System**

Mr. Yasuhiro Takagi, Mr. Setsuo Tokoro, Mr. Masayuki Usami, Mr. Tatsuya Shiraishi, Toyota Motor Corp., JAPAN

16:05 - 17:45

VM-10 : Aerodynamics: CFD**F2006M051****Numerical Simulations of Wakes Behind a Car Model**

Dr. Emmanuel Guilmineau, Laboratoire de Mécanique des Fluides, FRANCE

F2006M085**Wind Buffeting for an Automobile Using a Cartesian Grid**

Mr. Anantha Hebbale, Mr. Sreekanth, Daimlerchrysler Research and Technology India Pvt Ltd., Dr. Ravichandran, Mr. Milind Kulkarni, Infotech Technologies, INDIA

F2006M111**High Performance LES on Earth Simulator: A Challenge for Vehicle Aerodynamics**

Prof. Makoto Tsubokura, The University of Electro-Communications, Mr. Kozo Kitoh, Kozo Kitoh Technology, Inc., Prof. Nobuyuki Oshima, Dr. Takuji Tominaga, Hokkaido Univ., Dr. Huilai Zhang, Mr. Keji Onishi, Advance Soft, Prof. Toshio Kobayashi, Japan Automobile Research Institute, JAPAN, Simone Sebben, Volvo Car, SWEDEN

F2006M203**Validation and Characterization of Unsteady Flow and Aeroacoustic Features of a Simplified Automobile Side-Mirror**

Dr. Brad Duncan, Dr. Dave Freed, Dr. Siva Senthoooran, Dr. Gana Balasubramanian, Exa Corporation, USA, Dr. Swen Noelting, Dr. Bernd Crouse, Exa Corporation, GERMANY

16:05 - 17:45

VM-11 : Body Structures: Impact & Crash**F2006M024****Studying the Effects of Non-Extendable Hydraulic Absorbers with Cubic Non-linear Characteristics on the Vehicle Dynamic Response under High Speed Impacts**

Dr. Ahmed Elmarakbi, Prof. Jean Zu, University of Toronto, CANADA

F2006M142**Investigation on the Internal Energy Assessment in the Vehicle Crash Event**

Minoru Inoue, Mr. Michinari Watanebe, Mr. Hiroto Kido, Mr. Noriaki Ito, Dr. Shigeru Ogawa, Mazda Motor Corp., JAPAN

F2006M176**Influence of Optimal Shapes in Vehicle Structural for Improving Crash Safety Performance in the Real World Car to Car Impact.**

Mr. Masashi Makita, Mr. Ryuuji Ootani, Nissan Motor Co., Ltd., JAPAN, Dr. Chinmoy Pal, Nissan Motor Co., Ltd., INDIA

F2006M193**Development of Acceleration Estimating Method During Side Impact Test**

Mr. Tsuyoshi Yasuki, Toyota Motor Corporation, JAPAN

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 http://www.toyoda-gosei.com/ 45 Overseas Facilities in 16 Countries

09:00 - 10:30 **Plenary Session - Manufacturing & Logistics**



Ralf Dieter
 Chairman of the Board
 of Management,
 DÜRR AG



Mark T. Hogan
 President,
 Magna International



Atsushi Niimi
 Senior Managing Director,
 Member of the Board,
 Toyota Motor Corporation



Hideaki Oda
 Senior Managing Director,
 Bosch Corporation

10:30 - 11:00 **Coffee Break**

11:00 - 12:30 **Plenary Session - Traffic Control & Transportation**



Gerald D. Conover
 Managing Director,
 PRC Associates



Yasushi Fukunaga
 General Manager,
 Central Research Laboratory,
 Hitachi Ltd.



Dr. Samart Ratchapolsitte
 Deputy Governor of Bangkok



Paul Verhoef
 Head of Unit for Galileo/ITS,
 Directorate General for Energy
 and Transport, European
 Commission

12:30 - 13:45 **Lunch Break**

16:00 - 17:30 **Plenary Session - Collaborative Engineering**



Bernard Charlès
 President & CEO,
 Dassault Systèmes



Timothy D. Leuliette
 Chairman, President & CEO,
 Metaldyne



David B. Wohleen
 Vice Chairman,
 Delphi Corporation

to be confirmed
 Mazda Motor Corporation

13:45 - 15:25
DV-9 : Thermal Management

F2006D014
Efficient Transient CFD Simulation of a Typical Vehicle Underhood under Heat Soak

Dr. Matteo Franchetta, Ricardo UK Ltd., UK, Mr. Tom Bancroft, Ricardo Inc., USA

F2006D035
Comparison Between Predictions of a Numerical Thermal Manikin Model and Experiments under Solar Radiation

Dr. Yoshiichi Ozeki, DAPT, Dr. Kazuhiko Matsunaga, Mrs. Mai Anamizu, Isuzu Motor Co., Ltd., Dr. Toru Takabayashi, Asahi Glass Co., Ltd., Prof. Shinichi Tanabe, Waseda University, JAPAN

F2006D076
Reduction of Fuel Consumption by Predictive Thermal Management
 Dr. Rainer Richter, BMW Group, GERMANY

F2006D129
Adapting Segmental Models of Human Thermoregulation and

Thermal Sensation for Use in a Thermal Simulation of a Vehicle Passenger Compartment

Dr. Allen Curran, ThermoAnalytics, Inc., USA

13:45 - 15:25
DV-10 : Information Systems -3

F2006D162
Effectiveness of Installation of Video-recording Drive Recorder
 Dr. Tsuyoshi Katayama, Mr. Noboru Kubo, Japan Automobile Research Institute, Mr. Ikuo Nakatani, Mr. Shinsuke

Kashima, Japan Ministry of Land, Infrastructure and Transport, JAPAN

F2006D164
Evaluating the Influence of Distractions to Drivers Based on Eye Movement Model

Mr. Naoki Shibata, Prof. Goro Obinata, Nagoya University, Mr. Haruyuki Kodera, Mr. Hiroto Hamada, Toyota Motor Corporation, JAPAN

F2006D169
Visual Cognitive Performance of Elderly People - Effects to the

Reading Time in Character Size and Visual Distance

Mr. Bunji Atsumi, Mr. Hitoshi Kanamori, Toyota Motor Corporation, Dr. Masako Omori, Kobe Women's University, Prof. Masaru Miyao, Nagoya University, JAPAN

F2006D186
Proactive Detection of Driver's Potentially Risky Behavior Via Sensor Fusion Approach

Dr. Makoto Itoh, Prof. Toshiyuki Inagaki, University of Tsukuba, JAPAN

13:45 - 15:25
DV-11 : Communication & Informatics -1
F2006D042
Case Study on Reliable Body Network Communication Using Network Management

Mr. Joonwoo Son, Daegu Gyeongbuk Institute of Science and Technology, Prof. Wootaik Lee, Mr. Jinwoo Kim, Changwon National University, KOREA

F2006D078
The Future of VII and a National ITS Infrastructure in the United States

David Acton, Connexis, USA

F2006D148
Using Array Antennas to Improve Broadband Reception in Vehicles

Toshihide Komuro, ArrayComm, JAPAN

F2006D178
Development of Communication and Inter-system Functionality Evaluation Environment for in-vehicle Multimedia System

Mr. Masahiro Watanabe, Mr. Nobuyuki Sudo, Mr. Kenichi Suzuki, Mr. Takashi Saito, Mr. Hiroaki Hamanaka, Nissan Motor Co., Ltd., JAPAN

13:45 - 15:25
PT-25 : SI Engines: Engine Design & Modelling
F2006P100
Efficient Engine Development Using Model Based Development (MBD)

Mr. Satoshi Taniguchi, Mr. Naozumi Okuda, Mr. Junichi Mori, Mr. Akira Ohata, Toyota Motor Corporation, JAPAN

F2006P302
Advanced Math-based Engine Calibration and Control System Design: Road-Lab-Math Process

Dr. Byungho Lee, Dr. Charles Folkerts, General Motors, USA

F2006P354
Development of Gasoline Turbo Engine Conforming to U.S. ULEV2 Regulations

Mr. Tohru Ohta, Mrs. Nobu Takahashi, Mr. Nobuhiro Ito, Mr. Ryuji Kono, Mr. Yasuo Matsumura, Honda R&D Co.,Ltd., JAPAN

F2006P384
Modelling of a Spark Ignition Engine for Speed and Torque Transient Simulations

Mr. Baptiste Bonnet, Prof. Nicholas Vaughan, Cranfield University, UK

13:45 - 15:25
PT-26 : CI Engines: Emission/Aftertreatment
F2006P027
Application of a Multi-method ODE Software Component for Simulations of Ultra-low Emissions Diesel Engines

Dr. Paola Belardini, Dr. Claudio Bertoli, Istituto Motori National Research Council, Dr. Stefania Corsaro, University of Naples, Dr. Pasqua D'Ambra, ICAR National Research Council, ITALY

F2006P079
Modelling and Diagnostics of NOx After-Treatment Systems

Dr. Ahmed Soliman, Mrs. Zhijun Zou, Dr. Shawn Midlam-Mohler, Prof. Yann Guezennec, Prof. Giorgio Rizzoni, Ohio State University, USA

F2006P195
A Study on the Correlation of Opacity and PM of Exhaust Gas from a Diesel Vehicle

Mr. Sangkyung Shim, GM Daewoo Auto & Technology Co., Dr. Dongsun Park, EplusT Co., KOREA

F2006P377
Optimization of Diesel Engine Operating Parameters Using Vehicle Driving Simulation

Mr. Junghwan Bang, Mr. Seungmok Choi, Dr. Sungwoo Cho, Prof. Kyoungdoug Min, Seoul National University, KOREA

13:45 - 15:25
PT-27 : Hybrid & Electric Power Systems: Battery & Electric Power System
F2006P038
Double Rotor Synchronous Generator Used as Power Splitting Device in Hybrid Vehicles

Prof. Zdenek Cerovsky, Mr. Pavel Mindl, Czech Technical University of Prague - FEL, CZECH REPUBLIC

F2006P158
The Development of Prismatic Nickel Metal-hydride Battery for HEV Applications

Mr. Osamu Takahashi, Mr. Hiroyuki Sakamoto, Mr. Katsunori Komori, Mr. Toshifumi Ueda, Mr. Shinji Hamada, Panasonic EV Energy Co.,Ltd., JAPAN

F2006P275
Kinetic Energy Recovery with HLA Systems in Small Vehicles

Prof. Enrico Chiappini, DIMEG - University of L'Aquila, ITALY

F2006P340
Development of the Shaking Vibration Control for Electric Vehicles

Mr. Takahito Okubo, Mr. Ken Ito, Mr. Takaaki Karikomi, Mr. Satoru Fujimoto, Nissan Motor Co., Ltd., JAPAN

13:45 - 15:25
PT-28 : Alternative Fuel Engines: Hydrogen/LPG
F2006P155
Optimisation of LPG Throttle-Body Injection System for Improved Efficiency, Emissions and Air-Fuel Mixing

Mr. Mohammad Ali Khan, Prof. Harry Watson, Mr. Paul Baker, Mr. Gordon Liew, University of Melbourne, Mr. Damian Johnston, BP Australia Pty., Ltd., AUSTRALIA

F2006P200
Development of Hydrogen Rotary Engine with Dual Fuel System

Mr. Tomoaki Saito, Mazda Motor Corporation, JAPAN

F2006P356
Examination on Fuel Leakage Mechanism of LPi Vehicle to Meet the ULEV Regulation

Mr. Seongwon Choi, Prof. Simsoo Park, Prof. Cha-Lee Myung, Mr. Hochul Kwak, Korea University, Mr. Doh Han, Korea LPG Association, Mr. Hyun-Ke Kim, Korea Fuel-Tech Corporation, KOREA

F2006P416
Dual-Fuel Compression Ignition Engine Fuelled with Methanol or LPG

Prof. Slawomir Luft, Technical University of Radom, POLAND

13:45 - 15:25
PT-29 : Transmission Systems: MT -1
F2006P005
New High Performance Dual Clutch Transmission

Dr. Rolland Donin, Ricardo Germany, GERMANY

F2006P184
Reduction of Shift Time of Automated Gearboxes with Engine and Transmission Brakes

Prof. Dr. Tim Nosper, University of Applied Sciences, GERMANY

F2006P253
Energy Improvement of the AWD Lorry on the Base of Interaxle Differential Characteristics Optimization

Dr. Sjarhei Kharytonchyk, Prof. Mikhail Vysotski, Scientific Engineering

Enterprise-Belavtortraktorostroenie, Mr. Aliaksei Mikulchik, Minsk Automobile Plant, BELARUS

F2006P318
Automated Transmission + Diesel Engine: Powertrain Global Optimization Under Emissions Constraints

Mrs. Magali Rouge, Mr. Sébastien Bracard, Renault, FRANCE

13:45 - 15:25
PT-30 : Aftertreatment Systems: SCR/Catalyst
F2006P025
Review of SCR Technologies for Diesel Emission Control: European Experiences and Worldwide Perspectives Study Cases of SCR Passenger Cars Integration

Dr. Emmanuel Joubert, Aaqius & Aaqius, Mr. Joel Op De Beeck, Inergy Automotive Systems, FRANCE

F2006P261
Enhancing the Development of Highly Performing SCR-Systems Using VOEMLow

Mr. Patrick Debal, Dr. Guido Lenaers, VITO, BELGIUM

F2006P353
Development of a Low Precious Metal Two-bed Large-Diameter Close-Coupled Catalytic Converter

Mr. Noritaka Sekiya, Honda R&D Co.,Ltd, JAPAN

F2006P402
SCReaming for Low NOx Diesel Emissions: Passenger Car Application and Development of the Selective Catalytic Reduction Control Software

Dr. Lutz Kraemer, IAV GmbH, GERMANY

13:45 - 15:25
VI-17 : Vehicle Ride & Handling: Motorcycle
F2006V023
Analysis of Counter-steering Phenomenon on Motorcycle Dynamics

Mr. Junji Hirasawa, Ibaraki College of Technology, Prof. Masayoshi Kakikura, Tokyo Denki University, JAPAN

F2006V075
A Non Linear Rider Model for Motorcycles

Prof. Roberto Lot, University of Padova, ITALY

F2006V209
Motion Planning Algorithms Based on Optimal Control for Motorcycle Rider System

P.h.D. Francesco Biral, Prof. Mauro Da Lio, Dr. Enrico Bertolazzi, University of Trento, ITALY

F2006V214

Control of a Motorcycle and Its Multibody Dynamics Analysis

Prof. Hidekazu Nishimura, Mrs. Shaopeng Zhu, Mr. Shunsuke Iwamatsu, Chiba University, Dr. Yutaka Kamata, Honda R&D Co.,Ltd., Dr. Hiroshi Tajima, Nihon University, JAPAN

13:45 - 15:25

VI-18 : Power Steering, Active Steering -2

F2006V081

Four Wheel Steer Controller Development Utilising a GPS (Global Positioning Satellite) System Compensated Inertial Sensor Suit

Dr. Martin Bayliss, Dr. David Purdy, Cranfield University, UK

F2006V089

Active Front and Rear Steering PI Controls in Four Wheel Steering Vehicles

Dr. Fabio Cinili, Prof. Riccardo Marino, Università di Roma "Tor Vergata", Dr. Stefano Scalzi, Ferrari, ITALY

F2006V217

Exact Minimax Optimizations of Tire Workload for Independent Steering Vehicles

Prof. Osamu Nishihara, Dr. Toshihiro

Hiraoka, Prof. Hiromitsu Kumamoto, Kyoto University, JAPAN

F2006V221

Competing Electric Actuation Technologies for Automotive Applications

Dr. Dorin Iles-Klumpner, ebm-papst St. Georgen, USA, Dr. Ioan Serban, Mr. Milorad Risticvic, ebm-papst St. Georgen GmbH & Co. KG, GERMANY, Prof. Ion Boldea, University Politehnica Timisoara, ROMANIA

13:45 - 15:25

VI-19 : Tire -3

F2006V091

Tire/Road Interface Modelled as Elastically Coupled Two-mass System for Indirect Tire Pressure Monitoring System (ITPMS)

Dr. Alan Davis, European Patent Office, NETHERLANDS

F2006V152

Frictional Energy on the Contact Surface of Tread Rubber Block

Mr. Hyun Seung Yoo, Prof. Doo Man Kim, Hankuk Aviation University, KOREA

F2006V162

Numerical and Experimental Research on Truck Tire -

Road Contact Stress

Dr. Gabriel Anghelache, Ms. Raluca Moisescu, University Politehnica of Bucharest, ROMANIA

F2006V163

FE Analysis of the Effect of Real Brake Contact Areas on Brake Surface Temperatures

Dr. Hong-Sheng Qi, Mr. Yue Zhao, Prof. Andrew Day, University of Bradford, UK

13:45 - 15:25

VI-20 : Intelligent Safety Systems: Estimation/Sensing -2

F2006V201

Component-based, Automated FMEA of Advanced Active Safety Systems

Dr. Yiannis Papadopoulos, Mr. David Parker, University of Hull, UK, Dr. Christian Grante, Volvo Cars, SWEDEN

F2006V228

On-board Estimation of Friction Potential

Dr. Daniel Lechner, INRETS, FRANCE

F2006V229

Sensor Fusion for Vehicle Positioning in Intersection Active Safety Applications

Mr. Tohid Ardeshiri, Mrs. Sogol Kharrazi, Mr. Jonas Börgman, Autoliv

Development, Prof. Jonas Sjöberg, Chalmers University of Technology, SWEDEN

F2006V242

Fault Diagnosis of a Passenger Vehicle Electrical System

Dr. Pierluigi Pisu, Prof. Giorgio Rizzoni, Ohio State University, Dr. Annalisa Scacchioli, Center for Automotive Research, USA

13:45 - 15:45

VI-OS : Organised Session: Enhancing Active Safety by New Scientific Approaches

F2006V203

Research on Incident Analysis Using Drive Recorder Part 1: Toward Database Construction

Prof. Minoru Kamata, Dr. Mitsunobu Fujita, Dr. Motoki Shino, University of Tokyo, Prof. Masao Nagai, Dr. Yohei Michituji, Tokyo University of Agriculture and Technology, Mr. Kozo Maeda, JSAE, JAPAN

F2006V202

Research on Incident Analysis Using Drive Recorder, Part 2: Toward Active Safety Assessment

Prof. Dr. Masao Nagai, Dr. Yohei Michituji, Tokyo University of Agriculture and

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Technology, Prof. Dr. Minoru Kamata, Dr. M. Fujita, Dr. Motoki Shino, University of Tokyo, Mr. Kozo Maeda, JSAE, JAPAN

F2006V205

Traffic Simulation System for Evaluating Effects of Advanced Driver Assistance Systems on Road Traffic Accidents

Prof. Naohiro Yuhara, Nihon University, Dr. Jun Tajima, Advanced Solutions Technology Japan, Ltd., JAPAN

F2006V086

Virtual Environment for the Development of Perception Systems for Active Safety

Dr. Javier Ibañez-Guzman, Mr. Johann Moussain, Dr. Sebastian Cornou, Mr. Didier Wautier, Renault S.A., FRANCE, Mr. N. Shimomura, Dr. Hiroshi Takahashi, Mr. Y. Aragaki, Nissan Motor Co., Ltd, JAPAN

F2006V253

Integrated Project PREVENT: Functional Requirements and System Architecture for Preventive Safety Applications

Dr. Maxime Flament, Ertico, BELGIUM, Mr. Matthias Schulze, Ertico, GERMANY

13:45 - 15:25

VM-12 : Body Structures: Body & Structure -1

F2006M013

Innovative Signal Processing for the Analysis of in-service Vibration of Vehicle Closures and Components

Dr. Juan J. García, Applus+ IDIADA, SPAIN

F2006M050

Pedestrian Protection - Influence of Body Design

Mr. Jiri Svoboda, Czech Technical University in Prague, CZECH REPUBLIC

F2006M079

Current Situation and New Proposals for Pedestrian Protection Through an In-depth Accident Investigation

Mr. José Manuel Barrios, Mrs. Esmeralda Martos, Mr. Pere Fonts, Applus+ IDIADA, SPAIN

F2006M124

Application of Non-parametric Shape Optimization Method to Multiobjective Rigidity Design of Automotive Components

Mr. Jiro Tsuji, Mitsubishi Automotive Engineering Co., Ltd., Prof. Masatoshi Shimoda, Shonan Institute of Technology, Mr. Yasuhiro Kanda, MMC Computer Reseach Ltd., JAPAN

13:45 - 15:25

VM-13 : Manufacturing Systems: Process/Evaluation

F2006M069

Optimal Management of Wirings Harnesses Diversity

Dr. Josselin Visconti, Dr. Yann Collette, Renault, FRANCE, Mr. Maryan Sidorkiewicz, Renault, GERMANY

F2006M187

Study on Near Dry Cutting of Aluminum Silicon Alloys for Engine Cylinder Head

Mr. Hiromi Yoshimura, Mr. Makoto Matsui, Toyota Motor Corporation, Prof. Dr. Toshimichi Moriwaki, Prof. Dr. Nobuo Ohmae, Prof. Dr. Tetuo Nakai, Dr. Toshiro Shibasaka, Dr. Hiroshi Kinoshita, Kobe University, JAPAN

F2006M214

Development of Carburized Quenching Process Simulation Tool for Optimizing Operation Conditions

Dr. Youichi Watanabe, Nissan Motor Co., Ltd., Prof. Tatsuo Inoue, Fukuyama University, Prof. Dong-Ying Ju, Saitama Institute of Technology, Dr. Hayato Shichino, Komatsu Co. Ltd., Dr. Kazuo Okamura, Sumitomo Metals Co. Ltd., Prof. Michiharu Narazaki, Utsunomiya University, Mr. Hideo Kanamori, Idemitsu Kosan Co. Ltd., JAPAN

F2006M230

Development of Accurate Springback Prediction Technology in Sheet Forming Simulations

Dr. Masato Takamura, Dr. Hideyuki Sunaga, Dr. Susumu Takahashi, Mr. Yoshinori Tanaka, Nissan Motor Co., Ltd., Dr. Akitake Makinouchi, RIKEN - The Institute of Physical and Chemical Research, JAPAN

15:25 - 15:50 Coffee Break

15:50 - 17:30

DV-12 : Human Comfort -1

F2006D066

Measurement of Semivolatile Organic Compounds (SVOCs) in Vehicle Cabin - The First Report

Mr. Kouichi Tatsu, Isuzu Advanced Engineering Center, Ltd., JAPAN

F2006D074

Improved Air Quality In-cabin - The Electrostatic Filtration

Mr. Frédéric Ladrech, Valeo Climate Control, FRANCE

F2006D109

Vehicle Interior Space Utility with Seat Equipment for Occupant's Relaxation

Mrs. Naoko Motoyoshi, Mrs. Nanae

Michida, Mr. Tamio Miyahara, Mr. Kouichi Nakaya, Mazda Motor Corporation, JAPAN

F2006D168

Method of Evaluating Air Discharge Sound Quality of Automotive Air-conditioning Systems

Mr. Junichi Amakasu, Nissan Motor Co., Ltd., JAPAN

15:50 - 17:30

DV-13 : Driver Assistance -3

F2006D038

Route Guidance Coordinated with Traffic Management, Individual in-car-navigation in Accordance with Diversion Recommendations of Traffic Control Centers - Technical and Institutional Solutions

Mr. Peter Fischer, BMW AG, GERMANY

F2006D127

Conduct-by-wire Following a New Paradigm for Driving into the Future

Prof. Dr. Hermann Winner, Darmstadt University of Technology, GERMANY

F2006D130

Novel User Interface for Semi-automatic Parking Assistant System

Mr. Ho Gi Jung, Dr. Pal Joo Yoon, Mando Corp., Prof. Jai Hie Kim, Yonsei University, KOREA

F2006D147

Study of Driver Behavior when Using Full Speed Range Adaptive Cruise Control

Mr. Kenji Kimura, Mr. Hitoshi Kanamori, Toyota Motor Corporation, Mr. Takashi Wakasugi, JARI, JAPAN

15:50 - 17:30

DV-14 : Communication & Informatics -2

F2006D106

A Contribution Towards an Electronic Network for Safety Relevant Automotive Electronic Systems

Philipp Nenner, Universität Karlsruhe (TH) / IIT, GERMANY

F2006D143

Information Distribution System to Select Suitable Information for Driver with Vehicle Information and Destination Presumption for in-vehicle Navigation System

Mr. Yasushi Sobukawa, Suzuki Motor Corporation, JAPAN

F2006D177

A Novel Approach for a Night Vision System

Prof. Dr. Peter M. Knoll, Robert Bosch GmbH, GERMANY

F2006D184

Prediction Method of Emergency Braking Based on Accelerator Pedal Information

Mr. Shinichi Kojima, Mr. Yoshiki Ninomiya, Toyota Central R&D Labs., Inc., Mr. Osamu Takeda, Mr. Shigeyuki Kido, Toyota Motor Corporation, JAPAN

15:50 - 17:30

PT-31 : SI Engines: Turbo (for SI&CI)/Super-Charging

F2006P108

Development of One-dimensional Models for Turbochargers and Application in the Improvement of Engines Intake, Exhaust Noise and Volumetric Efficiency

Dr. José Ramón Serrano, Prof. Antonio J. Torregrosa, Mrs. Tania Fernández, Universidad Politécnica de Valencia, Dr. Said Soltani, Renault, SPAIN

F2006P119

Unsteady Flow Behaviour of the Turbocharging Circuit in Downsized SI Automotive Engines

Prof. Massimo Capobianco, Eng. Silvia Marelli, University of Genoa, ITALY

F2006P248

Application of a Second Generation 12V Electric Supercharging System to Enhance Torque and Driveability of Naturally Aspirated Gasoline Engines

Mr. Guy Morris, Mr. Mark Criddle, Visteon UK Ltd., UK

F2006P262

Flow Analysis and Performance Mapping of Twin-screw Superchargers for Different Rotor Profiles

Katherine Ilie, Prof. Aleksandar Subic, RMIT University, AUSTRALIA

15:50 - 17:30

PT-32 : CI Engines: Variable Compression

F2006P047

Modeling of Variable Intake Valve Timing in Camless Turbocharged Diesel Engine

Mr. Seyed Ahmad Ghazimirsaid, Mr. Amirhossein Shamdani, Dr. Amirhosein Shamekhi, K.N.T.U., IRAN

F2006P331

Diesel VCR (Variable Compression Ratio) Engine Development Using Multi-link Mechanism

Mr. David Gerard, Dr. Hedi Ben Hadj Hamouda, Mr. Steven Croguennec, Mr. Marc Thomine, Renault, FRANCE, Dr. Shunichi Aoyama, Mr. Kenshi Ushijima, Mr. Katsuya Moteki, Nissan, JAPAN

F2006P371

Study on Ignition Timing Control for Diesel Engines Using In-Cylinder Pressure Sensors

Dr. Yuichi Shimasaki, Mr. Mamoru Hasegawa, Mr. Satoshi Yamaguchi, Mr. Makoto Kobayashi, Mr. Hideki Sakamoto, Mr. Naoto Kitayama, Mr. Tomohiro Kanda, Honda R&D Co.,Ltd., JAPAN

F2006P417

Potential of Diesel Emissions Reduction by Premixed Combustion with Variable Valve Timing

Mr. Yutaka Murata, Jin Kusaka, Prof. Yasuhiro Daisho, Matsuo Odaka, Waseda University, Daisuke Kawano, Hisakazu Suzuki, Yuichi Goto, National Traffic Safety and Environment Laboratory, Hajime Ishii, JAPAN

15:50 - 17:30

PT-33 : Hybrid & Electric Power Systems: Simulation Tool

F2006P115

An Advanced Simulation Tool for Consumption Emissions and Performance Analysis of Conventional and Hybrid Vehicles

Dr. Pascal Menegazzi, IFP, Mr Philippe Aubret, Imagine, Mr. Francois Badin, Mr.

Rodchi Trigui, INRETS, Mrs. Carole Marchand, Gaz De France, FRANCE

F2006P273

Development of "Virtual and Real Simulator" for Hybrid Vehicle Evaluation

Mr. Shoji Sakai, Nippon Soken, Inc., Mr. Yasushi Kojima, Mr. Koji Shirota, Toyota Motor Corporation, JAPAN

F2006P367

Development of Inverter Simulation System for Hybrid Vehicles

Mrs. Kaoru Torii, Mr. Shoichi Sasaki, Mr. Kimimori Hamada, Toyota Motor Corporation, Mr. Takashi Kojima, Toyota Central R&D Labs., Inc., JAPAN

F2006P378

New Tools for Interior Comfort Evaluation of Modern Vehicles

Antonio Vecchio, Dr. Karl Janssens, Dr. Bart Peeters, Dr. Herman Van der Auweraer, LMS International, BELGIUM

15:50 - 17:30

PT-34 : Alternative Fuel Engines: Diesel

F2006P165

Effects of Fuel Properties to the Cold Starting Performance of a Low

Compression Ratio DI Diesel Engine

Mr. Koji Kitano, Toyota Motor Corporation, JAPAN

F2006P216

A Study of Fischer-Tropsch Diesel (FTD) Fuel Effects on Combustion and Emissions Characteristics

Mr. Kazunori Yoshitomi, Mr. Noboru Uchida, Mr. Hiroshi Hirabayashi, Hino Motors, Ltd., Dr. Ichiro Sakata, Toyota Motor Corporation, Mr. Hiroshi Yoshida, Showa Shell Sekiyu K.K., JAPAN

F2006P239

Study Concerning the Energetic and Ecologic Potential of the Alternative Fuels for Internal Combustion Engines

Prof. Anghel Chiru, Dr. Angel Huminic, Prof. Nicolae Ispas, Dr. Stanica Calota, Transilvania University of Brasov, ROMANIA. Prof. Eberhard Brunn, Brunn-Autoland, GERMANY

F2006P391

Comparison of Advanced Turbo-Charging Technologies Under Steady-State and Transient Conditions

Mr. Achim Königstein, Mr. Christian Hock, Mr. Erik Karlsson, Mr. Marcel Frensch, Mr. Per-Inge Larsson, GM Powertrain Europe, GERMANY

PT-35 : Transmission Systems: MT -2

F2006P065

A New Methodology to Investigate the Shift Lever Vibrations Root Cause

Dr. Ciro Pezzi, Dr. Corrado Grasso, Dr. Giovanni Mastrangelo, Elasis S.C.p.A., ITALY

F2006P072

The Validation of an FEM Analysis of a Shift Fork Assembly for Automotive Transmission Application

Dr. Giovanni Gatti, Dr. Domenico Feola, Dr. Corrado Grasso, Elasis ScpA, ITALY

F2006P097

Applicability of the New Kyowa High Performance Synchronizer

Mr. Kazuyoshi Hiraiwa, Kyowa Metal Works Co., Ltd., JAPAN, Dr. Peter Werth, Mr. Thomas Hackl, Hofer-Pdc GmbH, GERMANY

F2006P107

Development of Modern Powershift Transmissions for City Buses in the Context of the Diverging Requirements of World Wide Customers

Dr. Joachim Foth, Mr. Peter Wunderlich, ZF Friedrichshafen AG, GERMANY

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15:50 - 17:30**PT-36 : Powertrain Technology: Emission****F2006P136****Simulation of Thermal Barrier Coating Diesel Engine**

Dr. Thuong Hien Le, Hanoi University of Technology, VIETNAM

F2006P175**Design and Performance of a Solid Particle Counting System for Real-Time Measurement of Engine Exhaust**

Mr. Qiang Wei, Horiba Instruments Incorporated, USA, Dr. Montajir Rahman, Mr. Ichiro Asano, Mr. Takeshi Kusaka, Ms. Kaori Inoue, Dr. Masayuki Adachi, Horiba, Ltd., JAPAN

F2006P238**Generating Realistic Emission Factors for Heavy-duty Vehicles - Methods and First Results**

Dr. Juhani K Laurikko, Mr. Kimmo Erkkilä, VTT Technical Research Centre Finland, FINLAND

F2006P288**Diesel Lean NOx Trap Performance Improvements Using Combustion-based and External Reductant Feedstreams**

Mr. David Brown, Mr. Michael Viola, Mr. Frank Ament, General Motors Powertrain, USA

15:50 - 17:30**TC-2 : Safety -1****F2006T041****Building up an Area Wide Hazardous and Heavy Goods Monitoring System for the Austrian TERN - Project SHAFT**

Mr. Juergen Zajicek, Arsenal Research, AUSTRIA

F2006T056**Statistical Analysis of the Influence of Using an ISA System on Accident Reduction. The Spanish Case**

Dr. Javier Paez, Dr. Francisco Aparicio, Mr. Felipe Jiménez, Dr. Félix Moreno, INSIA - UPM, SPAIN

F2006T057**Visual Behavior Assessment of Older Driver Using a Simulator**

Mr. Kazunori Higuchi, Mr. Mitsuteru Kokubun, Mr. Yoshiyuki Umemura, Toyota Central R&D Labs., Inc., Mr. Yoshitaka Fuwamoto, Mr. Bunji Atsumi, Toyota Motor Corp., JAPAN

F2006T071**Monitoring the Vehicle Driving and Usage Conditions: Objectives, Experiences and Perspectives**

Dr. Michel Andre, Mr. Robert Vidon, INRETS - Institut National de Recherche sur les Transports et leur Sécurité, FRANCE, Mr. Matteo Perotti, Politecnico di Milano, ITALY

15:50 - 17:30**TC-3 : Environment & Energy -2****F2006T010****Uncertainty Analysis of the Vehicle Emission Measurement on the Chassis Dynamometer**

Dr. Piotr Bielaczyc, Dr. Andrzej Szczotka, BOSMAL Automotive Research and Development Center, POLAND

F2006T030**Real-time, Size-resolved, Quantitative Measurements of Diesel Exhaust Particles Semi-volatile Chemical Composition by Means of Aerosol Mass Spectrometer**

Dr. Kenichi Akiyama, Japan Automobile Research Institute, JAPAN

F2006T042**Numerical Simulator for Comprehensive Testing of an SCR Catalytic Converter System**

Dr. Christoph Schär, Measurement and Control Laboratory, Dr. Christopher Onder, Prof. Hans P. Geering, IMRT/ETHZ, SWITZERLAND

F2006T066**CLEVER - Compact Low Emission Vehicle for Urban Transport**

Mr. Heiko Johannsen, Mr. Lukasz Lasek, Technical University Berlin, Mr. Peter Krams, BMW AG, Dr. Steffen Sohr, Takata-Petri Ag, GERMANY, Mr. Chris Denton, Cooper-Avon Tyres Ltd., UK, Mr. Richard Tilagone, IFP, FRANCE, Mr. Richard Kretz, LKR, AUSTRIA

15:50 - 17:30**VI-21 : Power Steering, Active Steering -3****F2006V019****Mathematical Modelling of a Cornering Vehicle Fitted with Hydraulic Power-assisted Steering**

Dr. Khalid Hussain, Mr. Masri Baharom, Prof. Andrew Day, University of Bradford, UK

F2006V079**Driver Preferences of Steering Gear Ratio and Steering Wheel Effort -****A Driving Simulator Study**

Mr. Markus Agebro, KTH Aeronautical and Vehicle Engineering, SWEDEN

F2006V164**Modelling of a Hydraulic Steering System**

Mr. Peter Pfeffer, Dr. D. Nigel Johnston, University of Bath, UK, Mr. Manfred Harter, BMW Group, GERMANY

F2006V196**Development of Steering Hardware-in-the-loop (HIL) Simulator**

Mr. Masaya Segawa, Koyo Seiko Co., Ltd., JAPAN

15:50 - 17:30**VI-22 : Suspension & Braking -3****F2006V185****The Development of Suspension Design Technology Applying Principal Elastic Axes**

Mr. Kazuhiro Nishimura, Mr. Takashi Nozawa, Toyota Motor Corporation, JAPAN

F2006V212**Study on the Novel Active Suspension for Vehicles with Energy Regeneration**

Mr. Xuechun Zheng, Prof. Fan Yu, Jiao Tong University, CHINA

F2006V238**A Comparison of OEM and Aftermarket Shock Absorbers for a Production Hypersports Motorcycle I - Bench Testing and System Simulation**

Mr. Riccardo M. Pagliarella, Dr. Angelo Tempia, Mr. John Karambalis, Mr. Sam Andrews, RMIT University, AUSTRALIA

F2006V243**Calculation and Depiction of Joint Angles in Suspension Systems**

Dipl.-Ing. Ingo Albers, Institut für Kraftfahrwesen Aachen, Dr.-Ing. Christoph Elbers, ZF Lemförder Fahrwerktechnik GmbH & Co. KG, GERMANY

15:50 - 17:30**VM-14 : Body Structures: Body & Structure -2****F2006M143****Application of FOA to the Development of 1BOX-car Body Structure with Various Types**

Mr. Hiroshi Kamiya, Mr. Kouji Matsumoto, Mr. Hiroshi Okumura, Toyota Auto Body Co., Ltd., Mr. Hidekazu

Nishigaki, Mr. Tatsuyuki Amago, Toyota Central R&D Labs., Inc., JAPAN

F2006M197**The Improvement of Accuracy of Road Load Input Prediction for Durability**

Mr. Takuya Yuasa, Mr. Toshiaki Nakamaru, Nissan Motor Co., Ltd., JAPAN

F2006M198**Development of a New Vehicle Including the Doors with Built-in Pillar Function**

Mr. Kazuaki Yoshimura, Kanto Auto Works Ltd., JAPAN

F2006M227**Development of Front Pillar Structure with No Blind Spot**

Mr. Yuuji Kinoshita, Hino Motor Ltd., JAPAN

15:50 - 17:30**VM-15 : Manufacturing Systems: Painting/Surface Touch****F2006M167****Measurement and Visualization of Micro-Brilliance Texture for Automobile Paint**

Mr. Takahiro Tsubouchi, Mr. Minoru Ikeda, Mr. Susumu Umemura, Mr. Satoshi Kodama, Toyota Motor Corporation, JAPAN

F2006M191**Development of New Quantitative Evaluation Method for Surface Touch Perception of Car Interior Parts**

Mr. Atsushi Yamada, Mr. Hiroyuki Nishibata, Kanto Auto Works Ltd., JAPAN

F2006M217**Development of Super Touch Feel Paint**

Mr. Satoshi Miyajima, Kanto Auto Works Ltd., Mr. Kenji Kawazu, Toyota Motor Corporation, JAPAN

F2006M238**Development of Simulation Technology for Electrodeposition Painting of Vehicle Bodies**

Mr. Takeshi Kashiyama, Suzuki Motor Corporation, JAPAN

09:00 - 10:40

DV-15 : Driver-Vehicle Interface Information/Driveability

F2006D075

Investigation of Path Tracking Skill Using a Moving Base Driving Simulator

Mr. Andreas Nilsson, KTH Aeronautical and Vehicle Engineering, SWEDEN

F2006D176

Running Car Diagnosis by Tele-metering Data

Mr. Koichi Onishi, Mr. Kenji Kurihara, Mr. Teruhisa Ono, Mr. Tsutomu Onodera, Nissan Motor Co., Ltd., Mr. Mamoru Shinshi, Nissan Motorsports International Co., Ltd., JAPAN

F2006D207

Objective Driveability Development of Full-size Pickup Trucks

Mr. David Evans, Mr. Randall Yost, Mr. Eric Schutt, General Motors, USA, Mr. Gernot Leitner, Mr. Erik Bogner, AVL List GmbH, AUSTRIA

09:00 - 10:40

DV-16 : Human Comfort -2

F2006D086

Measurement of Semivolatile Organic Compounds (SVOCs) in Vehicle Cabin (The Third Report)

Mr. Kunihiro Hoshino, GL Sciences Inc., JAPAN

F2006D125

Capturing Driver Behaviour for Sound Evaluations Using an Interactive NVH Simulator

Dr. Paul Jennings, Mr. Sebastiano Giudice, Mr. Jeff Fry, Mr. Diego Sanchez Repila, University of Warwick, Mr. Roger Williams, Mr. Mark Allman-Ward, Sound & Vibration Technology, Dr. Garry Dunne, Jaguar Engineering Centre, UK

F2006D201

Delivering Customer Enthusiasm by Engine Sound Character Design

Dr. Per-Olof Sturesson, C. Lindqvist, A. Lindblom, General Motors Europe Engineering, SWEDEN

F2006D208

Cabin Air Quality - Main Cause for Discomfort and Smell from the HVAC and Possible Technical Solutions

Mr. Stefan Wiedemann, BMW Group, GERMANY

09:00 - 10:40

DV-17 : Vehicle Security & Occupant Protection

F2006D013

Advances in European Passive Safety Research: The APROSYS Project

Prof. Dr. Jac Wismans, Mr. Gijs Kellendonk, TNO, NETHERLANDS

F2006D071

Identification of the Most Frequent Intersection Accident Scenarios: A Tool for Inferring Appropriate Counter-Measures

Mrs. Marie-Christine Simon, Centre Européen d'Etudes de Sécurité et d'Analyse des Risques (CEESAR), Mr. Yves Page, Mr. Cyril Chauvel, LAB, FRANCE, Mr. Michael Stanzel, Volkswagen, GERMANY

F2006D144

TOYOTA New Security System by Telematics Technology

Mr. Takeo Endo, Toyota Motor Corporation, JAPAN

F2006D145

A Study of Cervical Spine Kinematics in Rear Impacts and Mitigation of Loading Level to Cervical Soft Tissues

Dr. Yuichi Kitagawa, Mr. Junji Hasegawa, Mr. Tsuyoshi Yasuki, Toyota Motor Corporation, JAPAN

09:00 - 10:40

PT-37 : SI Engines: Component

F2006P084

Super Carbon Fouling Resistive Small Spark Plug

Mr. Hiroya Ishiguro, Denso Corporation, Mr. Katushi Hashizume, Toyota Motor Corporation, Mr. Shinichi Okabe, Nippon Soken Inc., JAPAN

F2006P305

Friction Reduction Technology and Prediction Procedure in New L4 Engines

Mr. Kenichi Okita, Mr. Sadayuki Abou, Mr. Minoru Chuubachi, Mr. Yukio Shimada, Nissan Motor Co., Ltd., JAPAN

F2006P357

The Behavior of Spray Particles Generated by Slit Nozzle in the Turbulent Flow

Mr. Masaya Muto, Prof. Marie Oshima, University of Tokyo, JAPAN

F2006P394

Speedup of Bearing Evaluation by Using Newly Developed Bearing Rig-Tester

Mr. Kyoichi Machida, Mr. Shinichi Takahashi, Mr. Hideo Ueshima, Mr. Toshiki Sato, Mr. Kenji Fujiki, Honda R&D Co., Ltd., JAPAN

09:00 - 10:40

PT-38 : CI Engines: Injection System

F2006P021

Compensating the Influence of

Pressure Waves on Injection

Accuracy in Common Rail Systems by Use of a Magneto-Elastic Pressure Sensor

Mr. Julian Baumann, Prof. Uwe Kiencke, University of Karlsruhe, IIT, Dr. Thomas Schlegl, Siemens VDO Automotive AG, GERMANY

F2006P192

Multiple Injections at High Pressure with a Piezo-Electric Injection System in a HDDI Diesel Engine

Mr. Rickard Ehleskog, Chalmers University of Technology, SWEDEN

F2006P346

Further Development of the EDS, Single Fluid HEUI Injection System

Prof. Brian Milton, University of New South Wales, Mr. Ben Ware, Mr. Tim White, Mr. Gareth Milton, Mr. Tony Gardner, Mr. Mark Bevan, Enviro Diesel Systems, AUSTRALIA

09:00 - 10:40

PT-39 : Hybrid & Electric Power Systems: Simulator/Management

F2006P374

Approaches to Inverter Quality Assurance for Hybrid Vehicles (HVs)

Mr. Mikio Shirai, Mr. Yoichiro Baba, Toyota Motor Corporation, JAPAN

F2006P376

Hybrid vs. Advanced Diesel

Prof. Guenter Hohenberg, University of Technology Darmstadt, GERMANY

F2006P387

Energy Management Strategies for a Parallel Hybrid Electric Powertrain: Fuel Economy Optimisation with Driveability Requirements

Mr. Enrico Cacciatori, Prof. Nicholas Vaughan, Cranfield University, UK

F2006P413

Simulation Analysis of Performance for Off-Road HEV Based on Redevelopment of Simulation Software ADVISOR

Dr. Yugong Luo, Tsinghua University, CHINA

09:00 - 10:40

PT-40 : SI Engines: Valve/Ignition/Bearing

F2006P279

Development of Lead-free Floating Bush Bearings for Turbochargers

Mr. Eisaku Inoue, Mr. Masahito Fujita, Mr. Atsushi Uno, Daido Metal Co., Ltd., JAPAN

F2006P287

Electro-Hydraulic Fully Flexible Valve Actuation System for Advanced

Combustion Development

Dr. Zongxuan Sun, Dr. Tang-Wei Kuo, GM, USA

F2006P289

Self Diagnosis of Inductive Ignition System for Use in Small Engine

Mr. Himadri BhushanDas, TVS Motor Company, INDIA

F2006P358

Ultra Low Emission System for Variable Valve Lift Gasoline Engine

Mr. Hiroshi Tagami, Mr. Yuji Yasui, Mr. Masahiro Sato, Mr. Hisashi Ito, Honda R&D, JAPAN

09:00 - 10:40

PT-41 : Alternative Fuel Engines: Ethanol/Hydrogen

F2006P294

Aspects of Using Ethanol in SI Engines

Prof. Nicolae Negurescu, Prof. Constantin Pana, Prof. Marcel Ginu Popa, Ass.Eng. Alexandru Cernat, Dr. Gabriel Boboc, Phd.Student Dorin Soare, University Politehnica Bucharest, ROMANIA

F2006P412

Gaseous Fuels Containing Hydrogen in ICES

BAE Lejo Buning, HAN University, NETHERLANDS

09:00 - 10:40

PT-42 : Transmission Systems: Machine Elements

F2006P035

Smooth Launch Control of an Integrated Friction Launch Automatic Transmission

Mr. Andrew Phillips, Dr. Shushan Bai, General Motors Corp., USA

F2006P299

Development of Super-Low Friction Torque Tapered Roller Bearing for High Efficiency Axle Differential

Mr. Hiroki Matsuyama, Dr. Kazutoshi Toda, Mr. Kanichi Kouda, Mr. Kouji Kawaguchi, Mr. Atsuji Uemura, Koyo Seiko Co., Ltd., JAPAN

F2006P325

A Study on Noise Reduction of a Torque Converter

Mr. Euncheol Park, Mr. Intea Lee, Mr. Jaeduk Jang, Mr. Insik Joo, Korea Powertrain Co., Ltd., Prof. Sungbae Choi, Catholic University of Daegu, KOREA

F2006P361

Development of Compact, High Capacity AWD Coupling With DLC-Si Coated Electromagnetic Clutch

Mr. Junji Ando, Dr. Toshiyuki Saito, Mr.

Naoyuki Sakai, Mr. Toshifumi Sakai, Mr. Hajime Fukami, Toyoda Machine Works, Ltd., Mr. Kazuyuki Nakanishi, Mr. Hiroyuki Mori, Mr. Hideo Tachikawa, Dr. Toshihide Ohmori, Toyota Central R&D Labs., Inc., JAPAN

09:00 - 10:40
PT-43 : Powertrain Materials
(PM Steel, Alloy Bearing)

F2006P191
Development of Lead-Free Aluminum Alloy Bearing with Higher Amount of Silicon

Mr. Yukihiko Kagohara, Mr. Takeshi Hoshina, Mr. Osamu Ishigo, Daido Metal Co.,Ltd, JAPAN

F2006P201
Investigations of Availability of PM Steels According to Different Requirements for Car Components
 Dr. Koki Kanno, Hoganas Japan K.K., JAPAN

09:00 - 10:40
TC-4 : Safety -2

F2006T016
Accurate Estimation of Ultimate Roof Crush Strength and Dynamic Performance in Rollovers Taking into Account the Windshield and Suspension-tire System
 Mr. Ryuuji Ootani, Dr. Chinmoy Pal, Nissan Motor Co., Ltd., KOREA

F2006T032
Impact Injury Analysis of the Human Head
 Dai Watanabe, Prof. Kohei Yuge, Seikei University, Prof. Tetsuya Nishimoto, Nihon University, Prof. Shigeyuki Murakami, Dr. Hiroyuki Takao, Jikei University, JAPAN

F2006T044
Head Kinematics and Upper Neck Loading During Simulated Low-speed Lateral Impact Collisions
 Dr. Chimba Mkandawire, Dr. Dan Mazzucco, Dr. Vinod Vijayakumar, Dr. Irving Scher, Dr. Michelle Heller, Exponent Failure Analysis Associates, Inc., Mrs. Heather Morrison, Mercy Rehab Associates, USA

F2006T058
Optimizing Parameters Associated with Regulation on Pedestrian Protection
 Dr. Cheol Oh, Dr. Younsoo Kang, The Korea Transport Institute, KOREA

09:00 - 10:40
TC-5 : Transportation - New Concepts and Standards

F2006T025
A Linear Programming Model for Complex Reverse Logistics
 Prof. Laurentiu David, Centennial College of Applied Arts & Technology, CANADA

F2006T063
Development of Bipedal Passenger Vehicle
 Mr. Toru Miyagawa, Mr. Kazuhiro Shintani, Mr. Takashi Yamamoto, Toyota Motor Corp., JAPAN

F2006T064
Technical Outline of Japanese Legislation Standards for Fuel Cell Vehicles
 Mr. Kazuyuki Narusawa, Mr. Tetsuo Taniguchi, Mr. Shinichiro Itoh, Mr. Kazuo Matsushima, National Traffic Safety and Environment Laboratory (NTSEL), JAPAN

09:00 - 10:40
VI-23 : Braking

F2006V048
Design Anomalies of Electro-mechanical Brake Systems
 Mr. Levente Balogh, Budapest University of Technology and Economics, HUNGARY

F2006V140
The Electronic Wedge Brake - EWB
 Mr. Henry Hartmann, Dr. Richard Roberts, Karsten Hofmann, Siemens VDO Automotive AG, GERMANY

F2006V218
Dynamic Measurement of the Forces in the Friction Area of a Disk Brake During a Braking Process
 Mr. Thomas Degenstein, Prof. Hermann Winner, Darmstadt University of Technology, GERMANY

F2006V237
Automotive Test and Research Laboratory of the University of Applied Sciences of Bingen
 Mr. Nureddin Bennett, University of Applied Sciences of Bingen, GERMANY

09:00 - 10:40
VM-16 : Body Structures: Body & Structure -3

F2006M112
On the Quantitative Assessment of the Fatigue Strength of Shot Blasted Ductile Cast Irons with Casting Surfaces
 Dr. Junichiro Yamabe, Dr. Motokazu Kobayashi, Mitsubishi Fuso Truck&Bus Corp., JAPAN

F2006M152
The Parametric Study of Door Trim Armrest Characteristics for the

Abdomen Injury Assessment by Impact Test Method
 Prof. Younghun Youn, Mr. Hyunghyun Na, Korea University of Technology and Education, Mr. Hunchol Lee, Mr. Ikkun Jang, Mr. Ohwan Chun, Hanil-ehwa Co., KOREA

F2006M215
Fatigue Behavior Analysis of Plastic Fuel Tank
 Hiroaki Himeki, Mr. Hiroshi Kumagai, Mr. Katsumi Morohoshi, Mr. Kazunori Wakamatsu, Nissan Motor Co.,Ltd., JAPAN

F2006M233
Multibody - FEM Analysis of a Land Speed Record Vehicle Suspension
 Dr. Fabio Renzi, Dr. Marco Evangelos Biancolini, Università degli Studi di Roma "Tor Vergata", ITALY, Prof. Giorgio Rizzoni, Dr. Codrin Grueie Cantemir, The Ohio State University, USA

09:00 - 10:40
VM-17 : Manufacturing Systems: Forging/Welding

F2006M199
Ultrasonic Fast-Identification Expert System of the Auto Stick-Weld Defect Based on Echo-characteristics Analyzing
 Mr. Xin Zhao, Dr. Yansong Zhang, Prof. Guanlong Chen, Shanghai Jiaotong University, CHINA

F2006M212
Application of Laser Welding at Toyota Motor Corporation
 Mr. Kazuhisa Mikame, Mr. Keisuke Uchida, Toyota Motor Corporation, JAPAN

F2006M213
Development of a CAE System for Wear Prediction of Hot Forging Die
 Mr. Atsuo Watanabe, Toyota Motor Corporation, JAPAN

F2006M243
"Grind Less" Activity of Outer-panel Die
 Mr. Noritaka Sunahara, Toyota Industries Corporation, JAPAN

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 We have sold more than
 2600 Hybrid Trucks and Buses so far.

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<http://www.hino.co.jp/e/index.php>

11:15 - 12:15 **Special Speech**



Dr. Hiroaki Kitano
Founding President, The RoboCup Federation

12:15 - 13:30 **Closing Ceremony**

Congress Summary, Prof. Yasuhiro Daisho, Congress Chairman
Presentation of Awards
Announcement of FISITA 2008
Handover of FISITA Presidency



Dr. Akihiko Saito, FISITA President 2006-2008

13:30 - 15:00 **Farewell Party**

Akebono Brake Industry Co., Ltd. 19-5, Nishinbashi Koami-cho,
Chuo-ku, Tokyo 103-8534, Japan www.akebono-brake.co.jp



AKEBONO
BRAKE EXPERTS

Poster Presentations

Monday, 23 October 2006
13:30 - 14:00
Poster Session One

F2006D012

Optimal Energy Management for Mild Hybrid Operation of Vehicles with A/C Electric Compressor Drive

Dr. Yoshishige Ohyama, Tohokugakuin University, JAPAN

F2006D015

Perspective of Suppressing Shock Waves by in-vehicle Dynamic Speed Control

Ms. Meng Lu, Radboud University Nijmegen, Dr. András Hegyi, Delft University of Technology, Mr. Kees Wevers, NAVTEQ, NETHERLANDS

F2006D021

D-DESM Traffic Flow Forecasting Model with Combined GA/Gradient Algorithm

Dr. Kai Cao, Shandong University of Technology, CHINA, Prof. Hamamatsu Yoshio, Ibaraki University, JAPAN

F2006D025

Study on Sensitivity of Parameters and Robust Design of Occupant Restraint System of Vehicle

Mrs. Junyuan Zhang, Mr. Yi Lin, Jilin University, CHINA

F2006D027

Customer's Preference Sound Quality Evaluation for Brand Sound of an Automotive Company

Prof. Sang-Kwon Lee, Mr. Byung Og Cho, Inha University, Dr. Dong Chul Park, Mr. Seung Goon Jung, Hyundai Motors, KOREA

F2006D029

Bus Communication and Control Protocol Using the Electric Passenger Car Control System

Dr. Nan Jinrui, Prof. Sun Feng-Chun, Beijing Institute of Technology, CHINA

F2006D039

Experimental Analysis of Unsteady Wake on a New Simple Car Model

Dr. Valerie Ferrand, Mr. Sylvain Aguinaga, SUPAERO, Prof. François Chometon, Prof. Alain Strzelecki, CNAM, FRANCE, Mr. Sebastian Kebreau, SUPAERO, GERMANY

F2006D053

An Analysis of Seating Position and Anthropometry Parameters of Pregnant Drivers

Mr. Yasuki Motozawa, Honda R&D Co., Ltd., Dr. Masahito Hitosugi, Dr. Shogo

Tokudome, Dokkyo University School of Medicine, JAPAN

F2006D055

The Time-series Fluctuation of Driver Attention - Estimation from the Specification of Eye Movement-

Mr. Toshiya Arakawa, Dr. Noriyoshi Matsuo, Fuji Heavy Industries Ltd., JAPAN

F2006D059

Objectiving the Comfort of Car Seats

Mr. Raphael Zenk, BMW Group, Mr. Christian Mergl, Lehrstuhl für Ergonomie (TU München), GERMANY

F2006D068

A Numerical Simulation Tool for Automotive Cooling System Design

Dr. Lorenzo Gattei, MSc. Riccardo Rossi, Seconda Facoltà di Ingegneria sede di Forlì, MSc. Enrico Cardile, Ferrari S.p.A., ITALY

F2006D070

Research on User's Preference for Motorcycle Engine Noise

Mr. Satoru Shimizu, Mr. Ichiro Sudo, Honda R&D Co., Ltd., JAPAN

F2006D072

Development of Prediction Method for Engine Warm Up

Mr. Osamu Shintani, Mr. Tadashi Nakagawa, Toyota Motor Corp., JAPAN

F2006D073

Experimental Study of the Nonlinear Dynamic Characteristics for Three Types of Hydraulic Engine Mounts and the Parameters Identification Method

Dr. Ranglin Fan, Tsinghua University, CHINA

F2006D077

Vehicle Communications for Safety

Michael Noblett, Connexis, USA

F2006D085

Customer Related CO₂-Reduction by an Optimized Heat Supply During Vehicle Warm-up

Dr. Stefan Wolff, Dr. Klaas Kunze, Irina Lade, Johann Tonhauser, BMW Group, GERMANY

F2006D089

Absolute Displacement Measurements of a Brake Disc During Self Generated Noise

Dr. John Fieldhouse, Dr. Perry Steel, Dr. Chris Talbot, University of Huddersfield, UK

F2006D100

Development of Correlation FXLMS Algorithm for the Performance Improvement in the Active Noise Control of Automotive Intake System Under Rapid Acceleration

Mr. Gyeong-Tae Lee, Mr. Hae-Jin Lee, Hanyang University, Dr. Jung-Yoon Lee, Dr. Jae-Eung Oh, Hanyang University, KOREA

F2006D104

Driving Safety Information Using Vibrotactile Display Device and its Evaluation with Driving Simulator

Mr. Hyunho Kim, Mr. Changhoon Seo, Prof. Jeha Ryu, Gwangju Institute of Science and Technology, Dr. Sibok Yu, Dr. Sooyoung Lee, Katech, KOREA

F2006D107

Study on Arm Manipulability Evaluation Technique for Improvement of Operation Performance

Mr. Naoki Yamada, Mr. Hironobu Yonezawa, Mr. Ichirou Masamori, Mazda Motor Corporation, Dr. Yoshiyuki Tanaka, Prof. Toshio Tsuji, Hiroshima University, JAPAN

F2006D115

Optimisation of Pin Shape and its Configuration for a "Pin" Type Vented Brake Disc Using CFD

Mr. Edward William Palmer, Dr. John Fieldhouse, Dr. Rakesh Mishra, University of Huddersfield, UK

F2006D117

Short Time and Non-linear Signal Processing Methods in Fault Detection of Diesel Engine

Dr. Eng. Piotr Bogus, Medcial University of Gdansk, Prof. Jerzy Merkisz, Poznan University of Technology, POLAND

F2006D118

Stick-slip Phenomenon in Automotive Shock-absorbers

Prof. Dr. Pilar Lafont, Prof. Dr. José Luis Muñoz, Prof. Javier Echávarri, Prof. Héctor Lorenzo, Dr. Juan Manuel Muñoz-Guijosa, Universidad Politécnica de Madrid, SPAIN

F2006D121

Influence of the Wheel on the Tire Cavity Noise

Mr. Takeshi Hayashi, Toyota Motor Corporation, JAPAN

F2006D122

Intelligent Vehicle Position Recognition with Wireless Data Transfer

FH-Prof. Dr. Emilia Bratschitsch, Mr. Thomas Lechner, FH-Prof. Dr. Hubert Berger, University of Applied Sciences FH Joanneum, AUSTRIA

F2006D123

Improvements in the Protection of Wheelchair Users in Accessible Minivans. Design of a New Safety System

Dr. Antonio Rodríguez Senín, Nebrija University, Mrs. Susana López Sánchez, University Institute for Automobile Research (INSIA), SPAIN

F2006D140

Thermal Simulation of Power Devices in the Power Supply for Automobiles

Mr. Masato Kabetani, Toyota Industries Corporation, JAPAN

F2006D142

Development of Pre-crash Safety System for Rear-end Collision

Mr. Yukinori Yamada, Mr. Kiyoka Matsubayashi, Mr. Motomi Iyoda, Mr. Tomoya Kawasaki, Mr. Koji Takeuchi, Toyota Motor Corporation, JAPAN

F2006D146

A Study of the Change in the Driver's State due to Long Driving

Mr. Kazuhito Kato, Dr. Satoshi Kitazaki, Nissan Motor Co., Ltd., JAPAN

F2006D153

Theoretical Study on Ridedown Effect in Frontal Collision

Dr. Koro Uenishi, Daihatsu Motor Co., Ltd., Prof. Hiroshi Matsuhisa, Associate Prof. Hideo Utsuno, Dr. Park Gyu, Kyoto University, JAPAN

F2006D155

Development and Application of Air Conditioning Simulation Using CFD

Mr. Shin Kobayashi, Daihatsu Motor Co., Ltd., JAPAN

F2006D156

A New CFD and Thermal Analysing Methodology Based On MpCCI

Dipl.-Ing. Ernst Peter Weidmann, Prof. Dr.-Ing. Jochen Wiedemann, FKFS, Dipl.-Inf. Uwe Scholl, Fraunhofer Gesellschaft - SCAI, Dr.-Ing. Martin Maihoefer, Dipl.-Math. Walter Bauer, DaimlerChrysler, GERMANY

F2006D157

Visualization of Road Noise Using Near Field Acoustic Holography

Dr. Koji Ishida, Mr. Katsumi Sawatari, Ono Sokki, JAPAN

F2006D158

Analysis of Oil Quality Using Micro-sensors
 Dr. Adam Adgar, University of Sunderland, UK

F2006D160

A Study on Estimating the Variation of Driver's State by EEGs and EOGs
 Mr. Kazuya Itoh, Mr. Yonosuke Miki, Mr. Noriharu Kubo, Nissan Motor Co., Ltd., Dr. Yuji Takeda, Mr. Hideaki Tanaka, National Institute of Advanced Industrial Science and Technology, JAPAN

F2006D170

Simulation and Testing of Hydraulic Power Steering System
 Mr. Miao Wang, A.Prof Nong Zhang, Mr. Chris Chapman, University of Technology Sydney, AUSTRALIA

F2006D173

Application of Optimization Calculation Method to Powertrain NV Performance Development
 Mr. Kazuyuki Yamamoto, Mr. Tadakazu Naritomi, Mr. Tetsuya Kawakami, Nissan Motor Co., Ltd., JAPAN

F2006D179

Measurement of Semivolatile Organic Compounds (SVOCs) in Vehicle Cabin (The Second Report) Measurement of VOC and SVOC Emission Used by a Chamber Method
 Mr. Masafumi Morimoto, ESPEC Corp, JAPAN

F2006D188

AUTOSAR RTE - Quick Start with a "Light" Version
 Karsten Hoffmeister, 3SOFT GmbH, GERMANY

F2006D189

An Intuitive Handheld Acoustic Noise Source Finder
 Dr. Hans-Elias de Bree, Microflown Technologies, Dr. Jos van Heck, DAF Trucks N.V., NETHERLANDS

F2006D192

Validation of a Baseline System Architecture for Sensor Fusion of Environment Sensors
 Michael Darms, Prof. Dr. rer. nat. Hermann Winner, Darmstadt University of Technology, GERMANY

F2006D196

Methodology to Couple Simulation Tools in Air Conditioning, Thermal Cabin and Thermal Discomfort Prediction. Part 1: Air Conditioning
 < -- > Thermal Cabin
 Mr. Vinicius Kuser, Mr. Lucas Abdala, Mr. Jean Philippe Claeys, Renault, FRANCE

F2006D197

How to Understand Complex Sensations: Roll and Lateral Support, by Using Drivers' Sensations and Preferences
 Mrs. Celine Astruc, Dr. David Blumenthal, Renault, FRANCE

F2006D198

Injury Risk-benefit Analysis of Rollover Protection Systems (ROPS) for All Terrain Vehicles (ATVs) Using Computer Simulation, Full-scale Testing and ISO 13232
 Mr. John Zellner, Mr. Michael Van Auken, Mr. Scott Kebschull, Ms. Susana Muñoz, Dynamic Research, Inc., USA

F2006D199

Considerations of "Luxurious" Sounds for Car Interior
 Mr. Norio Kubo, Yokohama Institute of Acoustics, JAPAN

F2006D200

Robust Engineering in Axle System NVH
 Dr. Zhaohui Sun, Mr. Michael Voight, Dr. Glen Steyer, American Axle & Manufacturing, USA

F2006D202

A Research of Worm Gear for Electric Power Steering
 Mr. Katsuji Watanabe, Mr. Yasuo Shimizu, Honda R&D Co.,Ltd., JAPAN

F2006D203

Exhaust Gas Heat Operated Automotive Air Conditioning for the Heavy Vehicle Industry
 Mr. M.K. Mahesh, Consultant, INDIA

F2006P011

Study on 3-D Molding Method for Blade of Torque Converters
 Dr. Jian Wang, Prof. Anlin Ge, Dr. Yulong Lei, Jilin University, Dr. Hua Tian, Pan Asia Technical Automotive Center Co., Ltd, CHINA

F2006P018

A Low Cost Euro-III Development Strategy for 4 L Engine for Commercial Vehicle Application.
 Mr. Yogesh Ramesh, Mr. Rajendra Petkar, Mr. Nanaso Chougule, Mr. Kiran Pithamber, Tata Motors, INDIA

F2006P024

Engine Management System Parameters Optimization Tool for Variable Valve Timing Engines
 Ferdinando De Cristofaro, Mr. Fabio Garofalo, Mr. Alessandro Riegel, Mr. Maurizio Simeoli, Elasis, ITALY

F2006P030

Performance and Exhaust Emission Evaluation of Bi-fuel CNG vehicles

Mr. Bashir A. Samsam Shariat, Electrofan Company, IRAN

F2006P033

Performance and Emission Characteristics of Single Cylinder Direct Injection Diesel Engine Fuelled with Sunflower Oil and Its Methyl Ester
 Mr. Anandram Venkatasubramanian, Mr. Karthick, Mr. Ramakrishnan Mr. Saravanan, Prof. Lakshmi Narayana Rao, Sri Venkateswara College of Engineering, INDIA

F2006P036

Direct Injection Gasoline S.I. Engine Flame Propagation and Knocking Analysis on the Various in-cylinder Mixture Formations
 Mr. Yuichi Suzuki, Mr. Hideki Oki, Mr. Daijirou Tanaka, Mr. Masato Nishigaki, Yamaha Motor Co., Ltd, JAPAN

F2006P040

Investigation and Modeling of Early High Frequency Diesel Injection
 Mr. Carl Wilhelmsson, Mr. Andreas Vressner, Dr. Per Tunestål, Prof. Bengt Johansson, Lund Institute of Technology, SWEDEN

F2006P041

Research on Control Strategies of Double Clutch Transmission Based on System Simulation
 Dr. Lei Yulong, Jilin University, CHINA

F2006P052

Three Dimensional Knock Modeling with Detailed Chemistry for Spark Ignition Engines
 Dr. Xiaofeng Yang, Mr. Toshihiro Ohashi, Honda R&D Co., Ltd, JAPAN

F2006P055

Response Characteristics of Hybrid Vehicles with Respect to Transmission Type at Changing Mode
 Mr. Jeong-Keun Ahn, SungKyunKwan University, KOREA

F2006P059

A Hybrid Engine Vehicle Simulation Model for Real-time Applications
 Mr. Akira Tsunoi, Mr. Masanori Kobayashi, Dr. Wolfgang Siemel, ETAS K.K., JAPAN

F2006P063

Variable Compression Ratio - A Cost Effective 2-Step Adjuster Solution
 Mr. Karsten Wittek, FEV Motorentechnik GmbH, GERMANY

F2006P064

Dependence of Mixed Lubrication with High Asperity Distribution Application to Bearing on Ring
 Dr. Jean-Louis Ligier, Dr. Patrick Ragot, Renault SA, FRANCE

F2006P067

The Roller Bearing Engine - A Cost Effective Contribution to CO2-Reduction
 Mr. Christof Tiemann, FEV Motorentechnik GmbH, GERMANY

F2006P074

Integrating Vehicle and Powertrain Analyses - VVINS - Virtual Vehicle Interior Noise Simulation
 Dr.-Ing. Christoph Steffens, Dipl.-Ing. Christof Nussmann, Dr.-Ing. Norbert Alt, FEV Motorentechnik GmbH, Dipl.-Ing. Christian Pilath, Lehrstuhl fuer Verbrennungskraftmaschinen (VKA), RWTH Aachen, GERMANY

F2006P078

UltimateCoolingTM System Application on Vehicle Equipped with Turbo Gasoline Engine
 Dr. Ngy-Srun Ap, Mr. Philippe Jouanny, Mr. Michel Potier, Valeo Engine Cooling, FRANCE

F2006P082

NOx and Efficiency Optimization for HAJI System Using a Particle Swarm Optimizer
 Mr. Pouria Mehrani, Prof. Harry Watson, University of Melbourne, AUSTRALIA

F2006P083

Next Generation Wet Starting Devices for Automatic Transmissions
 Dr. Ing. Christoph Sasse, ZF Sachs AG, GERMANY, Dipl. Ing. Stefan Wagner, Sachs Automotive Japan, JAPAN

F2006P086

Development of a New-Generation CVT with Medium Torque Capacity for Front-Drive Cars
 Mr. Hiroyuki Nishiyama, Jatco Ltd., JAPAN

F2006P090

Advanced Thermodynamic Analysis Supports Optimisation of Highly Flexible Engines and the Calibration of State-of-the-art ECU Functions
 Mr. Fernando Moreno, AVL List GmbH, AUSTRIA

F2006P091

An Experimental Method to Calibrate, on the Bench, the Clutch and the Actuators Behaviour for a SELESPEED® Transmission
 Eng. Piero Lonardo, Eng. Giovanni Mastrangelo, Eng. Corrado Grasso, Eng. Angelo Cogliano, Eng. Domenico Falanga, Mr. Luigi Conte, Elasis SpA, Mr. Francesco Lanzaro, Fiat Powertrain Technologies, ITALY

F2006P098

Predictive 3D CFD Modelling of Gasoline Auto-Ignition and

Combustion to Outline the Potential of Controlled Auto-Ignition Engines
Ir. Vincent Knop, Mr. Stéphane Friederich, IFP-Institut Français du Pétrole, FRANCE

F2006P103
Simulation of Hybrid Electrical Vehicles in Ecogest

Mrs. Carla Silva, Mr. João Bravo, Instituto Superior Técnico, PORTUGAL

F2006P120
The Comparison of the Effect of Biodiesel Fuel from Palm Oil and Physic Nut Oil (Jatropha Curcas) on a Direct Injection (DI) Diesel Engine
Dr. Iman Reksowardojo, Mr. Ngoc Dung Nguyen, Mr. Tran Quan Tuyen, Mr. Sopheak Rey, Dr. Tirta Prakoso, Dr. Tatang Hernas Soerawidjaja, Institut Teknologi Bandung, INDONESIA

F2006P122
A Study of Diffusive Combustion Using High-voltage Electrical Discharge
Mr. Takaaki Mifune, Nihon University, JAPAN

F2006P135
Dynamic Behaviour of the Fuel Spray from a Spray-Guided Air-Assisted GDI Engine Using Laser-Based Techniques
Mr. George Zakis, Dr. Seong Ho Jin, Dr. Michael Brear, Prof. Harry Watson, University of Melbourne, AUSTRALIA

F2006P137
The Torque Control Strategy Optimization for Hybrid System
Mrs. Hong Shu, Mr. Datong Qin, Mr. Minghui Hu, Mr. Yalian Yan, State Key Laboratory of Mechanical Transmission, CHINA

F2006P141
Hybrid Electric Vehicles of Use Hydrogen Fuel
Dr. Nikolay Khripach, Prof. Aleksey Ipatov, Prof. Vladimir Kamenev, Dr. Lev Lezhnev, Mr. Sergey Alioshin, Federal R&D Automotive & Engine Centre "NAMI", RUSSIA

F2006P143
Modelling SI Engines During Warm Up for Controller Development
Mr. Farzad Keynejad, Dr. Chris Manzie, University of Melbourne, AUSTRALIA

F2006P170
Analysis of Flow and Mixing Characteristics of CAI Engine for the Various Exhaust Valve Timing
Prof. Hoyoung Kim, Mr. Joo Hyung Lee, Mr. Jin Nam Kim, Korea Univ., Dr. Sung Young Park, Dr. Woo Tae Kim, Hyundai Motor Company, KOREA

F2006P179
Development of Shaft Drive CVT - Design and Evaluation of Performance
Dr. Masashi Yamanaka, Tohoku University, JAPAN

F2006P180
To Study the Effect of Variable Compression Ratio on Performance of LPG Based Single Cylinder Engine
Mistry Chetankumar Sureshbhai, C.K. Pithawalla College of Engineering & Technology, INDIA

F2006P187
Manufacturing of Composite Shafts by Rolling-in
Dipl.-Logist. Nadine Kessler, Dr.-Ing. Michael Hagedorn, University of Dortmund, GERMANY

F2006P194
Study of Combustion Properties of Ethanol Air Mixtures
Prof. Kimitoshi Tanoue, Mr. Takashi Hara, Mr. Fumio Shimada, Oita University, JAPAN

F2006P199
Analysis of the Increase of Combustion Engine Total Efficiency with Atkinson Cycle Applied in the Hybrid Driving System
Prof. Bronislaw Sendyka, M.Sc.Eng. Andrzej Sochan, Cracow University of Technology, POLAND

F2006P204
Detection of NOx Storage-Reduction Catalyst Performance by Thick Film ZrO2 NOx Sensor
Toshiro Yamamoto, Makoto Yonekawa, National Traffic Safety and Environment Laboratory, JAPAN

F2006P211
Analysis of Combustion Pressures of a Natural Gas Mixtures in Combustion Chamber
Prof. Bronislaw Sendyka, M. Sc. Eng. Marcin Noga, Cracow University of Technology, POLAND

F2006P213
Development of High Cr Sintered Stainless Steel with High Heat Resistance and Wear Resistance
Mr. Tatsuaki Yoshihiro, Hitachi Powdered Metals Co.,Ltd., JAPAN

F2006P215
Development of a Hybrid Configuration as a Power System of a Special Electrical Urban Vehicle
Prof. Dr. José María López, INSIA - Polytechnic University of Madrid, SPAIN

F2006P232
Fuel Efficiency and Dynamic Performances of a 2-Mode Hybrid Powertrain

Mr. Nam Wook Kim, Seoul National University, KOREA

F2006P246
The Potentials of Dedicated Methane Based Powertrains
Dr. Patrik Soltic, Mr. Bach Christian, Mr. Christian Lämmle, Dr. Chris Onder, ETH Zürich, SWITZERLAND

F2006P250
Optimization Methodology of High Performance Motorcycle Engine Cooling System
Prof. Adolfo Senatore, Dr. Massimo Cardone, Dr. Dario Buono, DIME - University of Naples Federico II, Dr. Luca Fabbri, Aprilia S.p.A., ITALY

F2006P259
Exhaust Emissions from a Biodiesel Fueled Industrial DI Diesel Engine
Dr. Keshav S. Varde, University of Michigan-Dearborn, USA

F2006P266
A Development of Cone Type LSD for SUV/R
Mr. Burkhan Usmanhodjayev, Prof. Young-Sik Pyoun, Mr. Alisher Gafurov, Mr. Hoon Kim, Sun Moon University, Mr. Ho Tae Kim, Mr. Y.C. Lee, Jinheung Machinery Co., Ltd., KOREA

F2006P281
New Digital Telemeter to Measure Engine Parts During Operation
Mr. Ryoji Isarai, Mr. Masayoshi Sugino, Mr. Kiyoshi Iwade, Mr. Makoto Otsubo, Mr. Tetsuro Serai, Mr. Michiyasu Moritsugu, Nippon Soken, Inc., Mr. Mitsuhiro Nakamura, Toyota Motor Corp., JAPAN

F2006P282
Development of Energy Management Systems for a Parallel HEV Using Fuzzy Logic
Mr. Meisam Amiri, University of Tehran, Mr. Ali Nabi, Mr. Amir Fazeli, Sharif University of Technology, IRAN

F2006P296
Development of Low Noise Transmissions Using New Test and CAE Technologies
Mr. Francois Gerard, LMS International, BELGIUM

F2006P300
Challenges and Solutions for Testing and Calibration of Hybrid Powertrains
Dr. George Gillespie, Horiba Automotive Test Systems GmbH, Dr. Robert Dorey, Mr. David Clarke, Ricardo UK Ltd., UK

F2006P307
Demands on In-Vehicle Power Generation System and its Realization in Hybrid Electric Vehicles

Dr. Shinji Ichikawa, Dr. Hichiroai Oyobe, Mr. Tetsuhiro Ishikawa, Mr. Shoichi Sasaki, Toyota Motor Corporation, Mr. Yoshitoshi Watanabe, Dr. Katsuhiro Asano, Toyota Central R&D Labs.,Inc., JAPAN

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A Simulation Tool for Electric Auxiliary Drives in HEVs -the Smart Electric Drives Library
Mr. DI(FH) Johannes V. Gragger, Dr. Christian Kral, Arsenal Research, AUSTRIA

F2006P322
New Energy Efficient Balance Shaft/Oil Pump Module
Mr. David Killion, Mr. David Tabbert, Mr. Steve Chevalier, Metaldyne, USA

F2006P323
Development of Extremely Flat Torque Converter for Automatic Transmission Systems
Mr. Dong-Jin Kim, Dr. Hideaki Kosuge, Mr. Jae-Duk Jang, Mr. In-Sik Joo, Korea Powertrain Co., Ltd., KOREA

F2006P326
Belt-drive Continuously Variable Transaxle for 1.3 Liter FWD Cars
Mr. Masashi Hattori, Aisin AW Co.,Ltd., JAPAN

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Development of an Engine Oil Temperature Prediction Method Using 3D Model Simulation
Mr. Yasushi Noda, Mr. Naohisa Mamiya, Mr. Satoshi Sometani, Mr. Masashi Hosoya, Mr. Keijiroh Koide, Nissan Techno Co.,Ltd., JAPAN

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Development of a High Capacity, Compact 6speed Manual Transmission
Mr. Kan Sasaki, Aisin AI Co.,Ltd., JAPAN

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INNOPART Integrated NOx and Particulate Reduction: Increasing the Maximum Soot Mass Loading
Dr. Lutz Kraemer, IAV GmbH, GERMANY

F2006P333
Fast, in-situ Smoke Monitoring with the New IAV Opacity Meter
Dr. Lutz Kraemer, IAV GmbH, GERMANY

F2006P341
Investigations of Pollutant Formation and Emissions from HPCR Diesel Engines
Prof. Paul Shayler, University of Nottingham, UK

F2006P344
Introduction of a New Infinitely

Variable Transmission for Automobile Usage
 Prof. Nogill Park, Mr. Sanghun Sung,
 Pusan National University, KOREA

F2006P350
Nano Particles from Vehicles
 Mr. Sousuke Sasaki, Dr. Yoshio
 Tonegawa, Dr. Toru Nakajima, Japan
 Automobile Research Institute, JAPAN

F2006P355
Analysis of Combustion System and Optimization of CVT Engine
 Mr. Hochul Kwak, Prof. Simsoo Park,
 Prof. Cha-Lee Myung, Mr. In-Goo Hwang,
 Korea University, KOREA

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Computational Method of Piston Structure and Lubrication Using Flexible Multibody Dynamics Technique
 Mr. Masakatsu Kuroishi, Mr. Atsushi
 Kawaguchi, Mr. Mizuho Inagaki, Toyota
 Central R&D Labs., Inc., Mr. Hisanao Torii,
 Toyota Motor Corporation, JAPAN

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The Influence of Water Injection on the Thermal Efficiency & Specific Fuel Consumption of Compression Ignition Engines
 Mr. Rukshan Navaratne, Open University
 of Sri Lanka, SRI LANKA

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Intelligent Controller for Diesel Particulate Filter
 Ms. Amudha Muthuraj, Prof.
 J. Shanmugam, Madras Institute of
 Technology- Anna University, INDIA

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Development of the Inner Spherical CVT Design for Motorcycle
 Prof. Nogill Park, Mr. Junghyun Ryu,
 Pusan National University, KOREA

F2006P381
Determination of Powertrain Types for Scooters Driving in Urban Areas
 Prof. Yaojung Shiao, National Taipei
 University of Technology, TAIWAN

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Simulation of Engine Dynamics by Using MBS/FEM- Hybrid Structures
 DI. Riener Harald, DI. Helmut Dannbauer,
 Magna Powertrain Engineering Center
 Steyr GmbH & Co KG, AUSTRIA

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Friction Characteristics of DLC-Si and Hard Coatings Lubricated in AWD Coupling Fluid
 Dr. Toshiyuki Saito, Toyoda Machine
 Works, Ltd., JAPAN

F2006P393
Application of the CFD-Simulation

Method in the Development of a Turbulence Increasing Concept for a PFI-SI Engine
 Prof. Dr. Bernhard Geringer, Dr. Peter
 Hofmann, Dipl.-Ing. Thomas Lauer,
 Vienna University of Technology,
 AUSTRIA, Dr. Uwe-Dieter Grebe, GM
 Powertrain, USA, Dr. Ronald Buhr, Mr.
 Otmar Scharrer, GM Powertrain Europe,
 GERMANY

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Numerical Study of the Effects of Air/Fuel Ratio and EGR on the Performance and Emission of a Dedicated Natural Gas Diesel Engine
 Dr. Ali Nassiri-Toosi, Iran University of
 Science & Technology, IRAN

F2006P398
A Numerical Simulation of Combustion in a Heavy Duty Diesel Engine
 Prof. Jin Kusaka, Waseda University,
 JAPAN, Dr. Luca Montorsi, Prof. Valeri
 Golovitchev, Prof. Ingemar Denbratt,
 Chalmers University of Technology,
 SWEDEN

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Hybrid Powertrain Modeling and Designs for Heavy Duty Trucks
 Dr. Pierluigi Pisu, Ohio State University,
 USA

F2006P406
A Numerical Study on Ignition and Combustion of a Heavy Duty Diesel Engine with Multiple Injections
 Mr. Yusuke Imamori, Dr. Hiroyuki Endo,
 Mitsubishi Heavy Industries, Ltd.,
 Mr. Yu Fujita, Dr. Jin Kusaka, Prof.
 Yasuhiro Daisho, Waseda Univ, JAPAN

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Accuracy of Exhaust Emissions Measurements on Vehicle Bench
 Dr. Robert Joumard, Dr. Jean-Marc
 André, Dr. Stéphanie Lacour, INRETS,
 Mr. Michael Gribbe, Renault, FRANCE,
 Dr. Savas Geivanidis, Prof. Zisis
 Samaras, LAT, GREECE, Dr. Juhani
 Laurikko, VTT Processes, FINLAND,
 KTI Zoltan Olah, KTI, HUNGARY,
 Dr. Martin Weilenmann, EMPA,
 SWITZERLAND, Dr. Erwin Cornelis,
 VITO, BELGIUM

F2006P422
Design and Development of a Light Multi-Purpose Hybrid Vehicle for Urban Services
 Prof. Dr. F. Javier Sánchez, Prof. Dr. José
 M. López, INSIA, Polytechnic University
 of Madrid, SPAIN

F2006P423
Dynamic Simulation of Components and Power Train Sub-Systems for Hybrids and Electrical Cars
 Dr. Davor Gospodaric, Trimerics, GERMANY

F2006P424
Three-Way Catalyst Control with HC Emission Using Sliding Mode Design
 Dr. Kazuhisa Ito, Prof. Tielong Shen,
 Sophia University, Mr. Akira Ohata,
 Mr. Jun Kako, Toyota Motor Corp.,
 JAPAN

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Opportunities and Constraints for Electric Vehicles in the Indian Transport Sector
 Mr. Pravin Chandra Menon, Mr.
 Thiloatham R Kolanu, Administrative
 Staff College of India, INDIA

F2006T014
Development Strategy of the Automotive Industry in Hong Kong
 Dr. Lee Sik Fun, Stephen, Hong Kong
 Productivity Council, HONG KONG

F2006T047
Modified Wear Resistant Hard Coatings for Piston Grooves Using Plasma and Laser Cladding
 Mr. Sanjeet Kanungo, Tolani Maritime
 Institute, Dr. Anand Khanna, IIT,
 Dr. Sharad Dixit, TMI, INDIA

F2006T074
Heavy Duty Fleet and Transportation in Iran, the Past, the Present Condition, Future Perspectives and its Interaction with Economy
 Mr. Arash Golnam, Mr. Nader
 Ale_Ebrahim, Iran Khodro Diesel, IRAN

F2006M015
Central European Automotive Production - Innovation Factor for Global Systems
 Prof. Dr. Assoc. Jan Lesinsky, Slovak
 University of Technology, SLOVAK
 REPUBLIC

F2006M026
The Influence of Car Front Geometry on the Vehicle Aerodynamics Parameters
 Prof. Dr. Waqar Asrar, Dr. Waleed F. Faris,
 Dr. Ashraf A. Omar, Ms. Tazkera Sadeq,
 IUM, MALAYSIA

F2006M033
Lightweight and High Strength Connecting-Rods Using Titanium and Steel
 Mr. Tsuyoshi Kubota, Dr. Hiroshi
 Yamagata, Yamaha Motor Co., Ltd.,
 JAPAN

F2006M036
Effect of Curvature on the Strength of Door Panels in the Event of a Side Impact
 Dr. Qasim Shah, Dr. Waleed Faris,

International Islamic University Malaysia,
 MALAYSIA

F2006M058
Collaborative Process and Material Planning for Automotive General Assembly Using Digital Virtual Factory
 Ms. Soon Ill Soh, Snugkyunkwan
 University, KOREA

F2006M060
Thermoelastohydrodynamic Lubrication for Connecting-rod Big End Bearing Used in the Engine of Automobile Under Dynamic Loading
 Dr. Le Vuong Hoang, Vietnam Register,
 VIETNAM

F2006M070
MAGNUM BRACE*, A New Long-glass-fibre Reinforced ABS Composite for Automotive Components
 Dr. Mark Murphy, Mr. James Seliskar,
 Dow Automotive, USA, Dr. Norwin Van
 Riel, Dow Automotive, NETHERLANDS

F2006M071
Low Gloss ABS Advancements for Automotive Interior Components
 Dr. Mark Murphy, Mr. Blair Patty, Mrs.
 Marisa Calhoun, Dr. Kalyan Sehanobish,
 Dow Automotive, USA, Mr. Nigel Shields,
 Dow Automotive, NETHERLANDS

F2006M075
Crushing Test of Double Hat-shaped Members of Different Materials with Adhesively Bonded and Self-piercing Riveted Joining Methods
 Mr. Myeong-Han Lee, Prof. Soo-Ik Oh,
 Seoul National Univ., Prof. Heon-Young
 Kim, Kangwon National Univ., KOREA

F2006M077
Performance Evaluations of a Structure with Spot Welds Considering Structural Stiffness and Durability
 Mr. Hyungbai Byun, GM Daewoo Auto &
 Technology Co., KOREA

F2006M078
Aerodynamics of the Underhood Airflow for Road Vehicles
 Dr. Angel Huminic, Prof. Anghel Chiru,
 Transilvania University of Brasov,
 ROMANIA

F2006M082
Design of Components of Plastic Material Reinforced with Short Fibre. Integration of CAE Tools
 Mr. Manuel Laspalas, Dr. Miguel Ángel
 Jiménez, Mrs. Begoña García, Instituto
 Tecnológico de Aragón, SPAIN

F2006M091
Defining of a Finite Element for Modeling of Some Elements of Motor Vehicle Supporting System

Prof. Dr. Slave Jakimovski, Ass. Kristina Jakimovska, Mechanical Faculty of Skopje, YUGOSLAVIA

F2006M101
Optimisation Studies of Compact Type Oil Cooler for Automotive Vehicles
Mr. Anandram Venkatasubramanian, Prof. Venkatesan, Mr. Saikishan, Sri Venkateswara College of Engineering, INDIA

F2006M102
Manufacturing and Properties Evaluation of Automotive Control Arm Using CAE
Mr. Chang-Ik Ma, Mr. Ho-do Lee, Mr. Sung-gu Kim, Hyundai Mobis, Mr. Sungyeol Seo, Central co., KOREA

F2006M105
Nanocomposit of System Carbon-Nanobon. The Potential Possibilities in Transport Machinery
Prof. Georgiy Volkov, Moscow State Technical University, RUSSIA

F2006M109
New Fuel Technology Reflects Style and Design Changes.
Mr. C.Orval Selders, Selders Design, USA

F2006M113
Development of Corrosion Fatigue Resistance Steel for Leaf Springs
Mr. Atsushi Sugimoto, Aichi Steel Corporation, Mr. Toshiaki Kuroki, Hino Motors, Ltd., Mr. Kazunori Kai, Horikiri, Inc., JAPAN

F2006M120
Process Analysis of Form Forming Method for High Tensile Steel Sheets
Dr. Souichiro Nishino, Ibaraki University Institute of Applied Beam Science, Dr. Kunio Ohya, PSG.Co., Ltd., JAPAN

F2006M125
Finite Element Model Verification of Automotive Electronics Using Design of Experiments
Mr. Won-Ho Kang, Mr. Se-Jong Oh, Mr. Hae-Jin Lee, Prof. Jae-Eung Oh, Hanyang University, Prof. Jung-Youn Lee, Kyonggi University, KOREA

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Application of Powder Plasma Method to Braze Finish Portion
Mr. Kota Shioya, Fuji Heavy Industries Ltd., JAPAN

F2006M128
Development of Lightweight Body, with Improved Structural Dynamic Performances, Using a Concurrent Design Optimization Approach
Mr Akira Nomura, Mr. Hirokazu Kuroda, Mr. Satoshi Murakami, Mr. Katsuyoshi Tanaka, Fuji Heavy Industries, JAPAN

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A Study for Manufacturing Instrument Panel by MCPs Injection Molding Process
Hyun Chang Hoon, Yonsei University, KOREA

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Topology Optimization of Thin-walled Structured Members for Crashworthiness
Yohei Tsuganezawa, Prof. Kohei Yuge, Seikei University, JAPAN

F2006M132
Implementation of a Data Warehouse for Reducing Setup Time and Defect in Pulley Manufacturing Process
Mr. BongHoon Oh, University of Science & Technology, Dr. Gyubong Lee, Dr. Bohyun Kim, Korea Institute of Industrial Technology, Prof. Sunghoon Ahn, Seoul National University, Mr. Soonsuk Hong, Mr. Jaeduk Jang, Korea Powertrain Co., Ltd., KOREA

F2006M136
Frontal Crash Safety Data Analysis in Japan for the Real World Safety Enhancement
Mr. Kenji Kawaguchi, Dr. Shigeru Ogawa, Mazda Motor Corp., JAPAN

F2006M141
Latest Developments in CAE Process Automation: An Insight into Batch Meshing of BiW Models
Dr.-Ing. Samouil-Tonis Saltiel, Ing. Michael Tryfonidis, BETA CAE Systems S.A., GREECE

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Nobel Target Approaches for Side Impact Injury Assessment in Door Trim by the Simple Impactor
Prof. Younghun Youn, Korea University of Technology & Education, Mr. Haeseok Choi, Mr. Hunchol Lee, Mr. Ikun Jang, Mr. Ohwan Chun, Hanil-ehwa Co., KOREA

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Development of Car Components Using Kenaf and a New Evolution in Biomaterials
Dr. Takuya Nishimura, Toyota Auto Body, JAPAN

F2006M158
Development of a Series Welding Method that Does Not Use a Back Electrode
Shinya Kato, Toyota Auto Body Co., Ltd., JAPAN

F2006M161
Cable Harness Design Using Virtual Immersive Reality
Mr. James Ritchie, Dr. Phillip Day, Dr. Graham Robinson, Dr. Richard Dewar, Prof. John Simmons, Heriot-Watt University, UK

F2006M172
The Development of Aluminum Disk Brake Calipers Using Rheocasting Process
Mr. Tomiyuki Murayama, Aisin Takaoka Co., Ltd., JAPAN

F2006M174
Die Wall Lubrication Development for Manufacturing Powder Metallurgy Automotive Parts
Dr. Akira Fujiki, Mr. Yukihiko Maekawa, Nissan Motor Co., Ltd., Mr. Kyoshi Adachi, Yoko Sangyo Co.,Ltd., JAPAN

F2006M182
Aluminum Boron Carbide Composites for Automotive Applications
Ellen Dubensky, Dr. Kalyan Sehanobish, Mr. Steve Swartzmiller, Dr. Ravi Ramanathan, Dow Automotive, Dr. Alek Pyzik, Dow Chemical, USA

F2006M183
Study of Door Window Glass Lifting & Lowering Motion and Speed Stability
Mr. Kazuhiko Tokutomi, Mr. Hiromichi Tozawa, Mr. Takayuki Kuramochi, Mr. Shouji Miyazaki, Nissan Motor Co., Ltd., JAPAN

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A New Inspection Technology for Detects on the Painted Surface
Mr. Takeshi Oku, Daihatsu Motor Co., Ltd., JAPAN

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Crash Simulation of Trailer Under-ride Guard
Dr. Basem Alzahabi, Kettering University, USA

F2006M202
Advances in Cavity Filling Structural Foams for Automotive Body Structure Applications
Mr. Steven Swartzmiller, Mr. Frank Billotto, Dow Automotive, USA

F2006M204
NIMS (Nissan Integrated Manufacturing System) of Body Assembly Process for Nissan FUGA
Mr. Tsutomu Arai, Mr. Kazuo Urakami, Nissan Motor Co., Ltd., JAPAN

F2006M207
Analyzing Noise and Vibration of Manual Transmission Manufacture in Vietnam
Dr. Quang Nguyen Thanh, Director of State Research, Prof. Dr. Thinh Du Quoc, Mr. Hoang Trin Minh, VSAE, VIETNAM

F2006M208
Effect of Strain Rate, Module of Elasticity and Yield Point on Energy Absorption Behaviour of Thin Cylindrical Shells
Dr. Javad Marzbanrad, Mr. Ali Kamyab,

Dr. Behrooz Mashadi, Iran University of Science and Technology, IRAN

F2006M209
Computer Aided Weight Management for Automotive Engineering
Dipl.-Ing. Hans-Peter Dahm, TGM GmbH, GERMANY

F2006M210
Use of Adhesive Bonding in Metal-Plastic Structural Automotive Components
Dr. Luis Lorenzo, Dow Automotive, USA

F2006M218
A New Approach to the High Quality Die Casting Process for Aluminum Cylinder-block
Shoichi Tsuchiya, Mr. Tomokazu Okuno, Toyota Motor Corporation, JAPAN

F2006M221
Accelerated Life Test of Domestic Vehicle Oil Tanks
Dr. Kubilay Yay, Prof. Murat Ereke, Istanbul Technical University, TURKEY

F2006M223
Increase and Adequacy of Rollover Safety for Buses due to Laboratory Tests and Simulations
Mr. Sándor Vincze-Pap, Jáfi-Autóktut Engineering Ltd., Mr. András Csiszár, EDAG, HUNGARY

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A Newly Numerical Model of Multi-dimensional CFD Approach and Application to the Coolant Flow System for Automotive Engine
Dr. Norihiko Watanabe, Software Cradle Co.,Ltd., Mr. Masahiko Kubo, Mitsubishi Motors Corporation, Mr. Nobuyuki Yomoda, CRC Solutions Corporation, JAPAN

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Study on Effect of Dip Time in Aluminizing of Steel
Mr. Rajendran Raj, Dr. Prof S. Venkataswamy, Crescent Engineering College, Dr N. Gowrishankar, IP Rings Ltd, Dr. Prof A. Rajadurai, Anna University, INDIA

F2006M228
Assuring Quality of Complex in-vehicle Electronics Through Comprehensive Testing
Mr. Juergen Klahold, dSPACE GmbH, GERMANY, Mr. Toshio Manaka, dSPACE K.K, JAPAN

F2006M236
Prediction of Bumper Beam for Ultra-Light High-Safety Automobiles Using Aluminum Foam
Prof. Bo-Young Hur, Gyeongsang National University, Dr. Yong-Moon Ryu, Katech, Mr. Moon-Yong Lee, Sungwoo High-Tech, KOREA

F2006M237

Development of Air Bearing Motor for Automotive Using Porous Metal
 Prof. Bo-Young Hur, Dr. Yong-Su Um, Mr. Sang-Youl Kim, Mr. SooHan Park, Gyeongsang National University, KOREA

F2006M240

Innovation for Next Generation Coating Process in Daihatsu Oita Plant
 Mr. Akira Tanahashi, Mr. Mitsuhiro Wakuda, Daihatsu Motor Co. Ltd., Satoshi Kodama, Toyota Motor Corporation, Mitsugu Endo, Kansai Paint Co., Ltd., JAPAN

F2006M244

ELV and ROHS Recycling Constraints : a Lead Free Electronics Qualification Procedure for Automotive Quality and Reliability
 Dr. Gerard-Marie Martin, Valeo VECS - CEE, Mr. Philippe Prieur, Mr. Laurent Dutrieux, Mr. Pascal Morin, Mr. Rocco Iacovella, Valeo - CEE, Mr. Roland Dollinger, Valeo - VSDS

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Thickness Effect of Thin Sheet on Dent Resistance
 Dr. Javad Marzbanrad, Mr. Mojtaba Aghamirzaie, University of Science & Technology, IRAN

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New Design Methods for Vehicle Engineering
 Mr. Olivier Sappin, Dassault Systèmes, JAPAN

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Study of Delayed Fracture of the Steel for High Strength Bolt
 Mr. Tsuyoshi Seguchi, Mr. Masatoshi Oguro, Mr. Motohide Mori, Mr. Osamu Nakano, Toyota Motor Corporation, JAPAN

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Development of High-Speed Laser Welding Technology Using Compound-Laser Method for Tailor Welded Blanks
 Mr. Shigeki Saito, Mr. Naoki Ozawa, Mr. Masami Takeshi, Mr. Fumiyuki Negishi, Mr. Hidenobu Ishida, Suzuki Motor Corp., JAPAN

F2006V008

Active Control in Flexible Plates with Piezoelectric Actuators Using Linear Matrix Inequalities
 Douglas Domingues Bueno, Clayton Rodrigo Marqui, Leandro Cordeiro, Dr. Vicente Lopes Júnior, Universidade Estadual Paulista - UNESP, BRAZIL

F2006V012

Active Suspension of Highway Truck Seat Using Genetic Algorithms
 Eng. Hani Salama, Prof. Younis Khalil, Prof. Samir Eldemerdash, Dr. Eladl Rabieh, Helwan University, EGYPT

F2006V016

Efficient Dynamics Powered by Intelligent Energy Balance
 Mr. Marcus Hafkemeyer, Mr. Johannes Liebl, BMW Group, GERMANY

F2006V022

In-vehicle Network Architectures Based on Controller Area Network (CAN)
 Mr. Holger Zeltwanger, CAN in Automation, GERMANY

F2006V028

Relation Between Driver Glance Change and Vehicle Behavior at Critical Cornering
 Dr. Hiromichi Nozaki, Kinki University, JAPAN

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A Design Method for Maximizing the Minimum Power in the Main Beam of On-vehicle Antenna
 Dr. Shinichi Sato, Dr. Tomomichi Kagawa, Niihama National College of Technology, JAPAN

F2006V032

The Research on Evaluation Method for Motorcycle Ride Comfort
 Prof. Xu Zhongming, Dr. He Yansong, Mr. Zhang Zhifei, Chongqing University, Mr. Li Junpeng, Shanghai University of Engineering Science, Mr. Zhou Kun, Jianshe Industries Co., Ltd., CHINA

F2006V033

The Influence of Roll Characteristics on Vehicle Dynamic Behavior
 Dr. Hideki Sakai, Mr. Jin Hozumi, Toyota Motor Corporation, JAPAN

F2006V034

Tests-Outdoor Vehicle Passenger Car
 Mr. Michel Gothié, CETE, FRANCE, Mr. Federico Mancosu, Pirelli SrL, ITALY, Mr. Martin Dodd, TRL Limited, UK

F2006V039

The Effect of Vehicle Component Changes on Steering Feel
 Dr. Blake Siegler, Mr. Chris Regan, Honda R&D UK, UK

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Automatic Model-Based Reliability Analysis
 Dr. Peter Miller, Ricardo UK, UK

F2006V046

Fuzzy-based Vehicle Lateral Stability

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in Crosswind

Dr. Beatriz L. Boada, Dr. M.J.L. Boada, Mr. A. Gauchia, Dr. C. Alvarez-Caldas, Prof. V. Diaz, Carlos III University, SPAIN

F2006V049**Variation of Vehicle Lateral Stability Behavior due to Suspension System Wearing**

Dr. José A. Calvo, Universidad Carlos III de Madrid, SPAIN

F2006V053**Development of Brushless AC Motor Control Algorithm for EPS Application**

Mr. Younghoon Cho, Mr. Se Wook Oh, Mr. Yeon Woo Chung, Dr. Seok Chan Yoon, Mr. Young Kwang Kim, Mr. Tae Jae Shin, Mr. Kwang Soo Nam, Hyundai Mobis, KOREA

F2006V066**Brake Durability Test: Full Brake Noise Characterisation**

Mr. Roger Mateu, Applus+ IDIADA, SPAIN

F2006V068**Robust Parameters Identification of the "Magic Formula" Tire Model with Real Road Solicitations**

Dr. Pierre-Jean Ripert, Mr. Philippe Bodson, PSA Peugeot Citroën, Prof. Maxime Gautier, Prof. Wisama Khalil, IRCCyN, FRANCE

F2006V071**The New Self-adjustable Shock Absorber-VZN**

Dr. Adrian-Ioan Niculescu, Institute of Solid Mechanics, ROMANIA

F2006V078**Vertical Tyre Forces Estimation to Calculate the Rollover Risk of Heavy Vehicles**

Dr. Hocine Imine, Laboratoire Central des Ponts et Chaussées (LCPC), Ing. Victor Dolcemascolo, Dr.-Ing. Bernard Jacob, LCPC, FRANCE

F2006V083**Design and Construction of New Measurement Vehicles for Tyre/Road Noise**

Mr. Tobias Sahm, Prof. Jan-Welms Biermann, Institute of Automotive Engineering Aachen, GERMANY

F2006V084**Robust Vehicle State Estimator with Road Friction Estimation**

Dr. Yiqin Mao, Ford Research Centre Aachen, GERMANY

F2006V092**Chassis systems in the field of NVH and ride & handling performance**

Dipl.-Ing. Thomas Schrüllkamp, Fka Aachen, GERMANY

F2006V098**Trolleybus Braking Dynamics Comparison Under Ideal and Real Conditions of Service**

Mr. Kanstantsin Mazanik, Belarusian National Technical University, BELARUS

F2006V107**Development of a Control Algorithm for Tie-rod Actuating Steer-by-Wire System**

Mr. Chang-jun Kim, Hanyang University, KOREA

F2006V108**Development of an Analytic Model for Air Suspension Systems**

Mr. Jeongrae Kim, Mr. Byoungsoo Kwon, Dr. Wanil Kim, Mando Corporation, KOREA

F2006V112**Comparison Between Computer Simulation and Hardware-in-the-Loop Simulation (HILS) of the Drivetrain for the Development of Automated Manual Transmission**

Mr. Han-Wook Bae, Mr. Younghoon Cho, Mr. Youngkwang Kim, Mr. Kwangsoo Nam, Mr. Taekjae Lee, Mr. Hanho Hwang, Hyundai Mobis, KOREA

F2006V115**Magnetorheological Fluid Technology for Vehicle Applications**

Mr. Shigeru Shutto, Lord Far East, Inc., JAPAN, Mr. James R. Toscano, Lord Corporation, USA

F2006V123**Transient Performance of a Hydraulically Interconnected Kinetic (TM) Suspension System**

Dr. Jeku M. Jeyakumaran, Mr. Wade Smith, A.Prof. Nong Zhang, University of Technology, Sydney, AUSTRALIA

F2006V124**Ride Simulations of a Full-car with a Hydraulically Interconnected Passive Suspension**

Mr. Wade Smith, Prof. Nong Zhang, Dr. Jeku Jeyakumaran, University of Technology, Sydney, AUSTRALIA

F2006V132**An Integrated Approach for the Ride Shake Analysis & Test**

Dr. Jae-Hyuk Sung, Dr. Jin-Hee Jang, GM Daewoo Auto&Technology, KOREA

F2006V135**Stability of High Speed Tracked Vehicles**

Dr. David Purdy, Cranfield University DCMT, UK

F2006V144**Super Slim Automotive Acceleration Sensor Applied MEMS Technology**

Mr. Yoshihiko Isobe, Mr. Tsuyoshi

Fukada, Mr. Hiroshi Muto, Mr. Seiji Fujino, Denso Corporation, JAPAN

F2006V145**Intelligent Power IC with High ESD Robustness for Automobile**

Mr. Hiroaki Himi, Mr. Yoshiaki Nakayama, Mr. Shigemitsu Fukatsu, Dr. Seiji Fujino, Denso Corporation, JAPAN

F2006V146**The Optimal Design Using Design and Analysis of Computer Experiments for the Squeal Noise Reduction of the Automotive Brake System**

Mr. Hyounjin Sim, Hanyang University, KOREA

F2006V155**A Study on Anti-slip Control of Electric Vehicle with in-wheel-motor**

Prof. Hui Chen, Mr. Zhiqiang Du, Tongji University, CHINA

F2006V168**A Sensitivity Based Approach for Racing Cars Design and Set-up**

Pierluigi Antonini, Eta S.r.l., Prof. Maria Letizia Corradini, Università di Camerino, Prof. Sauro Longhi, Università Politecnica delle Marche, ITALY

F2006V178**A Study of Automotive Electrical Concept Planning Using Multi-domain Simulatio**

Mr. Kimitoshi Tsuji, Mr. Kenji Kataoka, Toyota Motor Corporation, JAPAN

F2006V180**Real-Time Control of a Magnetorheological Damper for Vehicle Suspension Systems**

Mr. Neil Stembridge, University of Leeds, UK

F2006V183**Theoretical and Experimental Study of a Vehicle Wedge Disc Brake**

Dr. Khaled R. M. Mahmoud, Ass. Prof. Khaled Abd-El-Gawwad, Minia University, EGYPT

F2006V213**Development of Vehicle Stability Control by Using Compact Hydraulic Brake Booster**

Mr. Masahiro Iden, Mr. Hiroshi Matsuoka, Mr. Seiichi Kojima, Mr. Takashi Kurokawa, Advics Co., Ltd., JAPAN

F2006V215**Development of LSI for Stereo Obstacle Detection Sensor**

Mr. Hideo Ikai, Mr. Masayuki Usami, Mr. Mitsuhiro Ohta, Toyota Central R&D Labs., JAPAN

F2006V230**Offset Eliminative Map Matching****Algorithm for Intersection Active Safety Applications**

Mr. Tohid Ardeshiri, Mrs. Sogol Kharrazi, Mr. Jonas Bårgman, Autoliv Development, Prof. Robert Thomson, Chalmers University of Technology, SWEDEN

F2006V231**A Study on Integration of AFS,ARS and ESP**

Mr. Kihong Park, Kookmin University, KOREA

F2006V239**A Comparison of OEM and Aftermarket Shock Absorbers for a Production Hypersports Motorcycle II - On-track Evaluation and Validation**

Mr. Riccardo M. Pagliarella, Dr. Angelo Tempia, Mr. John Karambalis, Mr. Sam Andrews, RMIT University, AUSTRALIA

F2006V240**Development of Driveline Test Bench for Automotive Chassis Component System**

Dr. Jaeyoun Kang, Korea Institute of Machinery & Materials, KOREA

F2006V244**Development of a Driving Simulator for the Investigation of Driver-vehicle-environment Interaction**

Dr. Orhan Atabay, Prof. Dr. Ali Guvenc Goktan, Istanbul Technical University, Kursat Guler, EQ Instruments Ltd., TURKEY

F2006V245**Evaluation and Control of Moment of Motor Inertia for EPS**

Mr. Yoshihiro Oniwa, Mr. Yasuo Shimizu, Honda R&D Co.,Ltd., JAPAN

F2006V250**Interaction of Modern Suspension Systems on the Lateral Dynamics of 4WS Vehicle**

Dr. Walid Oraby, Prof. Samir El-Demerdash, Mr. Mahmoud Mohamed, Prof. Al-Emam Selim, Faculty of Engineering, Mataria, EGYPT

F2006V254**Dynamic Simulation of Vehicles on Uneven Roads to Determine Vibrational Load on Car Body-fixed Components**

Mr. Rüdiger Benz, Mr. Gerd Schlesak, Mr. Peter Walz, Robert Bosch GmbH, Dr.-Ing. Günther Preschany, Porsche AG, Prof. Wolfgang Seemann, Prof. Jörg Wauer, Institut für Technische Mechanik, Universität Karlsruhe, GERMANY

F2006V255**Improving Road Simulation Tests**

Mr. José Antonio Pascual, CITEAN, SPAIN



Exhibition

Sustainable Automotive Technology

Opening Hours

Monday 23 Oct:	0955-1730
Tuesday 24 Oct:	0900-1730
Wednesday 25 Oct:	0900-1730
Thursday 26 Oct:	0900-1200

Welcome Reception

Sunday 22 Oct: 1900-2030
 Exhibitors, Congress Delegates
 and Accompanying Persons are invited

Official Opening

Monday 23 Oct: 0955

Admission: Free

The FISITA 2006 Exhibition is a global showcase for companies offering solutions in every area of automotive research, design, development and production. Attendees can visit the exhibition throughout the congress to gain hands-on experience of the latest technologies, products and services displayed by leading automotive companies from all over the world.

Delegates attending the FISITA Congress are senior technical decision-makers. FISITA 2006 offers companies the opportunity to demonstrate their products and services directly to the automotive engineers, scientists and executives who will decide the technology content of tomorrow's vehicles.

Prices start from 270,000 yen for a 9m² booth, and include a company profile on the congress web site.

To reserve your space, please contact:
 FISITA 2006 Exhibition Coordinator
 c/o Congress Corporation
 Phone: +81(0)3 5216 5551
 Fax: +81(0)3 5216 5552
 email: fisita2006exhibition@congre.co.jp

Applications will be accepted on a first-come, first-served basis.

Application Deadline: Friday 2 June 2006

For the latest information, including full exhibitor list, please visit www.fisita2006.com/exhibition

Special Exhibition

The Technology of Wonder – Inspire your Dreams

The aim of the special exhibition is to enable visitors to experience a boundless world of inspiration and innovation as foreseen through vehicle related technology. In this exhibition, robots and new visions of mobility inspire dreams, by demonstrating the critical core technologies which are driving vehicle evolution (eg those related to sensing, control, human-machine interfaces (HMI), drivetrain and by-wire technologies).



i-unit & Music Playing Robot : Toyota
 ASIMO : Honda
 EMIEW : Hitachi
 Pivo : Nissan

EVS-22

The 22nd International Battery, Hybrid and Fuel Cell Electric Vehicle Symposium & Exposition (EVS)

Registered delegates of FISITA 2006 are entitled to visit the EVS-22 Exhibition and test-ride events free of charge.



Technical Tours

Yokohama

TV-1: NISSAN Oppama Plant & NHK Spring Yokohama Plant

Date: Oct. 27 (Fri.) 8:30-15:30 (approx 7 hours)
 Price: JPY 3,000 per person (Lunch included)

TV-2: NISSAN Oppama Plant

Date: Oct. 27 (Fri.) 8:30-12:30 (approx 4 hours)
 Price: JPY 1,000 per person (Lunch not included)

NISSAN Oppama Plant

The Oppama Plant is one of Nissan's three major vehicle manufacturing plants in Japan. Beginning operation in 1961, this plant, located some 50 kilometers (31 miles) southwest of Tokyo, was Japan's first full-scale integrated vehicle assembly plant. In 1970 it was the first domestic plant to introduce welding robots; later the Oppama Plant became a pioneer of flexible manufacturing systems. These innovations have led to its position today as a leader in automated manufacturing.

Located next to the plant is the Oppama Wharf, a major shipping centre capable of transporting some 80,000 vehicles per month, both from Oppama and other Nissan plants.

The greater plant area also includes the Nissan Research Centre, home to Nissan's basic research activities, and the Vehicle Testing Department which operates the Oppama Proving Ground, a test track within the plant area.



NISSAN Oppama Plant

NHK Spring Yokohama Plant

With a history of more than six decades, NHK Spring is today one of the world's leading manufacturers of springs. The growth of motorisation created an ideal environment and enabled NHK Spring to achieve sustained growth and build a solid position in the industry. Today NHK Spring supplies high-quality products to many automobile manufacturers in Japan, North and South America, Europe and Asia.

In the 1970s, NHK Spring launched a bold initiative to develop new business activities. Now this effort is steadily bearing fruit in the form of new products, including parts for information and communications equipment. Together with its 23 domestic and 23 overseas group companies, NHK Spring will continue, in the 21st century, to contribute to global development by challenging the world of possibilities.

The Yokohama plant, main manufacturing site of the Suspension Spring Division, was completed in 1987 with the basic concept of clean environment and high productivity. The plant obtained a certification of ISO14001 in 1997 for the first time in the spring industries, and has been continuously working to develop more environmentally friendly spring manufacturing processes.

TV-3: The Earth Simulator Centre (ESC) & National Institute of Information and Communications Technology (NICT)

Date: Oct. 27 (Fri.) 9:00-15:30 (approx 6.5 hours)
 Price: JPY 3,000 per person (Lunch included)

Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

**Yokohama Institute for Earth Science
 The Earth Simulator Centre (ESC)**

The Earth Simulator aims to build a harmonious relationship between the Earth and its inhabitants. This supercomputer is one of the world's most powerful machines and works on a variety of research and development projects in collaboration with many public and industrial organisations to explore the current and future challenges facing mankind. It can predict what is likely to happen in the future by



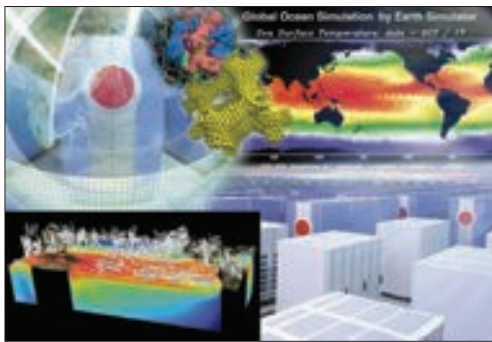
NHK Spring Yokohama Plant



Technical Tours continued

investigating global environmental problems, such as global warming, unusual atmospheric phenomena and tectonic activities with a high degree of precise simulation. The system is configured with 640 units of high performance nodes which employ eight vector processors and 16 Gbytes of high speed memory (8GFLOPS/CPU), interconnected via a high speed crossbar network with a data transfer rate of 12.3 Gbytes/s in 2 ways.

The Earth Simulator is used to study the organising systems of the whole earth and can investigate how mass consumption, including automobiles, airplanes, electrical devices and chemical products will influence the future of the global environment.



ESC (JAMSTEC)

National Institute of Information and Communications Technology (NICT) Yokosuka Research Park

The development of road transport, while bringing greater convenience to all, has led to significant problems such as traffic accidents and environmental pollution. Intelligent Transportation Systems (ITS) addresses many of the problems inherent in existing transport systems.

NICT is working on a number of aspects of ITS, such as a millimetre-wave vehicle-to-vehicle communication system, an optical fibre wireless road-to-vehicle communication system, 'software radio', and mobile video transmission.

Since 1998, NICT has been pursuing research on vehicle-to-vehicle and ROF (Radio on Fibre) road-to-vehicle communication systems under a joint project involving 20 organisations and various private-sector interests. The research is geared towards development of a feasible system and associated standards.

Tour Programme

- 1) Integrated millimetre-wave radar communication system for safe operational support
- 2) Ad-hoc moving-picture communications technology for advanced disaster radio on VHF band.

Option: Kirin Brewery Tour 15:30-17:30 (approx 2 hours)

As an additional option to Technical Tours TV-1 and TV-3, you will be able to enjoy a visit to Kirin Brewery. Established in 1907, the Kirin Beer is one of the most famous beer companies in Japan. At the brewery, you will follow the process of how Kirin Beer is made. At the end of the visit, free beer tasting awaits you.



NICT

The following technical tours are part of the EVS-22 Symposium, concurrently being held at Yokohama. As a FISITA 2006 participant, you are welcome to join these tours.

TV-4: JARI and Nikko 2-day Tour

From Yokohama 08:00 Oct 29 (Sun) Arr. 17:30 Oct 30 (Mon) Tokyo (arrive Yokohama approx. 18.30)
 Price: JPY 35,000 per person (double occupancy), JPY 38,000 per person (single occupancy)
 Leave Yokohama for Nikko, en route making a technical visit. Overnight in Nikko.
 2 lunches and 1 breakfast included.

DAY 1: YOKOHAMA - NIKKO

Visit to Japan Automobile Research Institute (Tsukuba City), overnight at a hotel in Nikko.

DAY 2: NIKKO - TOKYO / YOKOHAMA

Sightseeing in Nikko, famous as a World Heritage site.

TV-5: JARI 1-day Tour

Date: October 29 (Sun) 8:00-20:00 approx.
 Price: JPY 5,500 per person
 Visits to Japan Automobile Research Institute (Tsukuba City)

Japan Automobile Research Institute (JARI)

Tour Highlights: Fuel Cell Performance Evaluation Centre, Hydrogen and Fuel Cell Vehicle Safety Evaluation Facility (Hy-SEF) and new test course. Hy-SEF is the world's first indoor fire test facility for FCVs.

Minimum of 30 participants required per tour. Details are subject to change with or without notice.



Social Programme



Welcome Reception

Sunday 22 October, 19:00-20:30
Exhibition Hall

All participants (delegates, accompanying persons & exhibitors) are invited to attend this welcome party to officially launch the Congress. It's a great opportunity to get acquainted with your fellow participants. Please remember to pick up your badge in advance at the registration desk located in the Conference Centre on the second floor.
(Free of Charge)

Enjoy the Noh Performance!

Monday 23 October, 19:00-20:30
(Bus Departure Time 18:00 from Pacifico Yokohama)

This is a very special opportunity to enjoy a traditional Japanese Noh performance, the stylised art of song and dance that originated in the 14th century. UNESCO designated the art of Noh an Intangible Cultural Heritage in 2003. The intriguing Noh masks, elaborate costumes and themes of human destiny will make this an unforgettable experience. Enjoy a light meal onboard the bus as you ride through the dynamic city of Yokohama. Please reserve your seat using the registration form as places will be allocated on a first-come, first-served basis.
(Free of Charge)



Gala Dinner

Wednesday 25 October, 19:00-21:00
Pan Pacific Hotel Yokohama

The Gala Dinner will be held in the elegant Pan Pacific Hotel Yokohama. Many wonderful attractions are planned and you will enjoy the hotel's award-winning cuisine. The evening will be a highlight of the Congress. Seats will be limited, so be sure to book early!
(Price: 10,000 yen per person)

Farewell Party

Thursday 26 October, 13:30-15:00
2F Exhibition Hall Deck Restaurant
(overlooking Yokohama Bay)

All participants are invited to attend the farewell party and take a breath of fresh air, enjoying the inviting ocean view. Reflect on shared accomplishments and future plans before parting.
(Free of Charge)

Sponsored by **TOYOTA**





Optional Tours

OP-1: Flower Arrangement and Tea Ceremony

Date: Oct. 23 (Mon.) 13:00-16:00 (approx. 3.5 hours)
 Price: Free of Charge

Enjoy a hands-on experience of Japanese culture. Learn about the simple beauty of Japanese flower arrangement and taste special cakes with traditional Japanese tea, a ceremony originally perfected by samurai and still popular today.

OP-2: Yokohama Walking

Date: Oct. 23 (Mon.) 13:00-16:00 (approx 3-4 hours)
 Price: JPY 2,500 per person

Yamashita Park: This park commands a romantic view of the Bay Bridge and ships passing through the port.
Silk Museum: One of the rare silk museums in the world. Exhibits the process of silk production from silkworms to clothes as well as Japanese historical silk clothing.

OP-3: Tokyo City (1 day)

Date: Oct. 24 (Tue.) 9:00-16:00 (approx 7 hours)
 Price: JPY 10,500 per person

Meiji Jingu Shrine: Meiji Jingu is a Shinto shrine dedicated to Emperor Meiji and his wife, Empress Shoken, the great-grandparents of the present emperor. The shrine spreads over 700,000 square meters covered by a forest of 120,000 trees of 365 species donated by people from all over Japan.
Ukiyo-e Ota Memorial Museum of Art: This museum boasts one of Tokyo's finest collection of Edo Period woodblock prints or Ukiyo-e.
Oriental Bazaar: Located in one of the most lively shopping areas in Tokyo, Omote-sando, the boutique offers a wide range of Japanese souvenirs.

OP-4: Mt. Fuji and Hakone (1 day)

Date: Oct. 24 (Tue.) 9:00-18:00 (approx 9 hours)
 Price: JPY 16,000 per person (Lunch included)

Owakudani Valley: The Owakudani Ropeway joins Togendai, on the northern shore of Lake Ashi, and Mt. Soun. The highest point is 130 metres above the ground and at Owakudani Station a revolving observation platform affords a panoramic view of the Hakone district and a near by view of Owakudani Valley.

Lake Ashi: Excursion boats give cruises around beautiful Lake Ashi, a crater lake with a circumference of nearly 18 kilometres. Lake Ashi is also well known

for the inverted reflection of Mt. Fuji on a calm, clear day.

The Komagatake Ropeway: The Komagatake Ropeway takes one to the top of Mt. Komagatake, which affords a view of Mt. Fuji, Lake Ashi, Mt. Futago and the mountains of the distant Izu Peninsula. Cable cars travel the 720-meter-long ropeway in five minutes.

OP-5: Kamakura (1 day)

Date: Oct. 25 (Wed.) 9:00-17:00 (approx 8 hours)
 Price: JPY 11,500 per person (Lunch included)

Tsurugaoka Hachimangu Shrine: Founded at its present location by Yoritomo Minamoto in 1180, it remains one of the most popular shrines in the Kanto region.

Daibutsu or The Great Image of Buddha: Designated a National Treasure, it is Japan's largest Buddhist image after Todai-ji's in Nara.

Hase Kannon Temple: The Hase Kannon temple is the home of the Hase Kannon, Japan's largest wooden sculpture, standing about 27.5 feet in height.

OP-6: Edo (Old Tokyo) Downtown (1 day)

Date: Oct. 25 (Wed.) 9:00-17:00 (approx 8 hours)
 Price: JPY 11,500 per person (Lunch included)

Edo-Tokyo Museum: The Edo-Tokyo Museum shows how the 15th-century village of Edo grew to be Tokyo, one of the largest cities in the world. The museum, established in 1993, recounts this story of remarkable growth through life-size replicas and detailed scale models.

Sensoji Temple in Asakusa: Sensoji is the oldest and most impressive temple in Tokyo. The main hall was first built in 645 and the temple precincts bustle with people praying, buying fortunes, shopping or sightseeing.

Sumida River Cruise: Enjoy the boat ride from Asakusa. The river was the most important waterway for the development of Tokyo.

OP-7: Japanese Garden & Shopping

Date: Oct. 26 (Thu.), 9:00-12:30 (approx 3.5 hours)
 Price: JPY 5,000 per person

Sankei-en Garden: Sankei-en is full of masterpieces of architecture. Hara Tomitaro, a silk merchant, created the garden in the image of Nara.

Motomachi Shopping Street: Located close to China town this street is a shopper's paradise and is lined with many chic and fashionable stores.

Minimum of 30 participants required per tour. Details are subject to change with or without notice. Accompanying persons are also invited to join tours OP-1, OP-3 and OP-7

All pictures courtesy of Japan National Tourist Organisation.



Post Congress Tour

PC-1 Kyoto 2 days

Date: Oct. 28 (Sat.)-Oct. 29 (Sun.)

Price: JPY 47,000 per person (double occupancy / lunch included for the first day)

JPY 53,000 per person (single occupancy / lunch included for the first day)

DAY 1: Yokohama – Shin-Yokohama == Kyoto

Transfer to Shin-Yokohama station and board a Shinkansen (super express bullet train) for Kyoto. Afternoon tour in Kyoto, visits to Heian-Jingu Shrine, Sanjusangen-Do Temple, and Kiyomizu-Dera Temple. Transfer to a hotel in Kyoto.

DAY 2: Kyoto

Morning sightseeing in the city, visiting Nijo-Jyo Castle, Golden Pavilion, and Kyoto Imperial Palace. The tour disbands at the hotel around noon. The room is available until regular check-out time.

- We recommend arranging your return flight to your country from Kansai International Airport. From Kyoto to Kansai International Airport, you can take a JR limited-express train "Haruka" (JPY 3,490 / 75 min., every 30-60 min between 05:46-20:16).
- Minimum of 25 participants required.
- Details are subject to change with or without notice.

TOUR CONDITIONS

Tour fare includes 1) Sightseeing and transfers as shown in the itineraries, by motor coach and/or sightseeing boats on a seat-sharing basis, plus admission fees to temple, shrine etc.; 2) Tourist-class reserved seats on "Bullet" train and other trains; 3) Meals as specified in each itinerary; 4) English-speaking guide services; 5) Standard hotel rooms on a half-twin or single basis; 6) Baggage transfer and handling (no more than two normal-size pieces per person; at certain times and places, this service is not included owing to limited baggage capacity and the unavailability of porters at stations and/or hotels).



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Student & Young Engineer Events



FISITA Student Congress

The 8th FISITA Student Congress runs parallel to the main congress from 23 to 26 October and gives students from all over the world a unique opportunity to participate in this international conference and to present their own papers on automotive transportation and technologies.

Participants in the Student Congress are free to attend the Plenary Sessions of the main congress and will have their own technical sessions in the afternoons. Students are encouraged to present a paper, therefore priority will be given to students who submit an abstract with their application. The themes for the Student Congress are the same as those for the main congress:

- Powertrain Technology
- Vehicle Design and Manufacturing
- Vehicle Dynamics and Intelligent Control Systems
- Driver / Vehicle Interface, Information and Assistance Systems
- Transportation Challenges in Emerging Economies

Technical visits to automotive research institutions will also be included.

The Student Congress is open to all students at all levels of higher education. Proof of student status is required in the form of a signature of approval from a representative of a national FISITA member society (see pages 12&15) or university/college. Application forms may be downloaded from: www.fisita2006.com/students/congress.

Applications and paper abstracts (not more than 10 lines) should be submitted by email to: fisita2006@jsae.or.jp by **8 May 2006**. The deadline for Final Papers is **31 July 2006**. The organising committee will select a limited number of participants and inform applicants of their decision by mid-June. Awards will be presented for the best three papers at the Closing Ceremony of the main congress.

The registration fee for the Student Congress is 15,000 yen. This includes accommodation, all activities that are planned for the Student Congress, and admission to certain main congress events. Transport costs to and from Yokohama must be covered by the participant or their national member society.

FISITA Travelling Fellowship

FISITA offers young engineers and students under the age of 35 the opportunity to participate in a two-week Travelling Fellowship Programme from 16 to 26 October 2006. The first week (16th-20th) will consist of visits to various automotive industry sites. During the second week (23rd-26th), participants will join the Student Congress.

Tour highlights during the first week include:

- Visits to automotive plants and museums of Toyota, Nissan, Honda.
- Visits to places of interest.
- Sightseeing tour to Mount Fuji district.

Each FISITA national member society is responsible for selecting the candidate(s) for its country. Application forms may be downloaded from: www.fisita2006.com/students/fellowship.

Applicants are advised to check deadlines for in-country selection with their national member society. (see pages 12 & 15). Each national member society selects the candidate(s) for their country and sends the application form(s) to fisita2006@jsae.or.jp by **8 May 2006**. Applications must be accompanied by paper abstracts (not more than 10 lines) and sent to the appropriate national member society.

The organising committee will select a limited number of participants and inform applicants of their decision by mid-June. Final Papers must be submitted to fisita2006@jsae.or.jp by **31 July 2006**.

The registration fee for the Travelling Fellowship Programme is 18,000 yen. This includes accommodation, selected meals, travel costs during the programme, and admission to certain main congress events. Transport costs to and from Yokohama are covered by the national member society.

Full details can be found at the congress web site: www.fisita2006.com/students
For more information, please contact your national FISITA member society or the organising committee at fisita2006@jsae.or.jp



General Information

Venue

Pacifico Yokohama, 1-1-1 Minato Mirai, Nishi-ku, Yokohama, is a world-class integrated convention centre situated on the water front in Yokohama's Minato Mirai 21 area.

Entry into Japan

Every foreign visitor entering Japan must have a valid passport. Visitors from countries whose citizens require visas should apply to the Japanese consulate or diplomatic mission in their own country. For further information, please visit www.mofa.go.jp/j_info/visit/visa/index.html Requests for official invitations in support of visa applications should be sent to fisita2006program@congre.co.jp

Language

The official language of the Congress is English. Simultaneous translation (English/Japanese) will be provided during the plenary sessions only.

Climate

The temperature in Yokohama during the period of the Congress ranges between 15°C and 21°C with the chance of occasional rain showers.

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.

Currency Exchange

Only Japanese yen (JPY) is acceptable at regular stores and restaurants. Certain foreign currencies may be accepted at a limited number of hotels, restaurants and souvenir shops. You can buy JPY at foreign exchange banks and other authorised money exchangers on presentation of your passport.

Traveller's Cheques and Credit Cards

Traveller's cheques are accepted only by leading banks and major hotels in principal cities, and the use of traveller's cheques in Japan is not as popular as in some other countries. VISA, MasterCard, Diners Club

and American Express are widely accepted at hotels, department stores, shops, restaurants and nightclubs.

Tippling

In Japan tips are not necessary anywhere, even at hotels and restaurants.

Shopping

Shops and other sales outlets in Japan are generally open on Saturdays, Sundays and national holidays as well as weekdays from 10:00 to 20:00. Department stores, however, are closed one day per week, differing by store, and certain speciality shops may not open on Sundays and national holidays.

Tax

A consumption tax of 5% is added to all purchases. Prices shown include this tax.

Taxis

The fare consists of an initial flag-down price of approximately JPY 660 plus an additional cost per distance covered and time elapsed. Payment is made at the end of the ride, and you need to pay only the amount marked on the meter. Trains, subways and buses are recommended as inexpensive means of transportation.

Mobile Phones

Please note that GSM mobile phone service is not available in Japan. Mobile phones can be rented for use during your stay in Japan.

Electricity

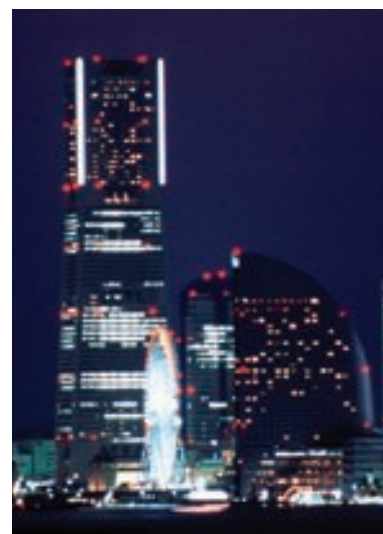
Electric current is uniformly 100 volts AC throughout Japan, but with two different cycles: 50 in eastern Japan including Yokohama, and 60 in western Japan including Kyoto and Osaka. Leading hotels in major cities have two outlets of 100 and 220 volts but their sockets usually accept a flat two-pin plug only.

Time Zone

Japan is 9 hours ahead of GMT.

Insurance

Participants are encouraged to obtain travel insurance (medical, personal accident and luggage) in their home country prior to departure.





Registration

Congress participants may choose from a full registration package covering the whole congress, or a one-day registration fee valid for a chosen day. Please choose your registration options and complete the Registration Form on pages 70 & 71 and fax / mail it to:

Registration Office of FISITA 2006
 Congress Corporation, 5-1 Koji-machi,
 Chiyoda-ku Tokyo 102-8481, Japan
 Fax: +81-(0)3 5216 5552
 Alternatively you can register online at
 www.fisita2006.com

Delegate Registration Includes:

- Admission to the Opening and Closing Ceremonies
- Admission to all Plenary and Technical Sessions
- Admission to the Exhibition
- Full Congress Proceedings (CD-ROM)
- Book of Abstracts
- Coffee/refreshments
- Admission to the Welcome and Farewell Receptions

Accompanying Persons Registration Includes:

- Admission to the Opening & Closing Ceremonies
 - Admission to the Exhibition
 - Admission to the Welcome and Farewell Receptions
 - Coffee/refreshments
 - Tour OP-1 - Flower Arrangement and Tea Ceremony *
 - Tour OP-3 - Tokyo City 1 Day *
 - Tour OP-7 - Japanese Garden and Shopping *
- * See page 61 for details*

Non-OECD Countries

Delegates from non-OECD countries benefit from a reduced registration fee. Please check the relevant box on the Registration Form. A list of OECD countries can be found at www.oecd.org

Lunches

Lunches are available at the Congress Venue or "Yokohama Queen's Square", a shopping complex where you can find coffee shops, eateries and many different types of restaurants. At lunch time coffee, refreshments and snacks are served each day (from 23rd to 25th) in the exhibition hall for Congress Delegates.

Advance Registration Deadline

20 September
 After this date, please register on site.

Cancellation Policy

Cancellations must be sent in writing to Congress Corporation by 20 September 2006. Providing the cancellation is received by this date, full payment minus 5,000yen for handling fees will be refunded. No refunds will be given after that date. No telephone cancellations will be accepted.

Important:

A different cancellation policy applies to accommodation & tours. Please see the Accommodation and Tour Form on page 74.



Category	By 30 June	By 31 August	On or after September 1
Delegate	90,000	100,000	110,000
Delegate (Non OECD Country)	40,000	70,000	80,000
Speaker / Poster Author / Chairman**	72,000	80,000	Chairman Only 90,000
Speaker / Poster Author / Chairman** (Non OECD Country)	35,000	60,000	Chairman Only 70,000
One Day Registration	35,000	35,000	40,000
Two Day Registration	65,000	65,000	70,000
Accompanying Person	20,000	20,000	20,000
Student†	15,000	15,000	15,000

**One speaker / poster author per presentation is entitled to the reduced speaker fee. Speakers / authors must insert their paper code (given in acceptance mail) on the registration form. Session chairmen must insert their session number.

†Participants registering as "students" must be full-time students and will be asked to attach a copy of their student identification card. Those who register on site will be asked to show their student identification card.

IMPORTANT: Speakers / poster authors must register by 31 August 2006.



Yokohama



Since the opening of its port in 1859, Yokohama has grown from a small village of 600 inhabitants to become Japan's second largest city (after Tokyo), with a population of 3.5 million.

When Yokohama opened its port to foreign countries after 250 years of isolation from the west it became Japan's gateway to the world, welcoming trade and becoming home to a vibrant immigrant community. The first photographic shop and Sukiyaki restaurant opened in 1862, followed by the first daily newspaper publisher and beer brewery. In 1872 the first railway line in Japan connected Yokohama to Tokyo, 30km to the north.

Characterised by openness and a progressive spirit, Yokohama has always been eager to adopt culture and art from all over the world and fuse them into a new tradition. Today, the city continues to make the most of its 147 year heritage and rich natural setting of hills, rivers and the ocean as it strives to become an even more vibrant, independent and international city.

Flourishing initially as a port city, the city of Yokohama has developed into an industrial giant that today steers the entire Japanese manufacturing industry. Yokohama is currently home to a variety of automotive and other related industries, and manufacturing remains the city's major commercial activity.

The city takes pride in its cosmopolitan atmosphere and offers many historical, cultural and recreational attractions, including Japan's largest Chinatown with countless gourmet restaurants and street vendors. Yokohama's bustling shopping area "Motomachi"

was once home to the foreign community living in Yokohama and still displays an ambient blend of East and West. Yamashita Park on the waterfront offers a scenic view of the port area where visitors can relax watching the boats in the harbour come and go.

Yokohama also offers unrivalled access to other tourist locations. Tokyo and Kamakura, the ancient military capital, are both within half an hour by train.

Pacifico Yokohama, the venue for the FISITA 2006 World Automotive Congress, is situated by the ocean in Minato Mirai, "the harbour of the future", and enjoys perfect views of Yokohama Bay Bridge. Minato Mirai was the focus of Yokohama's city development plan which made the district a new business, commercial and cultural hub, and home to one of the finest convention facilities in the world. It boasts many modern high-rise buildings, the most famous of which is the 70-storey Yokohama Landmark Tower. The observation deck provides a grand panoramic view that covers the entire Kanto region.

Minato Mirai is bustling with large shopping malls and amusement spots. The gorgeous night view of the city is not to be missed. The high-rise buildings, with Yokohama Cosmo World and its giant Ferris wheel in the centre, are lit up every evening, creating the illusion that the whole area is floating in the night sky.

To learn more about Yokohama, please visit
www.city.yokohama.jp
www.welcome.city.yokohama.jp
www.minatomirai21.com



All pictures courtesy of Japan National Tourist Organisation.

OFFICIAL TRAVEL AGENT

JTB Global Marketing & Travel Inc. (JTB GMT) is the official travel agent for the Congress and will handle hotel accommodation and tours.

JTB Global Marketing & Travel Inc.
 Convention Center
 (CD100720-187)
 2-3-11 Higashi-Shinagawa,
 Shinagawa-ku,
 Tokyo 140-8604 Japan
 Phone: +81-3-5796-5445
 Fax: +81-3-5495-0685
 E-mail: fisita2006@jtb.jp

HOTEL ACCOMMODATION

JTB GMT has reserved rooms at hotels in Yokohama for the Congress period. Reservations will be processed in order of receipt of application form.

If the hotel of your first choice is fully booked, you will be assigned to a room at a hotel of the same grade.



1. Inter-continental The Grand Yokohama
2. The Pan Pacific Hotel Yokohama
3. Yokohama Royal Park Hotel
4. Yokohama Sakuragicho Washington Hotel
5. Breezby Hotel
6. Navios Yokohama
7. Yokohama Kokusai Hotel
8. Hotel Camelot Japan
9. San-ai Yokohama Hotel
10. Chatelet Inn Yokohama

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Hotel Name & Details (Check-in & out time)	Room Rates JPY (inc bath)		Hotel Name & Details (Check-in & out time)	Room Rates JPY (inc bath)	
	Single	Twin		Single	Twin
1 Inter-continental The Grand Yokohama (14:00 / 11:00) 1-1-1, Minatomirai, Nishi-ku, Yokohama 220-8522 +81-45-223-2222 Adjacent to the venue	*JPY22,575	JPY30,450	6 Navios Yokohama (14:00 / 10:00) 2-1-1 Shinko, Naka-ku, Yokohama 231-0001 +81-45-633-6000 10 min. walk to the venue	JPY12,495	JPY22,890
2 The Pan Pacific Hotel Yokohama (14:00 / 11:00) 2-3-7, Minatomirai, Nishi-ku, Yokohama 220-8543 +81-45-682-2222 2 min. walk to the venue	*JPY21,000	JPY25,200	7 Yokohama Kokusai Hotel (13:00 / 12:00) 2-16-28, Minamisaiwai, Nishi-ku, Yokohama 220-0005 +81-45-311-1311 5 min. walk to JR Yokohama Sta.(West Exit)	JPY10,185	-----
3 Yokohama Royal Park Hotel (14:00 / 12:00) 2-2-1-3 Minatomirai, Nishi-ku, Yokohama 220-8173 +81-45-221-1111 5 min. walk to the venue	JPY18,900	JPY29,400	8 Hotel Camelot Japan (14:00 / 12:00) 1-11-3, Kitasaiwai Nishi-ku, Yokohama 220-0005 +81-45-312-2111 5 min. walk to JR Yokohama Sta.(West Exit)	JPY9,450	-----
4 Yokohama Sakuragicho Washington Hotel (14:00 / 10:00) 1-1- 67 Sakuragicho, Naka-ku, Yokohama 231-0062 +81-45-683-3111 15 min. walk to the venue	JPY9,975 (Sun-Tue) JPY11,550 (Wed-Fri) JPY13,125 (Sat)	JPY15,750 (Sun-Tue) JPY17,850 (Wed-Fri) JPY24,150 (Sat)	9 San-ai Yokohama Hotel (14:00 / 10:00) 3-95, Hanasakicho, Naka-ku, Yokohama 231-0063 +81-45-242-4411 18 min. walk to the venue	JPY8,715	JPY15,330
5 Breezbay Hotel (14:00 / 12:00) 1-22-2 Hanasakicho, Naka-ku, Yokohama 231-0063 +81-45-253-5555 15 min. walk to the venue	JPY10,000	JPY17,000	10 Chatelet Inn Yokohama (15:00 / 11:00) 1-2 Furocho, Naka-ku, Yokohama 231-0032 +81-45-681-4800 1 min. walk to JR Kannai Station	JPY7,875	JPY13,650

* Room rates include service charge, 5% consumption tax and breakfast. * indicates single occupancy of a twin or double room.

YOUTH HOSTEL: For those on a low budget, information for youth hostels in Yokohama is available from the following site: www.jyh.or.jp/english/index.html

Go to "Hostels," then a map will appear. On the right side, click below the "Kanto" title. A map will appear. On the lower right, click on "Kanagawa."

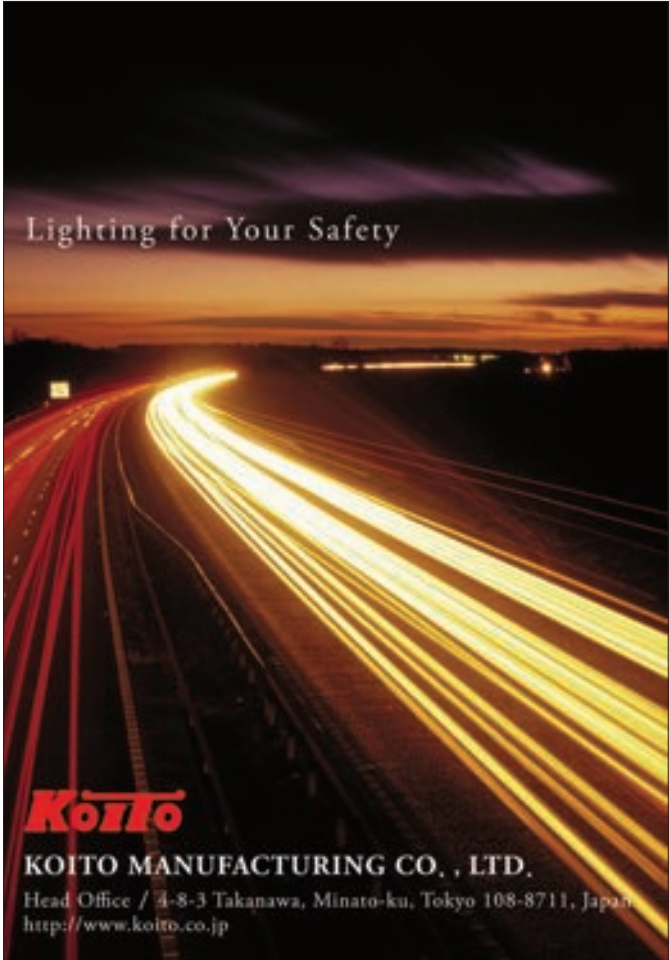


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<http://www.koito.co.jp>

Deadline: 20 September

For registration after 20 September, do not use this form - please register on-site.

SECTION 1 - PARTICIPANT

Please complete in BLOCK LETTERS and check appropriate boxes

First Name(s)	Family Name	Title (Prof./Dr./Mr./Ms)	
Chinese Characters (if applicable)			
Job Title	Department		
Organisation			
Mailing Address		Office <input type="checkbox"/>	Home <input type="checkbox"/>
City/State	Postal code	Country	
E-mail			
Phone (Incl. country code)	Fax (Incl. country code)		
Accompanying Person First Name(s)	Family Name	Title	

SECTION 2 - ABOUT YOU

Please check appropriate boxes

Which of the following areas do you work in?

Research & Development
 Design
 Manufacturing
 Production
 Engineering
 Electrical / Electronics
 Materials
 Testing / Measurement
 Sales / Marketing
 Purchasing / Buying
 Other

Which of the following best describes your job title?

President / CEO
 Managing Director
 Director / Vice President
 Manager
 Engineer
 Professor
 Lecturer
 Other

Which of the following is your company most active in?

Vehicle Manufacturing (passenger cars)
 Vehicle Manufacturing (commercial vehicles)
 Motorcycles
 Supply Industry (components / systems)
 Supply Industry (engines / powertrain)
 Supply Industry (electronics)
 Supply Industry (materials)
 Engineering Design Services
 Other

Where did you hear about the FISITA Congress?

Web site
 E-mail
 Preliminary Programme
 Colleague
 Advertisement
 Other

SECTION 3 - REGISTRATION

Please check the boxes of your choice

Category	By	By	On or after	Amount
	30 June 2006	31 August 2006	1 September 2006	
<input type="checkbox"/> Delegate	90,000 Yen	100,000 Yen	110,000 Yen	Yen
<input type="checkbox"/> Delegate (Non OECD)	40,000 Yen	70,000 Yen	80,000 Yen	Yen
<input type="checkbox"/> Speaker / Poster Author / Chairman* Paper / Session No.: <input type="text"/>	72,000 Yen	80,000 Yen	90,000 Yen (Chairman only)	Yen
<input type="checkbox"/> Speaker / Poster Author / Chairman (Non OECD)* Paper / Session No.: <input type="text"/>	35,000 Yen	60,000 Yen	70,000 Yen (Chairman only)	Yen
<input type="checkbox"/> One Day Registration Date:	35,000 Yen	35,000 Yen	40,000 Yen	Yen
<input type="checkbox"/> Two Day Registration Start Date:	65,000 Yen	65,000 Yen	70,000 Yen	Yen
<input type="checkbox"/> Accompanying Person	20,000 Yen	20,000 Yen	20,000 Yen	Yen
<input type="checkbox"/> Student (Not Student Congress)	15,000 Yen	15,000 Yen	15,000 Yen	Yen
			TOTAL (1)	Yen

* One speaker / poster author per presentation is entitled to the reduced speaker fee. Speakers / poster authors must insert their paper number. Session chairmen must insert the session number. All prices include consumption tax.

SECTION 4 - SOCIAL EVENTS

Please check the boxes of your choice

Category	Price per person	NO. of person(s)	Amount
Welcome Reception (22 Oct.)	FREE	Person(s)	Yen
Noh Performance (23 Oct.)	FREE	Person(s)	Yen
Gala Dinner (25 Oct.)	10,000 Yen	Person(s)	Yen
Farewell Party (26 Oct.)	FREE	Person(s)	Yen
		TOTAL (2)	Yen

GRAND TOTAL: (1) + (2) = YEN

Please note any dietary restrictions:

- Notes:
1. Personal cheques cannot be accepted.
 2. Bank transfer costs should be paid by the participant.
 3. If a group payment has been made, please indicate the name of the remitter and attach a list of participants to allow accurate confirmation of individual payments.

SECTION 5 - PAYMENT

Please select one method of payment

 BANK TRANSFER **CREDIT CARD**

Bank Transfers should be made to:

The Bank of Tokyo-Mitsubishi UFJ, Kojimachi Chuo Branch

4-1 Kojimachi Chiyoda-ku, Tokyo 102-0083 Japan

Account number: **1463735 (Ordinary Account)**Account name: **FISITA2006**Swift code: **BOTKJPJT**Bank code: **0005-015**
 VISA
 MasterCard
 Diners Club
 AMEX
 JCB
Card No:

Expiration date _____

Security code _____

(last 3 digits of the number on the back of the card, next to the signature)

Card holder's name: _____

Please attach a copy of your bank transfer documentation to confirm payment

Name of bank: _____

Date of Transfer request: _____

Payment made by: _____

SECTION 6 - CONFIRMATION

I have read and understood the cancellation policy on page 65 and wish to confirm my registration for FISITA 2006

Date:

Signature:

Please fax / mail both these pages of this registration form to:
Registration Office of FISITA 2006
c/o Congress Corporation 5-1 Kojimachi, Chiyoda-ku, Tokyo 102-8481 Japan
Phone: +81-3-5216-5551
Fax: +81-3-5216-5552

You can also register online at www.fisita2006.com
IMPORTANT: If you send your registration form by fax / mail,
 please DO NOT also register on-line.

Please complete and return this form to:

JTB Global Marketing & Travel Inc. (JTB GMT)
 Convention Center (CD100720-187)
 2-3-11 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-8604, Japan
 Fax: +81-3-5495-0685

You can also register online at www.fisita2006.com

IMPORTANT: If you send your registration form by fax / mail, please DO NOT also register on-line.

PLEASE NOTE: Hotel availability cannot be guaranteed after 20 September.

APPLICATION AND PAYMENT

Participants wishing to reserve hotel accommodation and tours should apply online or fax the completed form to reach JTB GMT **no later than September 20, 2006**. Confirmation will be sent by JTB GMT. Applications should be accompanied by a remittance covering the hotel deposit (room charge for one night) and total tour fare plus the handling charge of JPY 525 payable to JTB GMT. The hotel deposit will be credited to your final bill. All hotel expenses minus the hotel deposit will be payable directly to the hotel on departure.

No reservation will be confirmed without this payment. All payments must be in Japanese Yen. If the sender's name is different from the participant's name or the remittance covers more than one person, please confirm the name of each participant. Payment can be made by credit card or bank transfer to JTB Global Marketing & Travel Inc.

CONTACT DETAILS

Please complete in BLOCK LETTERS and check appropriate boxes

First Name(s)	Family Name	Title (Prof./Dr./Mr./Ms)	
Chinese Characters (if applicable)			
Job Title	Department		
Organisation			
Mailing Address	Office <input type="checkbox"/>		Home <input type="checkbox"/>
City/State	Postal code	Country	
E-mail			
Phone (Incl. country code)	Fax (Incl. country code)		
Accompanying Person First Name(s)	Family Name	Title	
Flight number	Arrival date	Arrival time	

HOTEL ACCOMMODATION

Hotel 1st choice			
Hotel 2nd choice			
Room type	Single <input type="checkbox"/>	Twin <input type="checkbox"/>	Deposit (1 night's stay) Yen
Arrival date	Departure date	No. of nights <input type="text"/>	
TOTAL (1)			Yen

Reservations will be processed in order of receipt of application form. If the hotel of your first choice is fully booked, you will be assigned a room at a hotel of the same grade.

OPTIONAL TOURS

Code	Course	Date	Price (per person)	No. of person(s)	Amount
OP-1	Flower Arrangement and Tea Ceremony	Mon Oct 23	free	<input type="text"/> Person(s)	Yen
OP-2	Yokohama Walking	Mon Oct 23	2,500 Yen	<input type="text"/> Person(s)	Yen
OP-3	Tokyo City 1 day	Tues Oct 24	10,500 Yen	<input type="text"/> Person(s)	Yen
OP-4	Mt Fuji and Hakone 1 day	Tues Oct 24	16,000 Yen	<input type="text"/> Person(s)	Yen
OP-5	Kamakura 1 day	Wed Oct 25	11,500 Yen	<input type="text"/> Person(s)	Yen
OP-6	Edo (Old Tokyo) Downtown 1 day	Wed Oct 25	11,500 Yen	<input type="text"/> Person(s)	Yen
OP-7	Japanese Garden & Shopping	Thu Oct 26	5,000 Yen	<input type="text"/> Person(s)	Yen
TOTAL (2)					Yen

TECHNICAL TOURS

Code	Course	Date	Price (per person)	No. of person(s)	Amount
TV-1	Nissan & NHK Spring Plants	27 Oct.	3,000 Yen	<input type="checkbox"/> Person(s)	Yen
TV-2	Nissan Plant	27 Oct.	1,000 Yen	<input type="checkbox"/> Person(s)	Yen
TV-3	JAMSTEC & NICT	27 Oct.	3,000 Yen	<input type="checkbox"/> Person(s)	Yen
Option to TV-1 & TV-3 course: Kirin Brewery Tour		27 Oct.	free	<input type="checkbox"/> Person(s)	---- Yen
TV-4	JARI and Nikko 2-day Tour	29-30 Oct	35,000 Yen (double occupancy)	<input type="checkbox"/> Person(s)	Yen
			38,000 Yen (single occupancy)	<input type="checkbox"/> Person(s)	Yen
TV-5	JARI 1-day Tour	29 Oct.	5,500 Yen	<input type="checkbox"/> Person(s)	Yen
TOTAL (3)					Yen

POST-CONGRESS TOUR

Code	Course	Date	Room Type	No. of person(s)	Amount
PC-1	Kyoto 2 Days	28-29 Oct.	53,000 Yen (single occupancy)	<input type="checkbox"/> Person(s)	Yen
			47,000 Yen (double occupancy)	<input type="checkbox"/> Person(s)	Yen
TOTAL (4)					Yen

Grand Total: (1) + (2) +(3) + (4) + 525 yen (Handling Charge) = Yen

PAYMENT

Please select one method of payment

BANK TRANSFER

Bank Transfers should be made to:

The Bank of Tokyo-Mitsubishi UFJ, Shin-Marunouchi Branch
 1-4-2 Marunouchi Chiyoda-ku, Tokyo 100-0005 Japan
 Account number: **4760343**
 Account name: **JTB Global Marketing & Travel Inc.** (Message: CD 100720-187)
 Swift code: BOTKJPJT
 Bank code: 0005 - 422

Please attach a copy of your bank transfer documentation to confirm payment

Name of bank _____

Date of Transfer request _____

Payment made by _____

CREDIT CARD

VISA MasterCard Diners Club AMEX JCB

Card No

Expiration date _____

Security code _____

(last 3 digits of the number on the back of the card, next to the signature)

Card holder's name _____

CONFIRMATION

I authorise JTB GMT to charge me for one night's hotel deposit, tours as requested and handling charge of 525 Yen. I understand my reservation will become valid on receipt of confirmation from JTB GMT. I have read and understood the cancellation policy.

Date _____

Signature _____

CANCELLATION

In the event of cancellation, written notification should be sent to JTB GMT. The following cancellation fees will be deducted before any refund is made, in addition to the handling charge.

Hotels:

Up to 10 days before the first night of stay -----No charge

9 to 2 days before-----20% of daily room charge

1 day before -----80% of daily room charge

On the day of arrival or no notice given -----100% of daily room charge

Tours:

20 to 8 days before the departure day of tours including hotel accommodations, or 10 to 8 days

before the departure day of one day tours-----20% of tour fare

7 - 2 days before -----30% of tour fare

1 day before -----40% of tour fare

Prior to starting time on the departure day -----50% of tour fare

After departure or failure to show without notice -----100% of tour fare