

Small Engine Technology Conference & Exposition

Technical Session Schedule

As of 10/04/2010 07:40 pm

Tuesday, September 28

Alternative Fuels (Part 1 of 2)

Session Code: SETC112

Room Horsaal 3

Session Time: 10:00

Organizers - Jan Czerwinski, Univ. of Applied Sciences - Biel; Tadao Okazaki, Kubota Corp.; Paul Richards, Innospec; Koji Yoshida, Nihon Univ.

Chairpersons - Paul Richards, Innospec; Koji Yoshida, Nihon Univ.

Time	Paper No.	Title
10:00 a.m.	2010-32-0054	Alternative Fuel Butanol: Preliminary Investigation on Performance and Emissions of a Marine Two-Stroke Direct Fuel Injection Engine Jeff R. Wasil, Justin Johnson, Rahul Singh, BRP US Inc
10:30 a.m.	2010-32-0126	Measurement of Regulated and Unregulated Exhaust Emissions from Snowmobiles in the 2009 SAE Clean Snowmobile Challenge Scott A. Miers, Christopher Green, Jay Meldrum, Michigan Technological Univ; Matt Chmielewski, AVL North America Inc
11:00 a.m.	2010-32-0055	Expanded Use of Small Engines by the Application of Butane Fuel Canisters Yasuhiro Sugimoto, Hiroaki Kojima, Masanori Fujinuma, Honda R&D Co. Ltd.
11:30 a.m.	2010-32-0052	Investigations on Combustion Process of Low-pressure CNG Compound Direct Injection Spark-ignited Engines Chunming Hu, Shengzhi Hou, Tianjin Univ.

Planned by Small Engine Technology Conference General Committee / EMB Land and Sea Group

Tuesday, September 28

Alternative Fuels (Part 2 of 2)

Session Code: SETC112

Room Horsaal 3

Session Time: 13:00

Organizers - Jan Czerwinski, Univ. of Applied Sciences - Biel; Tadao Okazaki, Kubota Corp.; Paul Richards, Innospec; Koji Yoshida, Nihon Univ.

Chairpersons - Tadao Okazaki, Kubota Corp.; Paul Richards, Innospec; Koji Yoshida, Nihon Univ.

Time	Paper No.	Title
1:00 p.m.	2010-32-0078	The Combustion and Performance of a Converted Direct Injection Compressed Natural Gas Engine using Spark Plug Fuel Injector Taib Iskandar Mohamad, Ali Yusoff, Shahrir Abdullah, Universiti Kebangsaan Malaysia; Mark Jermy, University of Canterbury; Matthew Harrison, Royal Academy of Engineering; How Heoy Geok, Universiti Kebangsaan Malaysia

1:30 p.m.	2010-32-0125	Real-World Emission Performance of a Snowmobile with Dual-Fuel Gasoline and Natural Gas Powertrain Luis Cachon, Ernst Pucher, Vienna University of Technology
2:00 p.m.	2010-32-0050	Combustion Characteristics of a Dual Fuel Diesel Engine with Natural Gas (Study with Fatty Acid Methyl Esters Used as Ignition Fuels) Yasufumi Yoshimoto, Niigata Inst. of Technology
2:30 p.m.	2010-32-0081	Potential of Hydrogenated Vegetable Oil (HVO) in a Modern Diesel Engine Heiko Pflaum, Peter Hofmann, Bernhard Geringer, Werner Weissel, Vienna University of Technology
3:00 p.m.		BREAK
3:30 p.m.	2010-32-0053	Effect of Injection Pressure on Ignition, Flame Development and Soot Formation Processes of Biodiesel Fuel Spray Olawole Abiola Kuti, Wu Zhang, Keiya Nishida, University of Hiroshima; Xiangang Wang, Zuohua Huang, University of Xian Jiantong
4:00 p.m.	2010-32-0080	Application of Cellulosic Liquefaction Fuel (CLF) and Fatty Acid Methyl Ester (FAME) Blends for Diesel Engine Koji Yoshida, Nihon Univ.
4:30 p.m.	2010-32-0079	The Influence of Cellulosic Liquefaction Fuel, FAME and Diesel Fuel Mixture on Diesel Engine Performance Yuya Ozawa, Graduate School of Nihon University
5:00 p.m.	2010-32-0051	Study of Dual Fuel Engine for Low Calorie Biomass Gas Hiroaki Wakizaka, Akihiro Hara, Tsugio Fukushima, Yasuhiro Noda, Tohru Nakazono, Yanmar Co., Ltd

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Tuesday, September 28

Vehicle Dynamics and Safety (Part 1 of 2)

Session Code: SETC115

Room Horsaal 4

Session Time: 08:00

Organizers - Masayuki Baba, Honda R&D Co., Ltd.; Deane B. Jaeger, Harley-Davidson Motor Co.

Chairpersons - Masayuki Baba, Honda R&D Co., Ltd.; Stephan Schmidt, Graz University of Technology

<i>Time</i>	<i>Paper No.</i>	<i>Title</i>
10:00 a.m.	2010-32-0110	Rolling Friction of Low Resistance Tires Martin Egger, FH-OOE
10:30 a.m.	2010-32-0105	Investigation of Steady-State Cornering Characteristics of Motorcycles Based on Tire Slip Angle Measurement Shigeru Fujii, Souichi Shiozawa, Akinori Shinagawa, Tomoaki Kishi, Yamaha Motor Co Ltd
11:00 a.m.	2010-32-0108	Mass Damper Application to the Front Suspension of a Tilting Three Wheeler Antonio Sponziello, Francesco Frenzo, Massimo Guiggiani, University of Pisa; Riccardo Rossi, EDI Progetti & Sviluppo

11:30 a.m. 2010-32-0104 **Automatic Optimisation of the Vibration Characteristics of Vehicle Suspension**
Senthilnathan Subbiah, TVS; David Towers PhD, University Of Leeds

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Tuesday, September 28

Vehicle Dynamics and Safety (Part 2 of 2)

Session Code: SETC115

Room Horsaal 4 Session Time: 13:00

Organizers - Masayuki Baba, Honda R&D Co., Ltd.; Deane B. Jaeger, Harley-Davidson Motor Co.; James K. Thompson, NIOSH

Chairpersons - Masayuki Baba, Honda R&D Co., Ltd.; Stephan Schmidt, Graz University of Technology

Time	Paper No.	Title
1:00 p.m.	2010-32-0100	Muscle Fatigue due to Motorcycle Riding Sai Praveen Velagapudi, TVS Motor Co Ltd; Venkatesh Balasubramanian, IIT Madras; Adalarasu k, VIT Vellore; R Babu, Venkata Mangaraju, TVS Motor Co Ltd
1:30 p.m.	2010-32-0106	Development of a Control Method to Reduce Acceleration Shock in Motorcycles Hirohide Matsushima, Kawasaki Heavy Industries, Ltd.
2:00 p.m.	2010-32-0102	Parametric Study of Three - Wheeler Directional Stability using MBD Simulations Ravikanth GSG, Gangi Reddy D, Tushar.R. Gawade, K.V. Santosh, M.Nagarjun Reddy, TVS Motor Company LTD
2:30 p.m.	2010-32-0101	A New Test Method to Characterize the Behaviour of Hydraulic Damper Govardan Daggupati, Venkata Mangaraju, Chandan Chavan, R Babu, TVS Motor Co Ltd

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Tuesday, September 28

Design and Simulation (Part 1 of 2)

Session Code: SETC107

Room Horsaal 5 Session Time: 10:00

Organizers - Roy Douglas, Robert Fleck, Queen's Univ. of Belfast; Minoru Iida, Yamaha Motor Co., Ltd.; Kazuyuki Shiomi, Honda R&D Co., Ltd.

Chairpersons - Roy Douglas, Queen's Univ. of Belfast; Minoru Iida, Yamaha Motor Co., Ltd.

Time	Paper No.	Title
10:00 a.m.	2010-32-0037	A New CFD Approach for Assessment of Swirl Flow Pattern in HSDI Diesel Engines Reza Rezaei, VKA, RWTH Aachen University; Stefan Pischinger, Jens Ewald, Philipp Adomeit, FEV Motorentechnik GmbH

10:30 a.m.	2010-32-0029	Establishment of Prediction Technology of Fatigue Strength in Roots of Internal Thread for Crankcase Assembly and Clarification of Cracking Mechanism in Roots of Internal Thread <i>Hiroshi Kuribara, Junya Saito, Hideki Saito, Daisuke Sekiya, Honda R&D Co Ltd; Hidenori Arisawa</i>
11:00 a.m.	2010-32-0033	A Multi-Disciplinary Approach for Design Improvement of an Air-Cooled Two-Wheeler Engine Cylinder Head <i>Om Singh, T. Sreenivasulu, M Kannan, K. Nagaraja, TVS Motor Company Ltd</i>
11:30 a.m.	2010-32-0034	EHD-Contact in Engine Simulations using a Modal Force Approach in Commercial Multi-Body Simulation Software <i>Michael Steinbatz, University of Applied Sciences Wels</i>

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Tuesday, September 28

Design and Simulation (Part 2 of 2)

Session Code: SETC107

Room Horsaal 5

Session Time: 13:00

Organizers - Roy Douglas, Robert Fleck, Queen's Univ. of Belfast; Kazuyuki Shiomi, Tomoo Shiozaki, Honda R&D Co., Ltd.; Isato Taki, Suzuki Motor Corp.

Chairpersons - Roy Douglas, Queen's Univ. of Belfast; Toshimi Kobayashi, Kawasaki Heavy Industries, Ltd.; Isato Taki, Suzuki Motor Corp.

Time	Paper No.	Title
1:00 p.m.	2010-32-0036	Holistic Model-Based Development Process <i>Christoph Dutzler, BRP-Powertrain GmbH & Co. KG; Gregor Heizinger; Andreas Mair, BRP-Powertrain GmbH & Co. KG</i>
1:30 p.m.	2010-32-0031	Prediction of Fatigue Failure in Multiaxial Stress States for Motorcycle Engines <i>Kenji Nishio, Kawasaki Heavy Industries Ltd</i>
2:00 p.m.	2010-32-0032	Stress Analysis of a CVT Belt Transmission <i>Claudio Annicchiarico, Renzo Capitani, Università degli Studi di Firenze; Riccardo Testi, Piaggio & C. S.p.A.</i>
2:30 p.m.	2010-32-0030	Basic Investigations on the Prediction of Spray-Wall and Spray-Fluid Interaction for a GDI Combustion Process <i>Martin Abart, Stephan Schmidt, Oliver Schoegl, Alexander Trattner, Roland Kirchberger, Helmut Eichlseder, Dalibor Jajcevic, Graz University of Technology</i>
3:00 p.m.		BREAK
3:30 p.m.	2010-32-0035	Exhaust System Simulation of a 2-Cylinder 2-Stroke Engine Including Heat Transfer Effects <i>Dalibor Jajcevic, Graz University of Technology; Matthias Fitl, BRP-Powertrain GmbH & Co KG; Stephan Schmidt, Graz University of Technology; Karl Glinsner, BRP-Powertrain GmbH & Co KG; Raimund Almbauer, Graz University of Technology</i>

4:00 p.m.	2010-32-0068	Vehicle Reliability Estimation Model for Concept Vehicle Target Setting and Identification of Critical Parameters Influencing System Reliability Shaiju M. Belsus, Gopi Sankar, Amol Sharma, Nissan Ashok Leyland Technologies Ltd
4:30 p.m.	2010-32-0069	Experimental and Numerical Analyses for the Characterization of the Cyclic Dispersion and Knock Occurrence in a Small-Size SI Engine Gustavo Fontana, Universita di Cassino; Fabio Bozza, Universita di Napoli; Enzo Galloni, Universita di Cassino; Daniela Siano, Istituto Motori, CNR
5:00 p.m.	2010-32-0070	Development of Innovative Simulation and Testing Methodologies for Optimizing Crankshaft Design Saharash Khare, TVS Motor Company Ltd. India

Tuesday, September 28

NVH Technology (Part 1 of 2)

Session Code: SETC105

Room Horsaal 6

Session Time: 10:00

Organizers - Kenneth Kicinski, Harley-Davidson Motor Co.; Tadao Okazaki, Kubota Corp.

Chairpersons - Jay Meldrum, Michigan Technological Univ.; Tadao Okazaki, Kubota Corp.

Time	Paper No.	Title
10:00 a.m.	2010-32-0023	Development of a Noise Prediction Technique for Designing a High-Performance Muffler of Motorcycle Toshiaki Taguchi, Makoto Aoki, Youta Katsukawa, Masahiro KOGA, Tohru Koshimizu, Masahito Saitou, Kawasaki Heavy Industries, LTD.
10:30 a.m.	2010-32-0028	Pros and Cons of Using Different Numerical Techniques for Transmission Loss Evaluation of a Small Engine Muffler Daniela Siano, Istituto Motori CNR; Fabio Auriemma PhD, Fabio Bozza, Universita di Napoli
11:00 a.m.	2010-32-0027	Reducing Tiller Arm Vibration of a 2-Cylinder Outboard Motor by the Double-Focused Mount Method Darrell A. Wiatrowski, Peter E. Lucier, BRP US Inc.
11:30 a.m.	2010-32-0022	Acoustic Analysis of Small Engine Catalytic Converters Jüri Lavrentjev, Hans Rämmal, Tallinn University of Technology

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Tuesday, September 28

NVH Technology (Part 2 of 2)

Session Code: SETC105

Room Horsaal 6

Session Time: 13:00

Organizers - Kenneth Kicinski, Harley-Davidson Motor Co.; Tadao Okazaki, Kubota Corp.

Chairpersons - Jay Meldrum, Michigan Technological Univ.; Tadao Okazaki, Kubota Corp.

Time	Paper No.	Title
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1:00 p.m.	2010-32-0025	Camshaft Drive Torque Measuring Device Built in a Chain Sprocket Masao Ishihama, Kanagawa Institute of Technology
1:30 p.m.	2010-32-0021	A Practical Approach towards Muffler Design, Development and Prototype Validation Shital Shah, Defiance Technologies; Saisankaranarayana Kuppili, Ashok Leyland; Kalyankumar Hatti; Dhananjay Thombare, Rajarambapu Institute of Technology
2:00 p.m.	2010-32-0026	Study of Bolt Model to Improve Accuracy of Engine Vibration Analysis Yoshisada Sakamoto, Suzuki Motor Corporation; Shozo Kawamura, Toyohashi University of Technology; Yoshihiko Sunayama, Suzuki Motor Corporation

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Tuesday, September 28

Fuel Supply Systems

Session Code: SETC106

Room Horsaal 6

Session Time: 15:30

Organizers - Peter Kaub, Re-Sol LLC; Isato Taki, Suzuki Motor Corp.

Chairpersons - Jay Meldrum, Michigan Technological Univ.; Isato Taki, Suzuki Motor Corp.

Time	Paper No.	Title
3:30 p.m.	2010-32-0066	Improvement of Wear Resistance of Fuel Pump for High Alcohol Content Fuel Toshifumi Uehara, Keihin Corp; Kouji Miyake; Yoshikazu Tanaka; Yukitaka Tsuda, Keihin Corp
4:00 p.m.	2010-32-0067	Optical Characterization of PFI Gasoline Sprays: Effect of Injection Pressure Anand T. N. C., Madan Mohan Avulapati, Devendra Deshmukh, Ravikrishna Rayavarapu, Indian Institute of Science
4:30 p.m.	2010-32-0064	Analysis of Port Injected Fuel Spray Under Cross Wind Using 2-D Measurement Techniques Yasuo Moriyoshi, Chiba Univ.; Minoru Iida, Yamaha Motor Co Ltd

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Tuesday, September 28

Emissions (Part 1 of 2)

Session Code: SETC110

Room K 012D

Session Time: 10:00

Organizers - Hiromi Deguchi, Suzuki Motor Corp.; Jeff J. White, Southwest Research Institute

Chairpersons - Hiromi Deguchi, Suzuki Motor Corp.; Jeff J. White, Southwest Research Institute

Time	Paper No.	Title
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10:00 a.m.	2010-32-0048	Analysis of Motorcycle Fuel Consumption in Malaysia Jih Houh Lee, Chew Liang Chong, Horizon Gitano, Universiti Sains Malaysia
10:30 a.m.	2010-32-0046	Strategies and Solutions to Control and Reduce the NO_x, HC and CO Levels in Gasoline/Alternate Fueled Engines P. Shanmugam, T. Kathiresan, N. Senthilnathan, AS. Anbukarasu, R. Vinoth Balaram, K. Prabu, MG. Naveenkumar, TVS Motor Company Ltd
11:00 a.m.	2010-32-0038	Extending Catalyst Useful Life through Advanced Catalytic Materials and Flow Dynamics Jordan Szafranski, Cosmos Manufacturing Inc.; Mike Galligan, BASF
11:30 a.m.	2010-32-0044	Development of Paper Exhaust Catalyst Material for Emission Control in Small Internal Combustion Engines (2) Katsumasa Kiuchi, Ryo Suzuki, Hiroaki Yano, Shintaro Yagi, Akihiko Tomoda, F.C.C. Co.,Ltd.

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Tuesday, September 28

Emissions (Part 2 of 2)

Session Code: SETC110

Room K 012D

Session Time: 13:00

Organizers - Hiromi Deguchi, Suzuki Motor Corp.; Jeff J. White, Southwest Research Institute

Chairpersons - Hiromi Deguchi, Suzuki Motor Corp.; Jeff J. White, Southwest Research Institute

Time	Paper No.	Title
1:00 p.m.	2010-32-0047	Real-time Particle Emissions from 2-stroke Motorbikes with and without PMP Sampling System Tim Hands, Alexander John Finch, Jonathan Symonds, Chris Nickolaus, Cambustion, Ltd.
1:30 p.m.	2010-32-0039	Experimental Investigation of Motorcycle Exhaust Gas Recirculation System Manqun Lin, Tianjin Internal Combustion Engine Res.
2:00 p.m.	2010-32-0040	Study on the Effect of EGR System on the Emissions from a Small Off-road Gasoline Engine Jing Qin, Manqun Lin, Liang Zhao, Bin Jia, Peng Liu, Tianjin Internal Combustion Engine Res
3:00 p.m.		BREAK
3:30 p.m.	2010-32-0041	Development of Motorcycle Drive Cycles for Malaysia Jih Houh Lee, Horizon Gitano, Hock Seng Eu, Ahmad Syazli Mohd Khalil, Universiti Sains Malaysia
4:00 p.m.	2010-32-0042	Measurement of Dry Soot and Particulate Matter from Two-Stroke and Four-Stroke Snowmobiles Scott A. Miers, Christopher A. Green, Jay S. Meldrum, Christine Lundberg, Michigan Technological Univ; William Silvis, Harry Pankratz, AVL North America Inc

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Wednesday, September 29

Engine Components

Session Code: SETC102

Room Horsaal 3

Session Time: 10:00

Organizers - Robert Fleck, Queen's Univ. of Belfast; Toshimi Kobayashi, Kawasaki Heavy Industries, Ltd.

Chairpersons - Robert Kee, Queen's Univ. of Belfast; Toshimi Kobayashi, Kawasaki Heavy Industries, Ltd.

Time	Paper No.	Title
10:00 a.m.	2010-32-0059	A Model Investigation on the Pressure Transducer Dynamics for Measurements in Lubricating Vane Pumps: Influence of Dissolved Air and of Transducer/Tubing Geometry Silvio Barbarelli, Sergio Bova, Rocco Piccione, Univ. of Calabria
10:30 a.m.	2010-32-0060	Diesel Engine Bearings for a Lead Free Future Rainer Aufischer, Miba Gleitlager GmbH
11:00 a.m.	2010-32-0057	Development of Dual Clutch Transmission for Large Motorcycles Junya Watanabe, Dai Arai, Masataka Tanaka, Takeru Abe, Atsushi Ogasawara, Masahiko Tsuchiya, Ryushi Tsubota, Honda R&D Co Ltd

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Wednesday, September 29

Lubricants

Session Code: SETC109

Room Horsaal 3

Session Time: 13:00

Organizers - Peter Kaub, Re-Sol LLC; Tohru Nakazono, Yanmar co. ltd.,

Chairpersons - Peter Kaub, Re-Sol LLC; Tohru Nakazono

Time	Paper No.	Title
1:00 p.m.	2010-32-0122	Demonstration of the Ability of a Novel Engine Oil to Remove Hydrocarbon Deposits in Two-Stroke Engines Brent R. Dohner, Michael S. Brenner, Lubrizol Corp.; Laimute Svarcas, Lubrizol Corp
1:30 p.m.	2010-32-0123	Study of Lower Viscosity Motorcycle Engine Oils for Fuel Saving Nobuaki Watanabe, IDEMITSU KOSAN Co.Ltd
2:00 p.m.	2010-32-0124	Impact of Oil Aging on Wear of Piston Ring and Cylinder Liner System Karoline Steinschütz, Bernhard Geringer, Vienna University of Technology; Martin Jech, AC2T research GmbH; Michael Urbanek, Vienna University of Technology; Thomas Wopelka, AC2T research GmbH; Charlotte Besser, Austrian Center of Competence for Tribol

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Wednesday, September 29

Two-Stroke Engine (Part 1 of 3)

Session Code: SETC103

Room Horsaal 4**Session Time: 10:00****Organizers -** Scott A. Miers, Michigan Technological Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.**Chairpersons -** Scott A. Miers, Michigan Technological Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.

Time	Paper No.	Title
10:00 a.m.	2010-32-0013	Visualization of a Fired Two-Stroke Chain Saw Engine Running at Idle Speed by Dynamic Neutron Radiography Christian Gruenzweig, Paul Scherrer Institut
10:30 a.m.	2010-32-0018	Experimental Tests and Simulations of A 1.5 cc Miniature Glow-Ignition Two-Stroke Engine Lei Tian, University of Minnesota, USA
11:00 a.m.	2010-32-0020	Fuel Injection for Low Emission 50cc 2-Stroke Scooter Paul Ravenhill, Jeffrey Allen, Benajmin Smither, Gavin Farmer, Scion-Sprays Ltd; Eric Demesse, Philippe Grosch, Peugeot Motocycles
11:30 a.m.	2010-32-0017	Possibilities and Limits of 1D CFD Simulation Methodology for the Layout of 2-Stroke GDI Combustion System Oliver Schoegl, Stephan Schmidt, Martin Abart, Christian Zinner, Roland Kirchberger, Graz University of Technology; Mathias Fitl, Karl Glinsner, Stefan Leiber, BRP-Powertrain GmbH & Co KG

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Wednesday, September 29**Two-Stroke Engine (Part 2 of 3)****Session Code: SETC103****Room Horsaal 4****Session Time: 13:00****Organizers -** Scott A. Miers, Michigan Technological Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.**Chairpersons -** Scott A. Miers, Michigan Technological Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.

Time	Paper No.	Title
1:00 p.m.	2010-32-0019	High Efficient 125- 250 cm³ LPDI Two-Stroke Engines, a Cheap and Robust Alternative to Four-Stroke Solutions? Roland Oswald, Andreas Ebner, Roland Kirchberger, Graz University of Technology
1:30 p.m.	2010-32-0015	Reed Valve CFD Simulation of a 2-Stroke Engine Using a 2D Model Including the Complete Engine Geometry Dalibor Jajcevic, Raimund Almbauer, Stephan Schmidt, Graz University of Technology; Karl Glinsner, Matthias Fitl, BRP-Powertrain GmbH & Co KG
2:00 p.m.	2010-32-0063	Hugo Ruppe - An Important German Combustion Engine Pioneer Bruno M. Spessert, Univ. of Applied Sciences Jena

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Wednesday, September 29**Advanced Combustion (Part 1 of 3)**

Session Code: SETC114

10:00

Room Horsaal 5

Session Time:

Organizers - Jaal B. Ghandhi, Univ. of Wisconsin Madison; Yasuo Moriyoshi, Chiba Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.

Chairpersons - James Carroll, Southwest Research Institute; Yasuo Moriyoshi, Chiba Univ.

Time	Paper No.	Title
10:00 a.m.	2010-32-0086	A Macroscopic Understanding of the Controlled Auto-Ignition for Vehicle Engines Yoichi Ishibashi, Hideaki Morikawa, Honda R&D Co Ltd
10:30 a.m.	2010-32-0087	A Further Approach to Controlled Auto- Ignition Using a Sequence of Low-Temperature Combustion-States Hideaki Morikawa, Yoichi Ishibashi, Honda R&D Co Ltd
11:00 a.m.	2010-32-0099	Experimental and Visualization Study of Fuel Injection Pressure and Injection Timing on PCCI Combustion Characteristics and Emissions Simhachalam Juttu, S Thipse, N Marathe, Automotive Research Association of India; M Gajendra Babu, Indian Institute of Technology - Delhi
11:30 a.m.	2010-32-0098	A Study of Ignition Characteristics of an HCCI Engine Operating on a Two-component Fuel Kenji Saitou, Akira Iijima, Yasuhiro Otagiri, Koji Yoshida, Yusuke Takahashi, Hideo Shoji, Nihon University

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Wednesday, September 29

Advanced Combustion (Part 2 of 3)

Session Code: SETC114

Room Horsaal 5

Session Time: 13:00

Organizers - Jaal B. Ghandhi, Univ. of Wisconsin Madison; Yasuo Moriyoshi, Chiba Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.

Chairpersons - James Carroll, Southwest Research Institute; Akira Iijima, Nihon University

Time	Paper No.	Title
1:00 p.m.	2010-32-0090	The Effect of Ceramic Thermal Barrier Combustion Chamber Coatings on the Performance and Efficiency of a Small Diesel Engine Tyrell Arment, Jim Cowart, Pat Caton, Leonard Hamilton, US Naval Academy
1:30 p.m.	2010-32-0093	Combustion System Development and Analysis of a Downsized Highly Turbocharged PFI Small Engine William P. Attard, Elisa Toulson, Ferenc Hamori, Harry C. Watson, University of Melbourne, Australia
2:00 p.m.	2010-32-0094	Investigations on Low Pressure Gasoline Direct Injection for a Standard GDI Combustion System Stephan Schmidt, Graz University of Technology; Martin Joyce, Jonathan Wall, DENSO International Europe; Alexander Trattner, Roland Kirchberger, Helmut Eichlseder, Graz University of Technology

Wednesday, September 29

Engine Controls (Part 1 of 2)

Session Code: SETC108

Room Horsaal 6

Session Time: 10:00

Organizers - Takashi Mizokawa, Yamaha Motor Co., Ltd.; Anthony A. Szczotka, Robert Bosch LLC

Chairpersons - Takashi Mizokawa, Yamaha Motor Co., Ltd.; Tony Szczotka, ROBERT BOSCH CORP

Time	Paper No.	Title
10:00 a.m.	2010-32-0115	Closed Loop Controlled Electronic Carburation System Paolo Colombo, Dell'Orto Spa
10:30 a.m.	2010-32-0118	Engine Controller Design for Small Engine Mass Production Jesse Beeker, Freescale; Marco Sacchi, Freescale Semiconductor
11:00 a.m.	2010-32-0120	Early Warning System for Light Commercial Engines using EMOS (Engine MOnitoring System) Controller Ajay Ramlal Dandge, Tata Technologies, Ltd.; Vishwas Vaidya, Tata Motors, Ltd.
11:30 a.m.	2010-32-0116	Engine Speed Control with a Choke Valve based on the Adaptive Control Approach - Mechanism to Drive both the Throttle Valve and the Choke Valve with a Single Motor Hideaki Shimamura, Akihito Kasai, Tetsuya Arai, Honda R&D Co.,Ltd.

Wednesday, September 29

Engine Controls (Part 2 of 2)

Session Code: SETC108

Room Horsaal 6

Session Time: 13:00

Organizers - Takashi Mizokawa, Yamaha Motor Co., Ltd.; Anthony A. Szczotka, Robert Bosch LLC

Chairpersons - Tony Szczotka, ROBERT BOSCH CORP; Takashi Mizokawa, Yamaha Motor Co., Ltd.

Time	Paper No.	Title
1:00 p.m.	2010-32-0121	Development of Idling Stop System for 125 cm³ Scooters with Fuel Injection Takeshi Yanagisawa, Teruhide Yamanishi, Katsuhiko Utsugi, Toshiya Nagatsuyu, Honda R&D Co Ltd
1:30 p.m.	2010-32-0117	Development of Variable Cylinder Management System for Large Motorcycles- An Effective Way of Reducing Output Change at Switching of the Number of Working Cylinders Hayato Maehara, Shunsuke Kitawaki, Takeru Abe, Shinji Saito, Takaaki Tsukui, Honda R&D Co Ltd

Wednesday, September 29

Materials (Part 1 of 2)

Session Code: SETC111

Room K 012D

Session Time: 10:00

Organizers - Yasuyuki Muramatsu, Yamaha Motor Co., Ltd.; David Palmer, BRP US Inc.

Chairpersons - Gregory W. Davis, Kettering Univ.; Yasuyuki Muramatsu, Yamaha Motor Co., Ltd.

Time	Paper No.	Title
10:00 a.m.	2010-32-0075	The Development of the Ceramics Nano-Film Coating Having Both High Corrosion Resistance and Excellent Heat Resistance Naohisa Takahashi; Isao Murakoshi; Shitomi Sasada
10:30 a.m.	2010-32-0077	Clearance Control Coatings - Low Cost, Abradable, Lubricious Andrew Suman, Flow Coatings LLC; Dmitry A. Shamis, Napier Engineering, LLC
11:00 a.m.	2010-32-0074	A Study on Material Compatibility and Improvements of Fuel System Parts of Gasoline Engine for Ethanol Blended Fuels Singaraju Venumadhav, M Murugan, Srinivasan Govindarajan, Muthukrishnan Ramachandran, B Srinivasan, Murugan Sivakumar, UCAL Fuel Systems Ltd
11:30 a.m.	2010-32-0072	New Environmental-Friendly Developments and Applications of the Pulsed Plasma Heat Treatment Technology in the Field of Engine, Transmission and Power Train Engineering Andreas Gebeshuber, Thomas Mueller, Robert Noebauer, Volker Strobl, Ruebig GmbH&Co.KG

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Wednesday, September 29

Materials (Part 2 of 2)

Session Code: SETC111

Room K 012D

Session Time: 13:00

Organizers - Yasuyuki Muramatsu, Yamaha Motor Co., Ltd.; David Palmer, BRP US Inc.

Chairpersons - Gregory W. Davis, Kettering Univ.; Yasuyuki Muramatsu, Yamaha Motor Co., Ltd.

Time	Paper No.	Title
1:00 p.m.	2010-32-0073	Development of Vanadium-added Heat Resistant Cast Iron for Exhaust Manifold Ryo Yamauchi, Satoshi Ishizuka, Nobuaki Suzuki, Suzuki Motor Co Ltd
1:30 p.m.	2010-32-0071	The CMT Process - News and Its Advantages in Industry Thomas Eder, Fronius International GmbH

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Thursday, September 30

Engine Technology

Session Code: SETC101

08:00

Room Horsaal 3

Session Time:

Organizers - Minoru Iida, Yamaha Motor Co., Ltd.; Nagesh Mavinahally, LEHR Inc.

Chairpersons - Minoru Iida, Yamaha Motor Co., Ltd.; Nagesh Mavinahally, LEHR Inc.

Time	Paper No.	Title
8:00 a.m.	2010-32-0005	Analysis of Transient Operation of Turbo Charged Engines Harald Stoffels, Stefan Quiring, Bert Pingen, Ford Werke GmbH
8:30 a.m.	2010-32-0009	Optimization of Geometry and Parameter Affecting Combustion for Four Stroke LPG Engine using CFD Parthiban Rajamani, Shanmugam Palani, Sakthi Saravanan Subramanian, TVS Motor Co Ltd
9:00 a.m.	2010-32-0008	Study on the Transient Response of a Fuel injected (FI) Motorcycle Engine Sakthi Saravanan Subramanian, Parthiban Rajamani, Murugesan Manickam, TVS Motor Co Ltd
9:30 a.m.	2010-32-0004	Prediction Technology of Output Power and Intake-Exhaust Noise Using 1D-Simulation for Small-Displacement Motorcycles Hiroshi Horikawa, Hideki Kido, Satoshi Iijima, Yasuo Murakami, Honda R&D Co Ltd
10:00 a.m.		BREAK
10:30 a.m.	2010-32-0003	CFD Modeling of In-Cylinder Fuel-Air Mixing in a CNG-Fuelled SI Engine with Port Gas Injection Manish Garg, TVS Motor Co., Ltd.; R Ravikrishna, Indian Institute of Science
11:00 a.m.	2010-32-0002	Study of Air-Fuel Mixture Preparation in a Single Cylinder SI Engine Balasubramanian Thiruvallur Loganathan, TVS Motor Co Ltd; Shamit Bakshi PhD, IITM; Ghodeswar Dinesh, TVS Motor Co Ltd
11:30 a.m.	2010-32-0007	Research on Extended Expansion General-Purpose Engine-Efficiency Enhancement by Natural Gas Operation- Shohei Kono, Hibiki Koga, Sei Watanabe, Honda R&D Co Ltd
12:00 p.m.	2010-32-0001	The New Rotax ACE 600 Engine for Ski-Doo Michael Gumpesberger, Stefan Gruber, Michael Simmer, BRP-Powertrain GmbH & Co KG; Christian Sulek, Bombardier-Rotax GmbH & Co KG; Christian Stiebinger, Josef Burgstaller, BRP-Powertrain GmbH & Co KG

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Thursday, September 30

Two-Stroke Engine (Part 3 of 3)

Session Code: SETC103

Room Horsaal 4

Session Time: 08:00

Organizers - Scott A. Miers, Michigan Technological Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.

Chairpersons - Scott A. Miers, Michigan Technological Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.

Time	Paper No.	Title
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8:00 a.m.	2010-32-0014	CFD Study of Spray Design for a GDI High Performance 2-Stroke Engine Dalibor Jajcevic, Raimund Almbauer, Stephan Schmidt, Graz University of Technology; Karl Glinsner, Matthias Fitl, BRP-Powertrain GmbH & Co KG
8:30 a.m.	2010-32-0061	Experimental Investigations of Two-Stroke SI Combustion with Simultaneous Cycle-Based Fuel Consumption Measurements Kai W. Beck, Karlsruhe Institute of Technology (KIT); Fatih Sarikoc, MOT GmbH; Ulrich Spicher, Karlsruhe Institute of Technology (KIT); Hans Van den Hoevel, Martin Duerrwaechter, AVL Deutschland GmbH; Heribert Kammerstetter, AVL LIST GmbH; Tim Gegg, Armin Kölmel, ANDREAS STIHL AG & Co. KG
9:00 a.m.	2010-32-0062	Combustion Analysis on Small Two-Stroke SI-Engines for Handheld Power Tools Tim Gegg, Armin Kölmel, ANDREAS STIHL AG & Co. KG; Kai W. Beck, Karlsruhe Institute of Technology (KIT)
10:00 a.m.		BREAK
10:30 a.m.	2010-32-0011	Potential of Expansion Chamber Exhaust Pipes for Two-Stroke Powered Tools Gerhard Zsiga, Robert Kerres, Matthias Bach, Klaus Fuoss, Porsche Engineering Services
11:00 a.m.	2010-32-0016	Development of a Non-Conventional Two Stroke Small Engine for Scooter Applications Giovanni Ferrara; Alessandro Bellissima; Marco Doveri; Francesco Balduzzi

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Thursday, September 30

Advanced Combustion (Part 3 of 3)

Session Code: SETC114

Room Horsaal 5

Session Time: 08:00

Organizers - Jaal B. Ghandhi, Univ. of Wisconsin Madison; Yasuo Moriyoshi, Chiba Univ.; Tomoo Shiozaki, Honda R&D Co., Ltd.

Chairpersons - James Carroll, Southwest Research Institute; Akira Iijima, Nihon University; Robert Kee, Queen's Univ. of Belfast; Takashi Mitome, Suzuki Motor Corp.; Yasuo Moriyoshi, Chiba Univ.

Time	Paper No.	Title
8:00 a.m.	2010-32-0088	Ignition Energy Development for a Spark Initiated Combustion System Capable of High Load, High Efficiency and Near Zero NOx Emissions William P. Attard, Jacob Kohn, Patrick Parsons, MAHLE Powertrain
8:30 a.m.	2010-32-0096	Research on the Combustion and Emission Characteristics of the DME/Diesel Dual-Fuel Engine Ock Taeck Lim, Kyu Yeol park, University of Ulsan; Young dug Pyo, Young-Jae Lee, Korea Institute of Energy Research
9:00 a.m.	2010-32-0097	An Investigation of the Effects of Fuel Inhomogeneity on the Pressure Rise Rate in HCCI engine using Chemiluminescence Imaging Takatora Naiki, Norimasa Iida, Keio University; Cedric Lhomme, Ecole Centrale de Nantes

9:30 a.m.	2010-32-0089	Optical Measurement of Autoignition and Combustion Behavior in an HCCI Engine <i>Akira Iijima, Koji Yoshida, Hideo Shoji, Nihon University</i>
10:00 a.m.		BREAK
10:30 a.m.	2010-32-0095	Combustion System Development and Analysis of a Carbureted and PFI Normally Aspirated Small Engine <i>William P. Attard, Elisa Toulson, Ferenc Hamori, Harry C. Watson, University of Melbourne, Australia</i>
11:00 a.m.	2010-32-0092	Analysis of Knocking in an SI Engine based on In-cylinder: Spectroscopic Measurements and Visualization <i>Ryoga Suzuki, Hideo Shoji, Koji Yoshida, Akira Iijima, Nihon University</i>

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Thursday, September 30

Collegiate Events

Session Code: SETC113

Room Horsaal 6

Session Time: 08:00

Organizers - Geoffrey McCullough, Queen's Univ. of Belfast; Taro Sekine, Nihon University

Chairpersons - Jay Meldrum, Michigan Technological Univ.; Yasuhiro Sugimoto, Honda R&D Co., Ltd.

Time	Paper No.	Title
8:00 a.m.	2010-32-0085	Development of a Power-train for a Formula SAE Competition Vehicle <i>Shinya Akizuki, Kanagawa Institute of Technology</i>
8:30 a.m.	2010-32-0084	University of Idaho's Flex-Fuel Two-Stroke Snowmobile <i>Peter Britanyak, Alex Fuhrman, Dylan Dixon, Karen R. Den Braven, Univ of Idaho; Nicholas Harker</i>
9:00 a.m.	2010-32-0083	Development of a Flexible Fueled Snowmobile Operating on Ethanol Blended Gasoline for the 2010 SAE Clean Snowmobile Challenge <i>Gregory W. Davis, Kettering Univ.</i>

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Thursday, September 30

Diesel Engine

Session Code: SETC104

Room Horsaal 6

Session Time: 10:30

Organizers - Yoshiro Tokunaga, Kawasaki Heavy Industries, Ltd.; Andrew P. Traxel, Briggs & Stratton Daihatsu LLC

Chairpersons - Roy Douglas, Queen's Univ. of Belfast; Yoshiro Tokunaga, Kawasaki Heavy Industries, Ltd.

Time	Paper No.	Title
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10:30 a.m.	2010-32-0112	Unique Rotary Diesel Engine Generator Development Darin Kowalski, Andrew Biske, US Army TARDEC
11:00 a.m.	2010-32-0113	Performance Improvement of a Multi-Cylinder CR Diesel Engine for Mini-Car Application Ornella Chiavola, University 'ROMA TRE'
11:30 a.m.	2010-32-0111	CFD Simulation Analysis of Cavitating Flow in a Real Size Diesel Engine Injector Nozzle Hagar Bastawissi, Medhat Elkelawy, Huazhong University of Science and Tech.

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Thursday, September 30

Hybrids, Electric Drives, and Fuel Cells

Session Code: SETC117

Room K 012D

Session Time: 08:00

Organizers - Glenn R. Bower, Univ. of Wisconsin; Yasuyuki Muramatsu, Yamaha Motor Co., Ltd.

Chairpersons - Glenn R. Bower, Univ. of Wisconsin; Yasuyuki Muramatsu, Yamaha Motor Co., Ltd.

Time	Paper No.	Title
8:00 a.m.	2010-32-0128	Evaluation of NOx and Fuel Consumption Reduction Potential of Parallel Diesel-Hybrid Powertrains using Engine-In-the-Loop Simulation Philipp Teiner, Bernhard Schneeweiss, Vienna University of Technology
8:30 a.m.	2010-32-0131	Low Cost Hybrid Motorcycle Optimisation Model Cian Harrington, N Vaughan, Cranfield University; Jeffrey Allen, Benjamin David Smither, Gavin Farmer, Scion-Sprays Ltd
9:00 a.m.	2010-32-0130	Two-Cylinder Gasoline Engine Concept for Highly Integrated Range Extender and Hybrid Powertrain Applications Martin Atzwanger, Christian Hubmann, Wolfgang Schoeffmann, Bernhard Kometter, Hubert Friedl, AVL List GmbH
10:00 a.m.		BREAK
10:30 a.m.	2010-32-0129	Study of Possible Range Extender Concepts with Respect to Future Emission Limits Andreas Ebner, Franz Winkler, Martin Abart, Raphael Luz, Roland Kirchberger, Stephan Schmidt, Helmut Eichlseder, Graz University of Technology
11:00 a.m.	2010-32-0127	Prediction of Filling Time and Temperature of Precooled Hydrogen During Filling of Hydrogen into a High-pressure Tank Masanori Monde, Seiichi Tanaka, Saga University; Toshio Takano, JFE container

The papers in this session are available in a single publication, CMELECVEH and CMELECVEHPPRS, and also indi
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