



Session Timetable & Paper List

15th SMALL ENGINE TECHNOLOGY CONFERENCE

November 3-5 2009

Convention & Exhibition Centre

Hotel Equatorial

Penang, Malaysia



SAE International™

 **MASAAM**
Motorcycle & Scooter Assemblers And Distributors Association of Malaysia



November 3rd, Tuesday

Session Stream : 1, Room : Bayan I/Bayan II

11:00 - 12:30

Environmental Impacts I

Chair : Hiromi Deguchi (Suzuki Motor Corporations)

Co-Chair : Lorenzo Pace (Emitec G.m.b.H)

2009-32-0023/20097023

Influence Factor Analysis of Light-off Tests for Motorcycle Catalytic Converters

Manqun Lin, Hongda Qu, Xicheng Yan, Bin Jia, Jing Qin (Tianjin University)

2009-32-0041 / 20097041

Study of the Effects on the Emission of Purge Fuel from Carbon Canister and Its Control in Motorcycles

Jing Qin, XiCheng Yan, ManQun Lin, JunJie Zhang, Peng Liu, Bin Jia (Tianjin University)

2009-32-0181 / 20097181

Canister Purge Flow Control Study on EFI Single Cylinder Small Engine

Tian Liangyun, Han Benzhong, Xi Gang, Zhang Zhen, Chen Siyuan, Thilo Leineweber (United Automotive Electronic System Co. Ltd), Xie Deyun (Jianshe Motorcycle Industry Group)

November 3rd, Tuesday

Session Stream : 1, Room : Bayan I/Bayan II

14:00 - 15:00

Environmental Impacts II

Chair : Hiromi Deguchi (Suzuki Motor Corporations)

Co-Chair : James Carroll (Southwest Research Institute)

2009-32-0102 / 20097102

Innovative 2 Wheeler Substrate Developments for EU5

Lorenzo Pace, Francois Jayat, Roman Konieczny (Emitec G.m.b.H.), Martin Forster, Richard Humer, Daniel Mairhörmann, Rudolf Prem (KTM Sportmotorcycles AG)

2009-32-7158 / 20097158

Catalytic Coating for Effective Emission Reduction in a Small Motorcycle Application

Ansgar Wille, Marcus Bonifer (W.C. Heraeus GmbH)

November 3rd, Tuesday

Session Stream : 1, Room : Bayan I/Bayan II

16:00 - 17:30

HCCI I

Chair : Minoru Iida (Yamaha Motor Co, Ltd.)

Co-Chair : Jeffrey Allen (Scion-Sprays Ltd.)

2009-32-0070 / 20097070

A Study of HCCI Combustion using Spectroscopic Techniques and Chemical Kinetic Simulations

Akira Iijima, Koji Yoshida, Hideo Shoji (Nihon University)

2009-32-0079/20097079

Improvement of Natural-gas HCCI Combustion by Internal EGR by Means of Exhaust Valve Re-opening

Kiyoshi Kawasaki, Kazuki Hirota, Shingo Nagata, Koji Yamane (The University of Shiga Prefecture), Hiroyuki Ohtsubo, Toru Nakazono (YANMAR Co., Ltd.)

2009-32-0035 / 20097035

A Dual-Fuel System to Achieve High Equivalence Ratio and High Engine Performance in Homogeneous Charge Compression Ignition (HCCI) Mode

Bancha Thanapiyawanit, Lu Jau-Huai (National ChungHsing University)

November 3rd, Tuesday

Session Stream : 2, Room : Tekukur

11:00 - 12:30

Vehicle Design

Chair : Toshimi Kobayashi (Kawasaki Heavy Industries, Ltd.)

Co-Chair : Roy Douglas (Queens University of Belfast)

2009-32-0099/20097099

Development of a Three Wheeler Engine With LPG fuel For Improved Performance Using Simulation Techniques

Ajith V Pai, G.S.Deshpande, V Lakshminarasimhan, Y Ramachandra Babu (TVS Motor Company Ltd.)

2009-32-0109 / 20097109

Development of Touring Motorcycle with a 1,352 cm³ Engine

Hideto Yoshitake, Yuji Horiuchi, Hisatoyo Arima, Youichi Utsumi, Kazunori Miyoshi, Satoru Watabe, Masanori Kinuhata (Kawasaki Heavy Industries, Ltd.)

2009-32-0143 / 20097143

Estimating of Motorcycle Frame Strength by Virtual Durability Test

Ryota Ide, Toshiaki Ogushi, Yoshihiko Sunayama, Yasuyuki Kishita, Shinji Watanabe (SUZUKI MOTOR CORPORATION)

November 3rd, Tuesday

Session Stream : 2, Room : Tekukur

14:00 - 15:30

Materials I

Chair : Shunichi Kometani (Yamaha Motor Co., Ltd.)

Co-Chair : Jay Meldrum (Michigan Technology University)

2009-32-0010 / 20097010

Weight saving in small engine and vehicle component by utilization of die cast creep resistant alloys

Hiroyuki Omura, Tatsuki Yonemaru, Jo Asada (Ryobi Limited), Hideharu Nakashima (Kyushu University)

2009-32-0065 / 20097065

Research on Pb-free Electroless Ni Plating for Pistons of General-purpose Engines

Kenji Suto, Tomonori Saito (Honda R&D Co., Ltd.), Sumitaka Watanabe (Japan Kanigen Co., Ltd.)

2009-32-0076 / 20097076

Development of Nitrocarburized High Strength Crankshaft Through Controlling Vanadium Carbonitride Precipitation by Normalizing

Satoru Suwa, Daiji Kawaguchi, Atsushi Murakami (Honda R&D Co., Ltd.), Kazuyoshi Kimura, Masato Tada (Daido Steel Co., Ltd.)

November 3rd, Tuesday

Session Stream : 2, Room : Tekukur

16:00 - 17:00

Materials II

Chair : Shunichi Kometani (Yamaha Motor Co.,Ltd.)

Co-Chair : Robert Kee (Queen's University of Belfast)

2009-32-0082 / 20097082

Development of High Fatigue Strength Valve Spring Using Control of White Layer by Nitriding

Keiichi Maekawa, Atsushi Murakami (Honda R&D Co., Ltd.), Masayuki Hashimura (NIPPON STEEL CORPORATION), Hiroshi Yarita (suzuki metal industry Co., Ltd.), Takanori Watanabe (AIR WATER INC.)

2009-32-0173 / 20097173

Establishment of Judder Analysis Technique & New Friction material

Kazuyoshi Miyachi (FCC Thailand CO., LTD), Tomohiro Hasegawa, Kazuma Matsushita (FCC CO., LTD)

November 3rd, Tuesday

Session Stream : 3, Room : Serindit

11:00 - 12:00

Vehicle Dynamics & Safety I

Chair : Takayuki Koizumi (Doshisya University)

Co-Chair : Robert Kee (Queen's University of Belfast)

2009-32-0060 /20097060

Cooperative Steer Control on Motorcycle between Rider and Active Support Torque

Takayuki Koizumi, Nobutaka Tsujiuchi, Yoshiki Noritou (Doshisha University)

2009-32-0081/20097081

Rider Response Time in Motorcycle Riding

Sai Praveen V, Venkata Mangaraju K, Venkatesh G., Babu R (TVS Motor Company Ltd.)

November 3rd, Tuesday

Session Stream : 3, Room : Serindit

14:00 - 15:00

Vehicle Dynamics & Safety II

Chair : Takayuki Koizumi (Doshisya University)

Co-Chair : Dalibor Jajcevic (Graz University of Technology)

2009-32-0146 / 20097146

Development of the Electronically-Controlled Combined Brake System

Hiroaki Amano (Kawasaki Heavy Industries, Ltd.), Tobias Fluck (Robert Bosch GmbH)

2009-32-0152 / 20097152

Simulation and experimental study to improve wobbling stability in 3-wheeler

D.Gangi Reddy, GSG.Ravikanth, Tushar R.Gawade, V.Jeyamurugan, M.Nagarjun Reddy
(TVS Motor Company Ltd.)

November 3rd, Tuesday

Session Stream : 3, Room : Serindit

16:00 - 17:30

NVH Technology

Chair : Tadao Okazaki (Kubota Corporation)

Co-Chair : James Carroll (Southwest Research Institute)

2009-32-0128 / 20097128

Damping loss factor prediction in statistical energy analysis for co-generation system enclosure

Nobutaka Tsujiuchi, Takayuki Koizumi, Satoshi Morita (Doshisha University), Hiroshi Uehara (YANMAR Co., Ltd.)

2009-32-0131 / 20097131

Evaluation of Feeling of Pulse for Cruiser-type Motorcycle

Takayuki Koizumi, Nobutaka Tsujiuchi, Takahisa Onishi (Doshisha University)

2009-32-0015/20097015

On experimental techniques to determine acoustic performance of small exhaust silencers

Jüri Lavrentjev, Hans Rämmal (Tallinn University of Technology)

November 3rd, Tuesday

Session Stream : 4, Room : Cempaka/Anggerik

11:00 -12:30

Engine Technology I

Chair : Kazuyuki Shiomi (Honda R&D Co., Ltd.)

Co-Chair : Robert Fleck (Queens University of Belfast)

2009-32-0042 / 20097042

Research on Extended Expansion General-Purpose Engine - Noise Characteristics Caused by Multiple Linkage System and Reduction of the Noise

Gaku Naoe, Sei Watanabe (Honda R&D Co., Ltd)

2009-32-0049 / 20097049

Improving the Fuel Consumption of Small Motorcycle Engine with YMJET-FI

Yoshitaka Nagai, Katsumi Suzuki, Takanori Tamura, Wataru Ishii, Hiroyuki Tsuzuku (Yamaha Motor Co., Ltd.)

2009-32-0059 / 20097059

Technologies for Enabling Concept of New-geometry 4-cylinder V-type Engine

Toru Kisaichi (Honda R&D Co., Ltd.)

November 3rd, Tuesday

Session Stream : 4, Room : Cempaka/Anggerik

14:00 - 15:30

Engine Technology II

Chair : Kazuyuki Shiomi (Honda R&D Co., Ltd.)

Co-Chair : J Fülínger (BRP-Powertrain GmbH & Co KG)

2009-32-0083 / 20097083

Development of Technologies for Improving Fuel Economy of Small Motorcycle Engines

Satoshi Iijima, Ryo Kubota, Kazunori Kikuchi (Honda R&D Co., Ltd.)

2009-32-0129 / 20097129

Fuel Film Behavior Analysis Using Simulated Intake Port

Minoru Iida, Keiichi Yoshikawa, Hiroshi Tanaka (Yamaha Motor Co. Ltd.), G. Wang, C. Arcoumanis (City University London)

2009-32-0051 / 20097051

Study on Similarity of Pumping Flow in Engine Crankcase

Hidehori Arisawa, Motohiko Nishimura, Hiroyuki Watanabe, Atsushi Ueshima, Kazuki Arima, Akiyuki Yamasaki (Kawasaki Heavy Industries, Ltd.)

November 3rd, Tuesday

Session Stream : 4, Room : Cempaka/Anggerik

16:00 - 17:30

Engine Technology III

Chair : Toshimi Kobayashi (Kawasaki Heavy Industries, Ltd.)

Co-Chair : Robert Fleck (Queens University of Belfast)

2009-32-0069 / 20097069

Power restriction on small capacity four stroke engines by exhaust gas recirculation - A new way of speed limiting with reduced exhaust emissions?

Jürgen Tromayer, Gerd Neumann, Roland Kirchberger, Helmut Eichlseder (Graz University of Technology)

2009-32-0011/20097011

Preliminary Study on Design and Control of a Novel CVT

K.U.Chan, P.K.Wong, H.W.Wu (University of Macau)

2009-32-7122 / 20097122

Development of the New Rotax 1200 4-TEC Powersports Engine: From Concept to Production

S. Leiber, R. Rokita, M. Gumpesberger (BRP-Powertrain GmbH & Co KG),

D. Abdul Latiff Aw, F. Othman, F. Mohd Hasan Wong (PETRONAS Research Sdn Bhd)

November 3rd, Tuesday

Session Stream : 5, Room : Teratai/Raya

11:00 - 12:30

Diesel Engines I

Chair : Toru Nakazono (YANMAR Co., Ltd.)

Co-Chair : Luigi Allocca (Istituto Motori - CNR)

2009-32-0017 / 20097017

Analysis of Droplets Evaporation Process of Diesel Spray at Ignition Delay Period using Dual Nano-spark Shadowgraph Photography Method

Abdullah Adam, Tomoaki Yatsufusa, Tomonori Gomi, Nobuyuki Irie, Yoshiyuki Kidoguchi (The University of Tokushima)

2009-32-0018/20097018

Analysis of Relation between Mixture Formation during Ignition Delay Period and Burning Process in Diesel Combustion

Amir Khalid, Tomoaki Yatsufusa, Takayuki Miyamoto, Jun Kawakami, Yoshiyuki Kidoguchi (The University of Tokushima)

2009-32-0057 / 20097057

Development of Newly Concept Diesel Engine for Industrial Use

Masato Ueda, Masayasu Takami, Tamon Tanaka, Koichi Funaki, Hideya Miyazaki (Kubota Corporation)

November 3rd, Tuesday

Session Stream : 5, Room : Teratai/Raya

14:00 - 15:30

Diesel Engines II

Chair : Toru Nakazono (YANMAR Co., Ltd.)

Co-Chair : Roy Douglas (Queens University of Belfast)

2009-32-0105 / 20097105

Light Duty Diesel Engine: Optimization of Performances, Noxious Emission and Radiated Noise

M. Costa, D. Siano, L. Allocca, A. Montanaro (Istituto Motori - CNR), F.Bozza (DIME - Universit di Napoli)

2009-32-0159 / 20097159

Simulation and Analysis of Combustion, Performance and Emission Characteristics of Biodiesel Fueled Low Heat Rejection Direct Injection Diesel Engine

B.Rajendra Prasath, P.Tamil Porai, Mohd.F.Shabir, T.Senthil Kumar (Anna University)

2009-32-0037/20097037

Effects of Thermal Barrier Coating on Diesel Engines Driven by 1, 4 Dioxane Ethanol Diesel Blends

C. Sundar Raj, S. Sendilvelan (Dr.MGR Educational and Research Institute), S. Arul (Panimalar College of Engineering), C. G. Saravanan (Annamalai University)

November 3rd, Tuesday

Session Stream : 5, Room : Teratai/Raya

16:00 - 17:30

Alternative Fuels I

Chair : Tomoo Shiozaki (Honda R&D Co., Ltd.)

Co-Chair : Luigi Allocca (Istituto Motori - CNR)

2009-32-0026 / 20097026

Experimental Investigation of Performance and Emissions of a Sequential Port Injection
Compressed Natural Gas Converted Engine

How Heoy Geok, Taib Iskandar Mohamad, Shahrir Abdullah, Yusoff Ali, Azhari
Shamsudeen (National University of Malaysia)

2009-32-0113 / 20097113

Flame Propagation of Bio-Ethanol in a Constant Volume Combustion Chamber

Chinda Chareonphonphanich, Prathan Srichai (King Mongkut's Institute of Technology
Ladkrabang)

November 4th, Wednesday

Session Stream : 1, Room : Bayan I/Bayan II

8:30 - 9:30

Two Stroke Engines I

Chair : Tomoo Shiozaki (Honda R&D Co., Ltd.)

Co-Chair : Stephan Schmidt (Graz University of Technology)

2009-32-0032 / 20097032

Development of the Gaseous Fuel Direct Injection System for Small Two-Stroke Transports

TEOH Yew Heng, Dr. Horizon GITANO-BRIGGS, TAN Yee (Hern University Science Malaysia)

2009-32-0077 / 20097077

Application of Scavenging-Port Injection of CNG to a Boat Engine at Running Conditions

Ryosuke Shina, Hideaki Suzuki, Mikiya Araki, Hisao Nakamura, Seiichi Shiga (Gunma University), Hideo Kishimoto (YAMATO Motor, Co., Ltd.)

November 4th, Wednesday

Session Stream : 1, Room : Bayan I/Bayan II

10:00 - 11:30

Two Stroke Engines II

Chair : Tomoo Shiozaki (Honda R&D Co., Ltd.)

Co-Chair : Juergen Tromayer (Graz University of Technology)

2009-32-0046/20097046

Simulation of Scavenging Process, Internal Mixture Preparation, and Combustion of a Gasoline Direct Injection Two-Cylinder Two-Stroke Engine

Dalibor Jajcevic, Raimund A. Almbauer, Stephan P. Schmidt (Graz University of Technology)

2009-32-0013 / 20097013

Knocking Investigations in a small Two-Stroke SI Engine

Kai Schreer, Kai W. Beck, Sören Bernhardt, Ulrich Spicher (Universitaet Karlsruhe), Werner Geyer, Stephan Meyer (Andreas STIHL AG & Co. KG)

2009-32-0030 / 20097030

Spectroscopic Measurements in Small Two-Stroke SI Engines

Kai W. Beck, Thomas Heidenreich, Steve Busch, Ulrich Spicher (Universität Karlsruhe), Tim Gegg, Armin Kölmel (Andreas STIHL AG & Co. KG)

November 4th, Wednesday

Session Stream : 1, Room : Bayan I/Bayan II

13:00 - 14:00

Hybrids, Electric Drives & Fuel Cells

Chair : Yasuyuki Muramatsu (Yamaha Motor Co., Ltd.)

Co-Chair : J Furlinger (BRP-Powertrain GmbH & Co KG)

2009-32-0031 / 20097031

Development and Operation of a 1kW Direct Methanol Fuel Cell Stack

Kazuyoshi Furukawa, Yasuyuki Muramatsu, Shuhei Adachi (Yamaha Motor Co., Ltd.)

2009-32-0061 / 20097061

Well-To-Wheel Energy Analysis of Conventional and Electric Motorcycles in Malaysia

Ahmad Syazli MOHD KHALIL, Dr. Horizon GITANO-BRIGGS (University Science Malaysia)

November 4th, Wednesday

Session Stream : 2, Room : Tekukur

8:00 - 9:30

Design & Simulation I

Chair : Hidenori Arisawa (Kawasaki Heavy Industries, LTD.)

Co-Chair : Tao Bo (Ricardo UK Ltd.)

2009-32-0138 / 20097138

Simultaneous Evaluation on Aerodynamics and Air-cooling Performances for Motorcycle using CFD Analysis

Tohru Shimizu, Toshihisa Abe, Yoshihiko Sunayama, Shinichi Watanabe, Eiichi Nakamura (Suzuki Motor Corporation)

2009-32-0089 / 20097089

Research on Dynamic Behavior Simulation Technology for Cam-Drive Mechanism in Single-cylinder Engines

Keiichi Dan, Takuro Kawakami (Honda R&D Co., Ltd.)

2009-32-0054 / 20097054

Mount Force Reduction in a Scooter Engine Mounting System

Manjunath Bhat, Kannan Marudachalam (TVS Motor Company Ltd.), C. Padmanabhan (Indian Institute of Technology)

November 4th, Wednesday

Session Stream : 2, Room : Tekukur

10:00 - 11:30

Design & Simulation II

Chair : Hidenori Arisawa (Kawasaki Heavy Industries, Ltd.)

Co-Chair : Roy Douglas (Queens University of Belfast)

2009-32-0176/20097176

Miniature HCCI Free-Piston Engine Compressor For Orthosis Application

Lei Tian, David B. Kittelson, William K. Durfee (University of Minnesota)

2009-32-0130 / 20097130

Side Opening Intake Strategy Simulation and Validation for a Sleeve Valve Port Application

Muhammad Hafidz Rahmat, Asyraf Ahmad, Mohd Faizan Ahmad Zuhdi (PETRONAS Research Sdn Bhd)

2009-32-0163/20097163

Prediction of Spark Ignition Engine Performance by Thermodynamic Simulation of a Real Cycle

Mehrnoosh Dashti (Islamic Azad University), Ali Asghar Hamidi (University of Tehran), Ali Asghar Mozafari (Sharif University of Technology)

November 4th, Wednesday

Session Stream : 2, Room : Tekukur

13:00 - 14:30

Lubricants

Chair : Toshimi Kobayashi (Kawasaki Heavy Industries, Ltd.)

Co-Chair : Jay Meldrum (Michigan Technological University)

2009-32-0080 / 20097080

Performance of Motorcycle Engine Oil with Sulfur-Based Additive as Substitute Zn-DTP
(Part II)

Nobuaki Watanabe, Moritsugu Kasai, Akira Mitara (Idemitsu Kosan Co., Ltd.), Masatoshi Akagi (Honda R&D Co., Ltd.)

2009-32-0075 / 20097075

Development of Catalyst-Friendly FC-W® Certified Marine Oils Utilizing Novel ZDP
Technology

Brent Dohner, Ewa Bardasz, Mike Brenner (The Lubrizol Corporation Wickliffe)

2009-32-7178 / 20097178

Test Method for Evaluating Gear Fatigue Life of 4-Stroke Motorcycle Engine Oils

Hitoshi Hamaguchi, Hideo Tanaka (Evonik Degussa Japan Co., Ltd.), Thorsten Bartels (Evonik RohMax Additives GmbH)

November 4th, Wednesday

Session Stream : 3, Room : Serindit

8:00 - 9:30

Collegiate Event I

Chair : Takashi Mitome (Suzuki Motor Corporation)

Co-Chair : Glenn R Bower (University of Wisconsin)

2009-32-0092 / 20097092

Space frame design for Formula SAE

Ryo Masutani, Daisuke Ito, Yasufumi Oguri, Takashi Suzuki (Sophia University)

2009-32-7103 / 20097103

Improving Vehicle Performance by Aerodynamic Devices in Formula SAE

Mitsuru Wakabayashi, Kanako Komuro, Olivier Pedoussaut, Yasufumi Oguri, Takashi Suzuki (Sophia University)

2009-32-0107 / 20097107

Inspiring a College Campus to Design, Create, and Build Green Small Engine Vehicles

Robert D. Garrick, Clark G. Hochgraf, Anson Wong, Sakhawat Hossain (Rochester Institute of Technology)

November 4th, Wednesday

Session Stream : 3, Room : Serindit

10:00 - 11:30

Collegiate Event II

Chair : Takashi Mitome (Suzuki Motor Corporation)

Co-Chair : Glenn R Bower (University of Wisconsin)

2009-32-0147 / 20097147

A Study on Improvement of Road Ability of a Formula SAE Vehicle

Hiroyuki Oda, Takanori Furumido, Yusuke Ohira, Tomoaki Kodama, Yasuhiro Honda,
Katsuhiko Wakabayashi (Kokushikan University)

2009-32-0154 / 20097154

A Trial of Engine Performance Improvement by Adopting A Turbocharger in Consideration of Intake and Exhaust Systems

Atsushi Kawamura, Shinya Matsumoto, Shuhei Yamamoto, Yusuke Ohira, Tomoaki Kodama, Yasuhiro Honda, Katsuhiko Wakabayashi (Kokushikan University)

2009-32-0177 / 20097177

Development of the Kettering University Snowmobile for the 2009 SAE Clean Snowmobile Challenge

Andrew Baker, Gregory W. Davis (Kettering University)

November 4th, Wednesday

Session Stream : 3, Room : Serindit

13:00 - 14:30

Collegiate Event III

Chair : Mikio Kato (Honda R&D Co., LTD.)

Co-Chair : Gregory W. Davis (Kettering University)

2009-32-0169 / 20097169

Torque Control of a Small Gasoline Engine with a Variable Nozzle Turbine Turbocharger

Kenichi Shimizu, Wataru Sato, Hiroshi Enomoto (Kanazawa University), Masahiko Yashiro (Honeywell)

2009-32-0170 / 20097170

Effect of Seat Belt Positions on Passenger Injury during Low Speed Front-end Impact

Tatsuya Fukui, Hiroshi Enomoto, Yusuke Miyazaki, Shinobu Sakai (Kanazawa University)

2009-32-0108 / 20097108

Initial Design and Refinement of a High-Efficiency Electric Drivetrain for a Zero-Emissions Snowmobile

Ethan K. Brodsky, Nicholas J. Rakovec, Kevin R. King, Daniel J. Bocci, Jared Olsen, Adam R. Schumacher, Glenn R. Bower (University of Wisconsin)

November 4th, Wednesday

Session Stream : 4, Room : Cempaka/Anggerik

8:00 - 9:30

Advanced Combustion I

Chair : Yasuo Moriyoshi (Chiba University)

Co-Chair : Robert Fleck (Queens University of Belfast)

2009-32-0043 / 20097043

Development of an NO_x Reduction System Using Exhaust Valve Controls in Small Engines for Motorcycles

Kazuo Fujihara, Yamato Nakamizo, Mitsuru Kojima, Teruhide Yamanishi (Honda R&D Co., Ltd.)

2009-32-0047 / 20097047

Effective Engine Downsizing Through the Use of Compression Ignition Poppet-Valved 2-Stroke Engine With Novel Combustion Cycle Involving Oxygen and Water

Azmi Osman (PETRONAS Research Sdn. Bhd.)

2009-32-7068 / 20097068

Testing and Evaluation of Fuel Properties Effect on High Speed Engine Performance

Zulkhairi Salleh, Chan Ming Yau, Wan Ahmad Nadzri (PETRONAS Research Sdn.Bhd.)

November 4th, Wednesday

Session Stream : 4, Room : Cempaka/Anggerik

10:00 - 11:30

Advanced Combustion II

Chair : Yasuo Moriyoshi (Chiba University)

Co-Chair : Robert Kee (Queen's University of Belfast)

2009-32-0045 / 20097045

Simulation and experimental investigations of a directinjection combustion system for high speed - high performance engines

Stephan Schmidt, Martin Abart, Oliver Schögl, Dalibor Jajčević, Alexander Trattner, Roland Kirchberger, Helmut Eichlseder (Graz University of Technology)

2009-32-0119 / 20097119

Very Lean and Diluted SI Combustion Using a Novel Ignition System with Repetitive Pulse Discharges

Tatsuya Kuboyama, Yasuo Moriyoshi (Chiba University), Kimitoshi Tanoue (Oita University), Eiki Hotta (Tokyo Institute of Technology), Yuichiro Imanishi, Naohiro Shimizu (NGK Insulators, LTD.), Katsuji Iida

2009-32-0135 / 20097135

Effect of Boost Pressure on Engine Performance and Exhaust Emissions in Direct-Injection Compressed Natural Gas (CNG-DI) Spark Ignition Engine

Girma Tadesse, A. Rashid A. Aziz (Universiti Teknologi PETRONAS)

November 4th, Wednesday

Session Stream : 4, Room : Cempaka/Anggerik

13:00 - 14:30

Advanced Combustion III

Chair : Yuh Motoyama (Yamaha Motor Co., LTD.)

Co-Chair : Stephan Schmidt (Graz University of Technology)

2009-32-0144 / 20097144

The Diffusion Combustion Induced by the High Voltage Electrical Discharge - The Influence of Fuel Property on Combustion Behavior

Yohsuke Takeshita, Koji Yoshida (Nihon University)

2009-32-0095 / 20097095

The Effect of Corona Discharge on Pre-Mixed Combustion

Koji Yoshida, Yosuke Soma (Nihon University)

2009-32-0097 / 20097097

Studies on Reducing Cycle by Cycle Variations and Improving Performance of a Small Carbureted Gasoline Engine

M.Krishnasamy, Y Ramachandra babu (TVS Motor Company Ltd.), A.Ramesh, M.K.G Babu (Indian Institute of Technology)

November 4th, Wednesday

Session Stream : 5, Room : Teratai/Raya

8:30 - 9:30

Alternative Fuels II

Chair : Koji Yoshida (Nihon University)

Co-Chair : Dalibor Jajcevic (Graz University of Technology)

2009-32-0040 / 20097040

Experimental Studies of Bio-Diesel Fuels on Pollutant Emissions from Small Diesel Engine

Nafis Ahmad, A Y F Bokhary (King Abdulaziz University), M Ashar, U Akhtar (Aligarh Muslim University)

2009-32-0111 / 20097111

Investigations on Operation of CI Engine Using Liquefied Petroleum Gas and Mahua Oil in Mixed Fuel Mode

N. Kapilan (Nagarjuna College of Engg. & Technology), T. P. Ashok Babu (NITK University), R. P. Reddy (Reva Institute of Technology)

November 4th, Wednesday

Session Stream : 5, Room : Teratai/Raya

13:00 - 14:00

Alternative Fuels IV

Chair : Toru Nakazono (YANMAR Co., Ltd.)

Co-Chair : Roy Douglas (Queens University of Belfast)

2009-32-0120 / 20097120

Stability, Performance and Emission Characteristics of Diesel-Ethanol Blend with Castor Oil as Additive in Variable Compression Ratio Engine

Arul Mozhi Selvan. V, Anand. R. B., Udayakumar. M. (National Institute of Technology)

2009-32-0168 / 20097168

Combustion Characteristics of an Alternative Charcoal Slurry Fuel in a Diesel Engine

Valentin Soloiu (Georgia Southern University), Yoshinobu Yoshihara, Kazuie Nishiwaki (Ritsumeikan University)

November 5th, Thursday

Session Stream : 1, Room : Bayan I/Bayan II

8:30 - 10:00

Fuel Supply Systems I

Chair : Yasuyuki Muramatsu (Yamaha Motor Co., Ltd.)

Co-Chair : Jeffrey Allen (Scion-Sprays Ltd.)

2009-32-0044 / 20097044

Flexible-Fuel System for Small Motorcycles

Atsushi Ito, Hiroshi Yamada, Hideya Horie, Toshiyuki Kubota, Shiro Kokubu, Yoichi Takahashi (Honda R&D Co., Ltd.)

2009-32-0055 / 20097055

Development of a Small Low-cost Fuel Injector to Overcome Diversification of Requirements in Global Markets

Daisuke Matsuo, Akihiko Haramai, Kazuhiko Sato, Minoru Ueda (Keihin Corporation)

2009-32-0056 / 20097056

Development of DBW Throttle Body for V4 Engines

Daisuke Shiraida, Takefumi Maruyama, Minoru Ueda (Keihin Corporation)

November 5th, Thursday

Session Stream : 1, Room : Bayan I/Bayan II

10:30 -12:00

Fuel Supply Systems II

Chair : Yasuyuki Muramatsu (Yamaha Motor Co., Ltd.)

Co-Chair : Juergen Tromayer (Graz University of Technology)

2009-32-0074 / 20097074

Variable Density Distribution of CNG Jet Injected at Small Injection Pressure

Emishaw D. Iffa, A. Rashid A. Aziz (Universiti Teknologi Petronas)

2009-32-0149 / 20097149

Low Cost Electronic Fuel Injection for Motorcycles and Utility Engines

P. Ravenhill, T. Drake, R.Hoolahan, B.Smith, I.McFarlane, J. Allen, G.Farmer
(Scion-Sprays Ltd)

2009-32-0112 / 20097112

Ethanol Impacts on Fuel Supply Parts of Gasoline Engines in Thailand

Chinda Charoenphonphanich, Kalong Buanak, Panya Kansuwan (King Mongkut's Institute of Technology Ladkrabang)

November 5th, Thursday

Session Stream : 2, Room : Tekukur

8:30 - 10:00

Collegiate Event IV

Chair : Mikio Kato (Honda R&D Co., LTD.)

Co-Chair : Gregory W. Davis (Kettering University)

2009-32-0171 / 20097171

Decreasing of the Engine Idle Speed of a Small Gasoline Engine with Feedback Control
Tatsuya Fukui, Hiroshi Enomoto (Kanazawa University)

2009-32-0185 / 20097185

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)

2009-32-0188 / 20097188

Combustion System Development and Analysis of a Carbureted and PFI Normally Aspirated Small Engine

William P. Attard, Elisa Toulson, Ferenc Hamori, Harry C. Watson (University of Melbourne)

November 5th, Thursday

Session Stream : 2, Room : Tekukur

10:30 -12:00

Design & Simulation III

Chair : Yoshihiko Sunayama (Suzuki Motor Corporations)

Co-Chair : Roy Douglas (Queens University of Belfast)

2009-32-0024 / 20097024

Symmetry and Time Delayed Boundary Condition for CFD Simulation and its Application in a Two-Cylinder Two-Stroke Engine

Dalibor Jajcevic, Raimund A. Almbauer, Stephan P. Schmidt (Graz University of Technology), Karl Glinsner (BRP-Powertrain GmbH & Co KG)

2009-32-0164 / 20097164

Multiple-Cylinder Diesel Engine CFD Simulation Using VECTIS

Tao Bo, Gang Li, Jawahar Palaniyandi, Robert Hunt, Chris Rowe (Ricardo UK Ltd)

2009-32-0101 / 20097101

Early stage development of a 4-stroke gas exchange process by the use of a coupled 1D / 3D simulation strategy

Oliver Schögl, Stephan Schmidt, Martin Abart, Roland Kirchberger (Graz University of Technology), Matthias Fitl, Philipp Gschwantner (BRP-Powertrain GmbH & Co KG)

November 5th, Thursday

Session Stream : 3, Room : Serindit

8:30 - 10:00

Engine Control I

Chair : Ryoza Okita (Yamaha Motor Co., Ltd.)

Co-Chair : Robert Kee (Queen's University of Belfast)

2009-32-0019/20097019

Intelligent Engine Management System for Small Handheld Low Emission Engines

Matthias Hehnke, Claus Naegele, Heinrich Leufen, Andreas Böhner (ANDREAS STIHL AG & CO. KG)

2009-32-0034 / 20097034

Development of a Small Motorcycle EFI Retrofit System

TEOH Say Lai, Dr. Horizon GITANO-BRIGGS (University Science Malaysia)

2009-70-0073 / 20097073

Cost Efficient Electronic Control Unit for Low-Emission Motorcycle Engines: A Solution Based on the Integration of Analog Functions

M. Sacchi, R. Ferrara, J. Beeker, Neng-Hau Ching (Freescale Semiconductor)

November 5th, Thursday

Session Stream : 3, Room : Serindit

10:30 - 12:00

Engine Control II

Chair : Ryoza Okita (Yamaha Motor Co., Ltd.)

Co-Chair : Jay Meldrum (Michigan Technological University)

2009-32-0124 / 20097124

Development of Fail-safe Method for Motorcycle's Electronic Throttle Control System

Takuya Sakamoto, Takeru Oshima, Yoshiaki Tani, Masashi Fukuuchi, Shinichi Kuratani
(Kawasaki Heavy Industries, Ltd.)

2009-32-0014 / 20097014

Modeling and Control of Variable Intake Valve Actuation in IC Engines

Chun-Hsien Wu, Pei-Jen Wang (National Tsing Hua University)

2009-32-0118 / 20097118

An Ionization Current based Cylinder Gas Pressure Estimation for Knock Detection and Control in a Single Cylinder SI Engine

Davinder Kumar (TVS Motor Company Ltd.), A. Ramesh, M.K. Gajendra Babu, P.V. Manivannan (Indian Institute of Technology Madras)

November 5th, Thursday

Session Stream : 4, Room : Cempaka/Anggerik

8:30- 10:00

HCCI II

Chair : Minoru Iida (Yamaha Motor Co, Ltd.)

Co-Chair : Roland Kirchberger (Graz University of Technology)

2009-32-0085 / 20097085

An Investigation of the Potential of Thermal and Mixing Stratifications for Reducing Pressure Rise Rate on HCCI Combustion by using Rapid Compression Machine

Daisuke Shirota, Norimasa Iida (Keio University)

2009-32-0086/20097086

Analysis of the combustion dispersion mechanism in HCCI Engine

Chao Shi, Kenichiro Nagai, Norimasa Iida (Keio University)

2009-32-0087/20097087

Mechanism Analysis of Influence of Engine Speed on HCCI Combustion by using Numerical Calculation

Hiroki Iino, Kenji Shigetoyo, Mari Nagae, Norimasa Iida (Keio University)

November 5th, Thursday

Session Stream : 4, Room : Cempaka/Anggerik

10:30 - 12:00

HCCI III

Chair : Minoru Iida (Yamaha Motor Co, Ltd.)

Co-Chair : Roland Kirchberger (Graz University of Technology)

2009-32-0072 / 20097072

Spark ignition and spark-assisted controlled auto-ignition in an optical gasoline engine

S. M. Begg, D. J. Mason, M. R. Heikal (University of Brighton)

2009-32-0021 / 20097021

Effect of spark assistance on improving cyclic stability of auto-ignition at light load in a small two-stroke engine

Janitha Wijesinghe (University of Technology, Sydney), Guang Hong (University of Technology, Sydney)

2009-32-0141/20097141

The Research about Thermal Stratification with Booster pressure Effect on Pressure Rise Rate in HCCI Engine using multi-zone model

O Seok Kwon, Dong Won Jeong, Ock Taeck Lim (University of ULSAN), Norimasa Iida (Keio University)

November 5th, Thursday

Session Stream : 5, Room : Teratai/Raya

8:30 - 10:00

Alternative Fuels V

Chair : Tadao Okazaki (Kubota Corporation)

Co-Chair : Glenn R Bower (University of Wisconsin)

2009-32-0066 / 20097066

Study on Biomass Gas HCCI Engine

Yudai Yamasaki, Masanobu Kanno, Yasuhiro Taura, Shigehiko Kaneko (The University of Tokyo)

2009-32-0100 / 20097100

Influence of Various Biodiesel Fuels on Diesel Engine Performance

Masashi Ono, Masato Nakajima, Koji Yoshida, Hideo Shoji, Akira Iijima (Nihon University)

2009-32-0132 / 20097132

Application of Newly Developed Cellulosic Liquefaction Fuel for Diesel Engine

Ren Yuan, Masashi Ono, Noritaka Yoshikawa, Hideo Shoji, Koji Yoshida, Akira Iijima (Nihon University)

November 5th, Thursday

Session Stream : 5, Room : Teratai/Raya

10:30 - 11:30

Alternative Fuels VI

Chair : Tadao Okazaki (Kubota Corporation)

Co-Chair : James Carroll (Southwest Research Institute)

2009-32-0063 / 20097063

A Study of IDI 2-Stroke Cycle Compression Ignition Engine with DME

Noritaka Yoshikawa, Koji Yoshida (Nihon University), Tatsuaki Suzuki (Hiroshima Institute of Technology)

2009-32-0048 / 20097048

Study on Single Cylinder Engine for Performance and Exhaust Emission with Diesel, Bio Diesel, LPG and CNG.

Syed Kaleemuddin (Greaves Cotton Limited), G. Ambaprasad Rao (National Institute of Technology)