

**Organizers:**

Yasuo Moriyoshi, (Chiba University); Jaal B Gandhi, (University of Wisconsin Madison)

20097043

**Development of NOx Reduction System Using Exhaust Valve Controls for Motorcycle Small Engine**

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

---

20097045

**Simulation and Experimental Investigations of a Direct-Injection Combustion System for High Speed – High Performance Engines**

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

---

20097047

**Effective Engine Downsizing Through the Use of Compression Ignition 2-Stroke Engine with Novel Combustion Cycle Involving Oxygen and Water**

Azmi Osman, (PETRONAS Research Sdn.Bhd.)

---

20097068

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

Zulkhairi Salleh, Chan Ming Yau, Wan Ahmad Nadzri, (PETRONAS)

---

20097095

**The Effect of Corona Discharge on Pre-Mixed Combustion**

Koji Yoshida, Yusuke Soma, (Nihon University);

---

20097119

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

Tatsuya Kuboyama, Yasuo Moriyoshi, (Chiba Univ.); Eiki Hotta, (Tokyo Inst. of Tech.); Yuichiro Imanishi, (NGK Insulators); Naohiro Shimizu, (NGK Insulators); Kimitoshi Tanoue, (Oita Univ.); Katsuji Iida

---

20097135

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

Girma Tadesse, (Universiti Teknologi PETRONAS)

---

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)

## Alternative Fuels

### Organizers:

Koji Yoshida, (Nihon University); Tomoo Shiozaki, (Honda R&D Co.,Ltd.); Tadao Okazaki, (Kubota Corporation); Paul Richards, (Innospec Ltd.)

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, (Universiti Kebangsaan Malaysia)

20097038

### Development of a 1.2L MPI Bi-fuel (LPG-Gasoline) Engine

Nilesh M Kankariya, Viswanatha H.C, Muthu Shanmugam R, Srinivasan L, Aashish B Jadhav, (Tata Motors Ltd.); Christian Dias, Jacques Honvault, Patrice Nicolas, (Valeo EMS)

20097040

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

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

20097048

### Study on Single Cylinder Engine for Performance and Exhaust Emission Characteristics with Diesel, Bio Diesel, LPG and CNG as a Fuel

Syed Kaleemuddin Mohiuddin, (Greaves Cotton Limited); Ambaprasad Rao, (National Institute of Technology Warangal)

20097050

### Experimental Performance and Emission Analysis of Bio Diesel Operated C.I Engine

Sundara Pandian, G. Devaradjane, (Anna University)

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)

20097066

### Ignition and Combustion Characteristics of Biomass Gas in a HCCI Engine

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



20097090

**Cold Start Characteristics of an Ethanol Engine**

Chinda Charoenphonphanich, Wittawat Imerb, (King Monkut's Institute of Technology Ladkrabang); Nuwong Chollacoop, (National Science and Technology Development Agency); Katsunori Hanamura, (Tokyo Institute of Technology)

---

20097100

**Influence of Various Biodiesel Fuels on Diesel Engine Performance**

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

---

20097106

**The Use of Special Blends of Biofuel and Additives to Improve Performance and Exhaust Emission in a Single Cylinder Diesel Engine**

Saifullah Md Ghazaly, H. H. Masjuki, M. Husnawan, M. A. Kalam, T. M. I. Mahlia, (University of Malaya)

---

20097111

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

Kapilan Natesan, (National Institute of Technology Karnataka); T. P. Ashok Babu, (NITK University), R. P. Reddy, (Reva Institute of Technology)

---

20097113

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

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

---

20097115

**Feasibility Study of Simaruba Glauca and Its Biodiesel Blends as an Alternate Fuel in a CI Engine**

Naga S. Sarada, (JNT University); JN Gupta, Kalyani K. Radha, M. Shailaja, AV Sitaramaraju, (JNTU College of Engineering)

---

20097116

**Impact of Using Ethanol Fuel in Conventional Motorbike**

Chinda Charoenphonphanich, Tanawat Srirugsa, (King Mongkut's Institute of Technology Ladkrabang)

---

20097117

**Performance Evaluation of Low Heat Rejection Diesel Engine with Waste Fried Vegetable Oil**

Naga S. Sarada, (JNTU College of Engineering); R. Peraiah Chowdary, (Chaitanya Bharathi Institute of Technology); T. K. Kishen Reddy, (JNTU College of Engineering); M. V. S. Murali Krishna, (Chaitanya Bharathi Institute of Technology); Shanker, Kalyani K. Radha, (JNTU College of Engineering)

20097120

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

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

---

20097123

**Flow Coefficient, Tumble Ratio and Compression Ratio Investigation of a Bi-Fuel Spark Ignition Engine**

Omid Samimi Abianeh, Ahmad Shafiei, (IPCO); Mostafa Mirsalim, (Amirkabir University)

---

20097132

**Application of Newly Developed Cellulosic Liquefaction Fuel for Diesel Engines**

Nin En, Koji Yoshida, Hideo Shoji, Akira Iijima, Masashi Ono, Noritaka Yoshikawa, (Nihon University)

---

20097136

**Performance and Combustion Characteristics Analysis of Gasoline Engine Fueled with Butanol-Gasoline Blends**

Yang Jing, Wang Yong, Yang Hanqian, Liu Jingping, Zhong Zhihua, (Hunan University)

---

20097168

**Combustion and Emissions Characteristics of a Charcoal-HFO Slurry (Bio-COM) in a Diesel Engine**

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



**Organizers:**

Takashi Mitome, (Suzuki Motor Corporation); Geoffrey McCullough,  
(Queens University of Belfast)

20097092

**Formula SAE Space Frame Design**

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

---

20097103

**Improving Vehicle Performance by Aerodynamic Devices in Formula SAE**

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

---

20097107

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

Robert D Garrick, Clark Hochgraf, (Rochester Institute of Technology)

---

20097108

**Design and Construction of a High-Efficiency Electric Drivetrain for a Zero-Emissions Snowmobile**

Glenn R Bower, Nick J. Rakovec, (University of Wisconsin); Adam R. Schumacher, Kevin R. King,  
John Deere; Daniel Bocci, (Argonne National Laboratories); Ethan K. Brodsky, Glenn R. Bower,  
(University of Wisconsin)

---

20097147

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

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

---

20097154

**A Trial of Engine Performance Improvement with a Turbocharger in Consideration of Intake Pipe  
Runner Length for Formula SAE**

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

---

20097169

**Torque Control of the Small Gasoline Engine with the Variable Nozzle Turbine Turbo-Charger**

Kenichi Shimizu, Hiroshi Enomoto, Kyohei Takahashi, Wataru Sato, Hiroyasu Motoi,  
(Kanazawa University); Masahiro Yashiro, (Honeywell)

---

20097170

**Effect of the Seat Belt Positions on the Passenger Injury during Low Speed Front-End Impact**

Tatsuya Fukui, Yusuke Miyazaki, Hiroshi Enomoto, Yasuhito Niwa, (Kanazawa University)

20097171

**Decreasing of the Idle Engine Speed of the Small Gasoline Engine with PID Control**

Tatsuya Fukui, Hiroshi Enomoto, Taira Maeda, Yosuke Fukunaga, Masahiro Kontani,  
Toshiyuki Sakai, (Kanazawa University)

---

20097177

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

Andrew Baker, Gregory W. Davis, (Kettering University)

---

20097185

**Combustion System Development and Analysis of a Downsized Highly Turbocharged PFI Small Engine**

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

---

20097188

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

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



**Organizers:**

Yasuyuki Takahata, (Yanmar Co., Ltd.); Andrew P Traxel, (Briggs & Stratton Daihatsu LLC)

20097017

**Analysis of Droplets Evaporation Process of Diesel Spray at Ignition Delay Period Using Double Nano-spark Shadowgraph Photography Method**

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

---

20097018

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

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

---

20097037

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

Chockalingam Sundarraj, (Bharathiyar College of Engineering and Technology); S. Arul,  
(Panimalar College of Engineering); S. Sendilvelan, (Dr.M.G.R. Educational and Research  
Institute); C. G. Saravanan, (Annamalai University)

---

20097057

**Development of Newly Concept Diesel Engine for Industrial Use**

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

---

20097105

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

Luigi Allocca, Consiglio Nazionale Ricerche; Costa Michela, Siano Daniela, (CNR - Istituto Motori);  
Bozza Fabio, (DIME - Univ. of Napoli); Montanaro Alessandro, (CNR - Istituto Motori)

---

20097159

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

B Rajendra Prasath, P.Tamilporai, Mohd.F.Shabir, (Anna University, Chennai); T.Senthil Kumar,  
(Anna University, Trichy)

### Organizers:

Hidenori Arisawa, (Kawasaki Heavy Industries, Ltd.); Roy Douglas, (Queens University of Belfast)

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 Rotax)

20097054

#### **Mount Force Reduction in a Scooter Engine Mounting System**

Manjunath Bhat, Manjunath Bhat, (TVS Motor Company Limited); C. Padmanabhan, (Indian Institute of Technology Madras, Chennai); Kannan Marudachalam, (TVS Motor Company Limited)

20097089

#### **Desk Evaluation Approach of Timing Chain System in Single Cylinder Engines**

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

20097101

#### **Development of a Combustion Process by the Use of a Coupled 1D / 3D Simulation Strategy**

Oliver Schoegl, Schmidt Stephan, Abart Martin, Kirchberger Roland, Eichlseder Helmut, (Graz University of Technology)

20097130

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

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

20097138

#### **Simultaneous Evaluation on Engine-cooling and Aerodynamics Performance for Motorcycle Using CFD Analysis**

Toshihisa Abe, Tohru Shimizu, Yoshihiko Sunayama, Suzuki Motor Corporation

20097163

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

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





20097164

**Multiple-Cylinder Diesel Engine CFD Simulation Using VECTIS**

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

---

20097176

**Miniature HCCI Free-Piston Engine Compressor For Orthosis Application**

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

**Engine Components**

No Paper

## Engine Control

### Organizers:

Ryozo Okita, (Yamaha Motor Co., Ltd); Anthony A Szczotka, (Robert Bosch LLC)

20097014

### Modeling and Control of Variable Intake Valve Actuation in IC Engines

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

---

20097019

### Intelligent Engine Management System for Small Handheld Low Emission Engines

Matthias Hehnke, Claus Naegele, Heinrich Leufen, Andreas Baehner, (Andreas Stihl AG & Co. KG)

---

20097034

### Small Motorcycle Electronic Port Fuel Injection Retrofitting

Teoh Say Lai, Horizon Gitano-Briggs, (Universiti Sains Malaysia)

---

20097073

### Low Cost Electronic Control Units for Low Emission Motorcycles Engines: a Solution Based on the Integration of Analog Functions

Marco Sacchi, Ralph Ferrara, Neng-Hau Ching, (Freescale Semiconductor)

---

20097118

### An Ion Current Based Cylinder Pressure Estimation for Knock Detection and Control in a Single Cylinder Spark Ignition Engine

Davinder Kumar, (TVS Motor Company); A. Ramesh, MKG Babu, (Indian Institute of Technology Madras, Chennai)

---

20097124

### Development of Electronic Throttle Control System for Motorcycle

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



**Organizers:**

Kazuyuki Shiomi, (Honda R&D Co., Ltd.); Nagesh S Mavinahally, (Cummins Inc.)

20097011

**Preliminary Study on Design and Control of a Novel Automotive CVT**

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

---

20097042

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

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

---

20097049

**Improvement of a Fuel Consumption of Small Motorcycle Engine with YMJET-FI**

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

---

20097051

**Study on Similarity of Pumping Flow in Engine Crankcase**

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

---

20097059

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

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

---

20097069

**Power Restriction on Small Capacity Four Stroke Engines by Exhaust Gas Recirculation – A New Way of Speed Limiting with Reduced Exhaust Emissions?**

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

---

20097083

**Development of Technologies for Improving Fuel Economy of Small Motorcycle Engines**

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

---

20097097

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

M Krishnasamy, (TVS Motor Company Ltd); A Ramesh, MKG Babu, (Indian Institute of Technology, Madras); YR Babu, (TVS Motor Company Ltd.)

20097122

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

Dali Abdul Latiff Aw, (PETRONAS Research Sdn. Bhd.); Stefan Leiber, Ralf Rokita, Michael Gumpesberger, (BRP-Powertrain GmbH & Co KG); Fadhli Wong Mohd Hasan Wong, Fauzy Omar Basheer Othman, (PETRONAS Research Sdn. Bhd.)

---

20097129

**Fuel Film Behaviour Analysis Using Simulated Intake Port**

Minoru Iida, K. Yoshikawa, H. Tanaka, (Yamaha Motor Co.,Ltd); G. Wang, C. Arcoumanis, (City University London)

## Environmental Impacts

**Organizers:**

Hiromi Deguchi, (Suzuki Motor Corporations); Jeff J White, (Southwest Research Institute)

20097023

**Influence Factor Analysis of Light-Off Temperature Tests for Motorcycle Catalytic Converters**

Manqun Lin, Hongda Qu, Xicheng yan, Bin Jia, Jing Qin, Bin Xu, Wei Wang, (Tianjin University)

---

20097041

**Study of the Effects on the Emission of Purge Fuel from Carbon Canister and It's Control Strategies in Motorcycles**

Jing Qin, Xicheng Yan, Manqun Lin, Baohua Zhu, Junjie Zhang, (Tianjin University)

---

20097102

**Innovative 2 Wheeler's Substrate Developments for EU5**

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

---

20097158

**Catalytic coatings for Effective Emission Reduction in Small Motorcycle Application**

Ansgar Wille, M. Bonifer, (W.C. Heraeus)

---

20097181

**Canister Purge Flow Control Study on EFI Single Cylinder Small Engine**

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



**Organizers:**

Yasuyuki Muramatsu, (Yamaha Motor Co., Ltd.); Peter Kaub, (Re-Sol LLC)

20097044

**Flexible Fuel System for Small Motorcycles**

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

---

20097055

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

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

---

20097056

**Development of DBW Throttle Body for V4 Engines**

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

---

20097074

**Variable Density Distribution of CNG Jet Injected at Small Injection Pressure**

Emishaw Dandena Iffa, Abdul Rashid Abdul Aziz, (Universiti Teknologi PETRONAS)

---

20097112

**Ethanol Impacts on Fuel Supply Parts of Vehicles in Thailand**

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

---

20097149

**Low Cost EFI for 2 and 3 Wheeled Motorcycles**

Jeffrey Allen, B. Smither, P. Ravenhill, R.Hoolahan, G. Farmer, (Scion-Sprays Ltd.)

**Organizers:**

Minoru Iida, (Yamaha Motor Co Ltd); Jaal Ghandhi, (University of Wisconsin Madison)

20097021

**Effect of Spark Assistance on Improving Cyclic Stability of Auto-Ignition in a Small Two-Stroke Engine**

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

---

20097035

**A Dual Fuel System to Achieve High Equivalence Ratio and High Engine Performance in HCCI Mode**

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

---

20097070

**A Study of HCCI Combustion Using Spectroscopic Techniques and Chemical Kinetic Simulations**

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

---

20097072

**Spark Ignition and Spark-Assisted, Controlled Auto-Ignition in an Optical Gasoline Engine**

Steven M Begg, (University of Brighton, UK) ; Morgan Heikal, (University of Brighton, UK)

---

20097079

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

Kiyoshi Kawasaki, Koji Yamane, (The University of Shiga Prefecture); Hiroyuki Ohtsubo, Toru Nakazono, (Yanmar) ; Kazuki HIROTA, Shingo NAGATA(The University of Shiga Prefecture)

---

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, (Keio University Graduated School); Norimasa Iida, (Keio University)

---

20097086

**Analysis of the Combustion Dispersion Mechanism in HCCI Engine**

Chao Shi, Kenichiro Nagai, (Keio University Graduated School) ; Norimasa Iida, (KEIO University)

---

20097087

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

Hiroki Iino, Kenji Shigetoyo, Mari Nagae, (Keio University Graduated School) ; Norimasa Iida, (KEIO University)

---

20097141

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

Ock Taeck LIM, O Seok Kwon, DongWon Jeong, (University of Ulsan) ; Norimasa Iida, (KEIO University)

---

20097179

**Optimization of HCCI Engine Emission Parameters Using Multiobjective Optimization Technique**

B.Pandian,G.Nagarajan, D.Ganesh, (Anna University)



**Organizers:**

Yasuyuki Muramatsu, (Yamaha Motor Co., Ltd.); Jay Meldrum, (Michigan Technological University)

20097031

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

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

---

20097061

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

Ahmad Syazli Mohd Khalil, Horizon Gitano-Briggs, (Universiti Sains Malaysia)

---

**Lubricants**

**Organizers:**

Hideo Kaido, (Kawasaki Heavy Industries), Ltd.; Michael S Brenner, (Lubrizol Corp.)

20097075

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

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

---

20097080

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

Nobuaki Watanabe, Akira Mitarai, (Idemitsu Kosan Co.,Ltd.)

---

20097178

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

Hitoshi Hamaguchi and Hideo Tanaka, (Evonik Degussa Japan Co., Ltd.);

Thorsten Bartels, (Evonik RohMax Additives GmbH)

## Materials

### Organizers:

Takashi Mitome, (Suzuki Motor Corporation); James Carroll, (Southwest Research Institute)

20097010

### Weight Saving in Small Engine and Vehicle Components by Utilization of Die Cast Mg Alloy

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

---

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.)

---

20097076

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

Satoru Suwa, Daiji Kawaguchi, Atsushi Murakami, (Honda R&D Co., Ltd.)

---

20097082

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

Keiichi Maekawa, Atsushi Murakami, (Honda R&D Co., Ltd.)

---

20097173

### Establishment of Judder Analysis Technique & New Friction Material

Kazuyoshi Miyachi, (FCC(Thailand)Co.,Ltd.)

## NVH Technology

### Organizers:

Tadao Okazaki, (Kubota Corporation); Kenneth Kicinski, (Harley-Davidson Motor Co.)

20097015

### On Experimental Techniques to Determine Acoustic Performance of Small Exhaust Silencers

Jüri Lavrentjev, Hans Rämmal, (Tallinn University of Technology)

---

20097128

### Damping Loss Factor Prediction in Statistical Energy Analysis for Co-Generation System Enclosure

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

---

20097131

### Evaluation of Feeling of Pulse for Cruiser-Type Motorcycle

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





**Organizers:**

Tomoo Shiozaki, (Honda R&D Co., Ltd.); Robert G Kenny, (Queens University of Belfast)

20097013

**Knocking Investigations in a small Two-Stroke SI Engine**

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

---

20097030

**Spectroscopic Measurements in Small Two-Stroke SI Engines**

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

---

20097032

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

Teoh Yew Heng, Horizon Gitano-Briggs, Tan Yee Hern, (University Science Malaysia)

---

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);  
Karl Glinsner, (BRP Rotax, Austria)

---

20097077

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

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

---

20097127

**Compression Wave Technology Effects on the Performance of a Two-Stroke Engine**

Abdul Yamin Saad, Wei Chin Yeoh, (Universiti Sains Malaysia)

## Vehicle Design

### Organizers:

Yoshiro Tokunaga, Toshimi Kobayashi, (Kawasaki Heavy Industries, Ltd.)

20097099

### Design and Development of a Three-Wheeler Engine for Improved Fuel Economy and Low Emission

Ajith V Pai, Ramachandra Babu Y, V Lakshminarasimhan, (TVS Motor Company)

---

20097109

### The Development of Touring Motorcycle with 1352 ml Engine

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

---

20097143

### Developmet of Structure Analysis Method for Motorcycle Frame

Toshiaki Ogushi, Ryota Ide, Yoshihiko Sunayama, (Suzuki Motor Corporation)

## Vehicle Dynamics & Safety

### Organizers:

Takayuki Koizumi, (Doshisha University); Deane B Jaeger, (Harley-Davidson Motor Co.)

20097060

### Cooperative Steer Control on Motorcycle between Rider and Active Support Torque

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

---

20097081

### Rider Response Time in Motorcycle Riding

Sai Praveen Velagapudi, Raju K. Venkatamanga, R. Babu, (TVS Motor Company Ltd.)

---

20097146

### Development of an Electronically-Controlled Combined Brake System

Hiroaki Amano, Keiji Sakamoto, Tomoyuki Takahashi, Manabu Kokawa, (Kawasaki Heavy Industries, Ltd.)

---

20097152

### Simulation and Experimental Study to Improve Wobbling Stability of a 3-Wheeler

Gangi Reddy Dumpala, G. S. G. Ravikanth, Tushar R. Gowade, V. Jeyamuragan, M. Nagarjun Reddy, (TVS Motor Company)



< MEMO >

