

Technical Sessions

SETC2019 Session Timetable							As of October 31, 2019	
		Ran 1	Ran 2	Cosmos 1	Cosmos 2	Himawari		
Tuesday, November 19th	8:30-10:00	Opening Ceremony & Keynote Speech (Himawari)						
	10:00-10:30	Networking Break & Poster Session						
	10:30-12:00		Collegiate Events	Alternative Fuels I	Diesel Engine I	Measurement & Simulation I	Fuel Supply Systems	
		Chair	Takashi Mitome	Toru Nakazono	Tomoaki Yatsufusa	Tadao Okazaki	Akira Iijima	
		Co-Chair	Stefan Sturm	Michael Lang	Adrian Irimescu	Stephan Schmidt	Simona Silvia Merola	
		3	20199532 / 2019-32-0532	20199526 / 2019-32-0526	20199590 / 2019-32-0590	20199567 / 2019-32-0567	20199535 / 2019-32-0535	
			20199581 / 2019-32-0581	20199592 / 2019-32-0592	20199538 / 2019-32-0538	20199546 / 2019-32-0546		
			20199621 / 2019-32-0621		20199545 / 2019-32-0545			
	12:00-13:15	Lunch & Poster Session						
	13:15-14:45		Materials & Manufacturing	Alternative Fuels II	Diesel Engine II	Measurement & Simulation II	Engine Controls	
		Chair	Aki Kodai	Hiroya Ueda	Tomoaki Yatsufusa	Tadao Okazaki	Yutaka Nitta	
		Co-Chair	Christoph von Hiller	Michael Lang	Giovanni Ferrara	Stephan Schmidt	Ken Fosaaen	
3		20199504 / 2019-32-0504	20199515 / 2019-32-0515	20199596 / 2019-32-0596	20199548 / 2019-32-0548	20199511 / 2019-32-0511		
		20199516 / 2019-32-0516	20199607 / 2019-32-0607	20199599 / 2019-32-0599	20199570 / 2019-32-0570	20199519 / 2019-32-0519		
		20199544 / 2019-32-0544	20199620 / 2019-32-0620	20199618 / 2019-32-0618	20199518 / 2019-32-0518	20199568 / 2019-32-0568		
14:45-15:15	Networking Break & Poster Session							
15:15-16:45			Functional Safety	Small & Micro CHP Systems	Measurement & Simulation III	Hybrids, Electric Drives & Fuel Cells		
	Chair		Takashi Mitome	Toru Nakazono	Minoru Iida	Yasuyuki Muramatsu		
	Co-Chair		Giovanni Ferrara	Alessandro Bellissima	Stephan Schmidt	Kai Beck		
	3		20199537 / 2019-32-0537	20199576 / 2019-32-0576	20199550 / 2019-32-0550	20199555 / 2019-32-0555		
			20199588 / 2019-32-0588	20199542 / 2019-32-0542	20199623 / 2019-32-0623			
			20199604 / 2019-32-0604	20199543 / 2019-32-0543	20199525 / 2019-32-0525			
16:45-17:00	Networking Break							
17:00-18:00	Special Speech (Himawari)							
Wednesday, November 20th	8:30-10:00		Emissions I	Alternative Fuels III	HCCI I	Measurement & Simulation IV	Engine Technology I	
		Chair	Hiroshi Deguchi	Toru Nakazono	Tatsuya Kuboyama	Tadao Okazaki	Yuji Araki	
		Co-Chair	Mikael Bergman	Kai Beck	Glenn Bower	Stefan Sturm	Roland Kirchberger	
		3	20199613 / 2019-32-0613	20199595 / 2019-32-0595	20199522 / 2019-32-0522	20199502 / 2019-32-0502	20199509 / 2019-32-0509	
			20199612 / 2019-32-0612	20199606 / 2019-32-0606	20199608 / 2019-32-0608	20199552 / 2019-32-0552	20199591 / 2019-32-0591	
						20199571 / 2019-32-0571	20199580 / 2019-32-0580	
	10:00-10:30	Networking Break & Poster Session						
	10:30-11:30		Emissions II	Alternative Fuels IV	HCCI II		Engine Technology II	
		Chair	Hiroshi Deguchi	Toru Nakazono	Akira Iijima		Yutaka Nitta	
		Co-Chair	Stefan Sturm	Ken Fosaaen	Glenn Bower		Roland Kirchberger	
		3	20199513 / 2019-32-0513	20199611 / 2019-32-0611	20199528 / 2019-32-0528		20199582 / 2019-32-0582	
			20199617 / 2019-32-0617	20199614 / 2019-32-0614	20199573 / 2019-32-0573			
11:30-13:00	Lunch & Poster Session							
13:00-14:30		Lubricants	Engine Components I	Vehicle Components	NVH Technology I			
	Chair	Yuji Mihara	Takahito Murase	Masayuki Baba	Chanat Ratanasumawong			
	Co-Chair	Mikael Bergman	Adrian Irimescu	Alexander Winkler	TBA			
	3	20199505 / 2019-32-0505	20199508 / 2019-32-0508	20199597 / 2019-32-0597	20199512 / 2019-32-0512			
		20199510 / 2019-32-0510	20199523 / 2019-32-0523		20199593 / 2019-32-0593			
		20199601 / 2019-32-0601	20199541 / 2019-32-0541		20199609 / 2019-32-0609			
14:30-15:00	Networking Break & Poster Session							
15:00-17:30	Plenary Session (Himawari)							
Thursday, November 21st	8:30-10:00		Advanced Combustion I	Engine Components II	Vehicle Dynamics	NVH Technology II	Two Stroke Engine I	
		Chair	Koji Yoshida	Takahito Murase	Hisayuki Sugita	Chanat Ratanasumawong	Tatsuya Kuboyama	
		Co-Chair	Simona Silvia Merola	Mike Marcella	Glenn Bower	TBA	Pierre Duret	
		3	20199565 / 2019-32-0565	20199530 / 2019-32-0530	20199569 / 2019-32-0569	20199531 / 2019-32-0531	20199524 / 2019-32-0524	
			20199551 / 2019-32-0551	20199610 / 2019-32-0610	20199572 / 2019-32-0572	20199533 / 2019-32-0533	20199549 / 2019-32-0549	
					20199578 / 2019-32-0578	20199587 / 2019-32-0587	20199579 / 2019-32-0579	
	10:00-10:30	Networking Break & Poster Session						
	10:30-12:00		Advanced Combustion II	Engine Components III		NVH Technology III	Two Stroke Engine II	
		Chair	Akihito Kasai	Naoya Isozaki		Tadao Okazaki	Tatsuya Kuboyama	
		Co-Chair	Simona Silvia Merola	Mike Marcella		TBA	Pierre Duret	
		3	20199586 / 2019-32-0586	20199553 / 2019-32-0553		20199527 / 2019-32-0527	20199562 / 2019-32-0562	
			20199616 / 2019-32-0616	20199584 / 2019-32-0584		20199594 / 2019-32-0594		
		20199622 / 2019-32-0622	20199585 / 2019-32-0585					
12:00-14:00	Lunch / Closing Ceremony (Himawari)							

Technical Sessions

(As of October 31, 2019)

Advanced Combustion

Organizers: Akihito Kasai (Honda R&D Co., Ltd.), Koji Yoshida (Nihon University), Adrian Irimescu (Istituto Motori-CNR)

20199551 **Effects of Sub-Chamber Configuration on Heat Release Rate in a Constant Volume Chamber Simulating Lean-Burn Natural Gas Engines**

Yuzuru Nada, Yoshiyuki Kidoguchi, Yuto Yamashita, Ryo Furukawa (Tokushima University)
Ryu Kaya, Hideaki Nakano, Shinichi Kobayashi (Honda R&D Co., Ltd)

20199565 **Design and Development of a High-Efficiency Single Cylinder Natural Gas-Fueled Jet Ignition Engine**

Nathan Peters, Michael Bunce, Hugh Blaxill (MAHLE Powertrain)

20199586 **Influence of Zn, Mo, P, S-contained Engine Oil Additives on Abnormal Combustion in a Spark Ignition Engine**

Tatsuya Kusumoto, Toshimasa Utaka (Idemitsu Kosan Co.,Ltd.), Takuya Izako, Akira Iijima (Nihon University)

20199616 **Numerical Study on Characteristics of Spray Under Air Flow in Gasoline Engine**

Min Guo, Qingrong Fan (Wuhan University of Technology), Keiya Nishida (Hiroshima University), Chaoqun Wu (Wuhan University of Technology)

20199622 **Improvement of Combustion Characteristics of Gas-Heatpump Engine Using Low Temperature Plasma Ignition System**

Tatsuya Kuboyama, Yasuo Moriyoshi (Chiba University), Osamu Matsumoto (Sustainable Engine Research Center), Takahiro Tsukamoto (Chiba University), Hideaki Maeshima (Toyota Industries Corporation)

Technical Sessions

(As of October 31, 2019)

Alternative fuels

Organizers: Toru Nakazono (LEMA/YANMAR Co. Ltd.), Hiroya Ueda (Honda R&D Co., Ltd.), Stephan Jandl (Graz University of Technology)

20199515 **RANS Simulation of Hydrogen-Rich Reformate Jet Mixing and the Effect of Injection Method on Particle Emission**

Leonid Tartakovsky, Andy Thawko (Technion - Israel Institute of Technology)

20199526 **Effect of Thermal Barrier Coating on Performance and Emissions of a DI Diesel Engine**

Yogeshwar Paik, Krishna Kumar Pandey, Chinmaya Ranjan Sahu, Saroj Kumar Barik, Sivalinagm Murugan (National Institute of Technology Rourkela)

20199581 **Influence of the Kind of Fuel Kind in the Ignition of Diesel Dual Fuel Operation with Introduced Natural Gas Combining EGR and Supercharging**

Yasufumi Yoshimoto (Niigata Institute of Technology), Eiji Kinoshita, Takeshi Otaka (Kagoshima University)

20199595 **The Experimental Investigation of the Performance and Emissions Characteristics of Direct Injection Diesel Engine by 2nd Generation Oil and Diesel Oil**

Annisa Bhikuning, Xin Li, Ryunosuke Sugawara, Eriko Matsumura, Jiro Senda (Doshisha University)

20199606 **Utilization of Castor Oil-Based Ethyl Ester Biodiesel in a Diesel Engine**

Ekarong Sukjit, Disatorn Dejvajara, Somkiat Maithomklang, Anupap Pumpuang (Suranaree University of Technology)

20199607 **The Effect of Ethanol Fuels on the Power and Emissions of a Small Mass-Produced Utility Engine**

Saager Paliwal, Glenn R Bower (University of Wisconsin-Madison)

20199611 **The Combustion Characteristic of Fuel Additives with Diesel-Ethanol Fuel Blends on Engine Performance**

Kampanart Theinnoi, Boonlue Sawatmongkhon, Thawatchai Wongchang (King Mongkut's University of Technology North Bangkok), Ekarong Sukjit (Suranaree University of Technology), Sathaporn Chuepeng (Kasetsart University)

20199614 **Evaluation of Optimal Water Content on an Emulsified Fuel Droplet for Diesel Engine**

Junichi Aoki, Tomoyuki Kaneko, Junya Tanaka (Kogakuin university)

20199620 **Study for Higher Efficiency and Lower Emissions in Turbo Charged Small Gas Engine Using Low Caloric Biomass Model Gas**

Kenta Shiomi, Ryogo Kato, Eriko Matsumura, Jiro Senda (Doshisha University), Ryoichi Hagiwara, Yuta Watanabe, Toru Nakazono (YANMAR CO., Ltd.)

20199621 **Performance and Emission Parameters of an LHR Engine Run on Jatropha Biodiesel and Its Diesel Blend**

Sanju Sureshan Nair, Krishna Kumar Pandey (National Institute of Technology Rourkela)

Collegiate Events

Organizers: Takashi Mitome (SUZUKI MOTOR CORPORATION), Teresa Castiglione (University of Calabria)

20199532 **Rework of an In-Line Two-Cylinder Engine for the Application in Formula Student**

Michael Feigl, Dominik Rößmann, Michael Josef Trzesniowski (University of Applied Sciences FH Joanneum)

Technical Sessions

(As of October 31, 2019)

Diesel Engine

Organizers: Masahiko Sugimoto (Kubota Corporation), Paul Litke (Air Force Research Laboratory)

20199590 **An Analysis of Diesel Spray Characteristics with Small Injection Amount Under Similarity Law Condition**

Yu Jin, Chang Zhai, Keiya Nishida, Yoichi Ogata (Hiroshima University)

20199592 **Effects of Spray Internal EGR Using CO₂ Gas Dissolved Fuel on Combustion Characteristics and Emissions in Diesel Engine**

Tomoyuki Mukayama, Yoshitaka Hattori, Jumpei Yamamoto (Doshisha University), Masaki Kuribayashi, Go Asai (YANMAR CO., LTD.), Eriko Matsumura, Jiro Senda (Doshisha University)

20199596 **Effect of Dwell Time of Split Injection on Diesel Spray Development and Mixture Formation Processes**

Jaeheun Kim, Shinichi Kakami, Keiya Nishida, Yoichi Ogata (Hiroshima University)

20199599 **LES Study on Correlation of Chemiluminescent Species and Heat Release Process in a Diesel Engine**

Beini Zhou, Takayuki Adachi, Jin Kusaka (Waseda University)

20199618 **An Effect of Cooled-EGR on Diesel Engine Performance Fueled with Coconut-Oil Methyl Ester**
Koji Yoshida (Nihon University)

Emissions

Organizers: Hiromi Deguchi (SUZUKI MOTOR CORPORATION), Leonid Tartakovsky (Technion-Israel Institute of Technology)

20199513 **Bosch On Board Diagnostic Solutions for Motorcycles**

Holger Jessen (Robert Bosch GmbH), Kushal Agarwal (Robert Bosch Engineering and Business Solutions Pvt Ltd.), Sabu Abhijith (Bosch Limited, India), Shreyas Hande (Robert Bosch Engineering and Business Solutions Pvt Ltd.), Matthias Tappe (Robert Bosch GmbH)

20199612 **Visualization and Analysis of Droplets Behavior in Aftertreatment Systems: II . Improvement of Vaporization Efficiency by Surface Texturing**

Naoki Sugiyama, Tetsuo Nohara, Masayuki Ochiai (Tokai University)

20199613 **Visualization and Analysis of Droplets Behavior in Aftertreatment Systems: I . Experimental Study by Acrylic SCR Dosing Simulator**

Tetsuo Nohara, Naoki Sugiyama, Masayuki Ochiai (Tokai University)

20199617 **Sensor Integrated Substrate for Future Exhaust System of Two Wheelers**

Kosaku Ito (Vitesco Technologies Japan K.K), Sven Seifert (Vitesco Technologies Emitec GmbH)

Technical Sessions

(As of October 31, 2019)

Engine Components

Organizers: Takahito Murase, Naoya Isozaki (Kawasaki Heavy Industries, Ltd.), Adrian Clenci (University of Pitesti, Romania)

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| 20199508 | Development of a Novel Hybrid-Piston for the Application in High Performance Two Stroke Engines
Christian Bechter, Thomas Herb (Mahle König KG), Frieder Zimmermann, Axel Jahn (Fraunhofer Institut Werkstoff- und Strahltechnik IWS, Dresden) |
| 20199523 | Optimum Design of Assist Mechanism for Motorcycle Multi-Plate Clutch
Misaki Minoha, Ryoichi Imai, Hidenori Kitazawa, Osamu Mano, Shinya Miyagawa, Kouji Yoneyama (EXEDY Corporation) |
| 20199530 | Friction Reduction of an All-Aluminum Cylinder for Motorcycles by a Mirror Finished Bore with Dimples
Yuta Murase, (Yamaha Motor Co.,Ltd) |
| 20199541 | A Study of Porous Material as Heat Storage Medium for Exhaust Turbocharged Gasoline Engine Application
Dongsheng Dong, Tatsuya Kuboyama, Yasuo Moriyoshi (Chiba University) |
| 20199553 | Optimization of Multi Plate Wet Clutch Design for Performance and Life
K Nitin Rajaram Bhone, Ashutosh Padmakar Jahagirdar (ENDURANCE TECHNOLOGIES LTD) |
| 20199584 | Dynamic Implicit Analysis of Valve Train with Cylinder Head Assembly
Prasanth Venkatesan, Sangam Laxman Kute, Sreenivasulu T, Karthik S, Rod Giles (Royal Enfield) |
| 20199585 | Piston Durability Analysis Including Side-Thrust Loads
Ashwin Balaji Govindaraj, Sangam Laxman Kute, Sreenivasulu T, Rod Giles (Royal Enfield) |
| 20199610 | Development of a Method to Predict Performance of Sensing System with Air Mass Flow Sensor by CFD
Kosuke Suematsu, Kento Nosaka, Tadao Okazaki (Kubota Corporation) |
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Engine Controls

Organizers: Hidetoshi Ishigami (Yamaha Motor Co., Ltd.), Yutaka Nitta (SUZUKI MOTOR CORPORATION), Ken Fosaaen (Kerdea Technologies)

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| 20199511 | Study of OBD Stage II Misfire Detection System for Small Motorcycles
Toshiki Kataoka, Hirotaka Fukuta, Takashi Sawada, Satoshi Miwa (AISAN INDUSTRY CO.,LTD.) |
| 20199519 | Sensor Fusion Concept for Improved Rotational Speed Measurement in Small Engines
Markus Neumayer, Thomas Suppan, Thomas Bretterklieber (Graz University of Technology) |
| 20199568 | Research on Method of Sensor Fault Detection for OBD-II Compliant Motorcycles Based on Temperature Estimation
Atsushi Watanabe (Keihin Corporation) |
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Technical Sessions

(As of October 31, 2019)

Engine Technology

Organizers: Yuji Araki (Yamaha Motor Co., Ltd.), Yutaka Nitta (SUZUKI MOTOR CORPORATION), Nagesh Mavinahally (MavinTech USA)

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| 20199509 | Tumble Flow Enhancement Applied for Low-load Condition of Engines by Utilizing Reverse Flow Phenomenon in Intake Port
Yohei Nakamura, Makoto Fujikubo, Yosuke Inoue (Honda R&D Co., Ltd.) |
| 20199580 | Study on Commonization of Basic Structure of Combustion Chamber in Development of General Purpose Engine for Environmental Performance Improvement
Takayuki Aoki, Takahiro Tsuchiyama (Honda R&D Co., Ltd.) |
| 20199582 | Experimental Investigations on a Novel Expansion Engine for Waste Heat Recovery
Michael Lang (Graz University of Technology) |
| 20199591 | Flexible Valve Timing Strategies for Boosting a Small Four-Stroke Spark Ignition Engine Performance.
Mohd Razali Hanipah, Muhammad Haziq Adham Rosli (Universiti Malaysia Pahang) |
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Fuel Supply Systems

Organizers: Akira Iijima (Nihon University), Simona Merola (Istituto Motori-CNR)

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| 20199535 | Development of an Injection System for Small Engines with Adaptive Control for Sensorless Lambda Operation
Sebastian Hook (PRÜFREX Innovative Power Product GmbH), Bernhard Ernst, Marek Lajda (Engineering e Motion GmbH & Co.KG) |
| 20199546 | Performance Investigation of a PFI Gasoline Engine by Applying Various Kinds of Fuel Injectors
Fuchao Shen (Chiba University), Toshiya Iio, Yudai Miyatani, Akira Tsunoi (Bosch), Tatsuya Kuboyama, Yasuo Moriyoshi (Chiba University) |
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Technical Sessions

(As of October 31, 2019)

HCCI

Organizers: Akira Iijima (Nihon University), Tatsuya Kuboyama (Chiba University), Adrian Irimescu (Istituto Motori-CNR)

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- 20199522 **Combustion Characteristic of Offset Orifice Nozzle Under Multi Pulse Ultrahigh Pressure Injection and PCCI Combustion Conditions**
Pop-Paul Ewphun, Miku Otake, Tsuyoshi Nagasawa, Susumu Sato, Hidenori Kosaka (Tokyo Institute of Technology)
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- 20199528 **Investigation of the Effect of Enhanced In-Cylinder Flow on HCCI Combustion in a Rapid Compression and Expansion Machine**
Yiwen Zhong, Kazuya Ogawa, Tatsuya Kuboyama, Yasuo Moriyoshi (Chiba University), Kei Yoshimura (SUZUKI MOTOR CORPORATION)
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- 20199573 **A Study of a 2-Stroke CAI Combustion Engine with High Robustness Against Fuel Types**
Mashu Kurata (Honda R&D Co., Ltd)
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- 20199608 **Improvements on the CFR Engine Three Pressure Analysis GT-Power Model for HCCI and Late SI Conditions**
Jorge Pulpeiro Gonzalez, Christopher P Kolodziej (Argonne National Laboratory)
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Hybrids, Electric Drives and Fuel Cells

Organizers: Yasuyuki Muramatsu (Yamaha Motor Co., Ltd.), Kai Beck (Andreas Stihl AG & Co. KG)

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- 20199525 **Acoustics and Drivability as the Main Drivers for Customer Satisfaction in an Electrified 2-Wheeler**
Hubert Friedl, Christian Hubmann, Bernhard Graf, Patrick Falk (AVL List GmbH)
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- 20199555 **Development of Hydrogen Powered Fuel Cell e-Snowmobiles**
Patrick Pertl, (HyCentA Research GmbH)
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- 20199623 **Replacement of 50cc Two-Stroke engine with an Electric Powertrain**
Jesse Beeker (Simple Tech Innovation)
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Lubricants

Organizers: Yuji Mihara (Tokyo City University), Toru Nakazono (LEMA/YANMAR Co., Ltd.), Mike Marcella (Maxima Racing Oils)

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- 20199505 **Developing High-Performance Motorcycle Oils**
Michael Marcella, (Maxima Racing Oils)
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- 20199510 **Identifying the Limitations of the Hot Tube Test as a Predictor of Lubricant Performance in Small Engine Applications**
Jason John Hanthorn, (Lubrizol)
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- 20199601 **Impact of Soot and Engine Oil Additive Characteristics on Metallic Wear Using Electron Microscopy and Confocal Microscopy**
Panyakorn Rungsritanapaisan, Preechar Karin (King Mongkut's Institute of Technology Ladkrabang)
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Technical Sessions

(As of October 31, 2019)

Materials and Manufacturing

Organizers: Aki Kodai (Kawasaki Heavy Industries, Ltd.), Roland Schierling (Andreas Stihl AG & Co. KG)

20199504 **Influence of Surface Compound Layer on Fatigue Strength of Nitrided Chromium Molybdenum Steel**

Tsuyoshi Kubota (Yamaha Motor Co.,Ltd), Osamu Umezawa (Yokohama National University)

20199516 **Development of High Productivity and Low Cost Card Edge Type ECU for Motorcycles**

Yuichi Takeda, Daisuke Sugio, Koji Inose (HONDA R&D Co.,Ltd.), Syuichi Takioka (Keihin Corporation)

20199544 **Development of Laser-welded Press Frames Applied for Small Scooters Using High-tensile Steel Plate Providing Light Weight and High Production Efficiency**

Sunao Kawano, Takeru Kobayashi (Honda R&D Co., Ltd.)

Measurement and Simulation

Organizers: Tadao Okazaki (LEMA/Kubota Corporation), Stephan Schmidt (Graz University of Technology)

20199502 **Spectroscopy Based Tool for Temperature Evaluation During the Spark Discharge**

Simona Silvia Merola, Adrian Irimescu (Istituto Motori - CNR)

20199518 **Advanced 2-Wheeler Powertrain Test Setup for Dynamic Fuel Consumption Measurement with Increased Accuracy, Repeatability and Data Quality**

Harald Mayrhofer, (AVL List GmbH)

20199538 **Experimental Study of Aerodynamic Drag Control on Bluff Body Using Synthetic Jets**

Shunsuke Watanabe, Naoto Kato, Hiroaki Hasegawa (Utsunomiya University)

20199542 **Improvement of On-Board In-Cylinder Gas Flow Model and Wall Heat Transfer Prediction Model for CI Engines Using PIV Measurements Under Motoring and Firing Conditions**

Mitsuhisa Ichiyonagi, Gerard Ndizeye, Yuji Sawamura, Reina Saito, Kotaro Takahashi, Koki Otsubo, Takashi Suzuki (Sophia University)

20199543 **Improvement of On-Board Wall Heat Transfer Model and Polytropic Index Prediction Model for CI Engines Using Measurement of Combustion Chamber Wall Heat Flux**

Mitsuhisa Ichiyonagi, Zhiyuan Liu, Haoyu Chen, Koki Asano, Koki Otsubo, Emir Yilmaz, Takashi Suzuki (Sophia University)

20199545 **Development of Drive Cycle Using Fleet Data for Two-Wheelers in Indian Market**

Arvind Satish, Abhijith Sabu, Johnson Xavier Saldanha (Bosch Limited), Nagesh A P (IIT Madras)

20199548 **Piston Temperature Measurement During Engine Warm-Up and Application for Analysis of Piston Behavior**

Akira Ishibashi, Kunihiko Hiraoka, Shinya Kubota, Masanobu Saito (SUZUKI MOTOR CORPORATION)

20199550 **Study on Performance Prediction Method of Super-High Expansion Ratio Engine**

Hiroshi Tonoshiro (Kanagawa Institute of Technology) Yasufumi Oguri (Chiba University), Akihito Okazaki (Kanagawa Institute of Technology)

20199552 **Analysis of Cycle to Cycle Variation in Port Injection Gasoline Engine by Simultaneous Measurement of Time Resolved PIV and PLIF**

Santa Haramiishi, Takahiro Watanabe, Minoru Iida (Yamaha Motor Co.,Ltd), Satoshi Hokimoto, Tatsuya Kuboyama, Yasuo Moriyoshi (Chiba University)

Technical Sessions

(As of October 31, 2019)

Measurement and Simulation (Continued)

20199567	Prediction of Air Temperature Distribution in Rider's Periphery of Idling Motorcycle by CFD Using DES Model Yuzo Fujita, Hiroshi Tatsumi (Honda R&D Co., Ltd.)
20199570	Study on Oil Consumption in the Small Engine for the Motorcycle Taichi Kohno, Yoshinari Ninomiya, Naoyuki Suda (SUZUKI MOTOR CORPORATION)
20199571	Effects of Shape of Ion-Probe on Flame Detecting Characteristics in 2-Stroke Gasoline Engine Tomoaki Yatsufusa, Rio Kamei (Hiroshima Institute of Technology)

NVH Technology

Organizers: Tadao Okazaki (LEMA/Kubota Corporation), Thomas Lagö (QirraSound Technologies Europe AB)

20199512	A Study on the Decay Process in the Time-Frequency-Dependent Combustion-Noise-Generation Model for Diesel Engines Hitoshi Oguchi, Koki Minato, Takehiko Seo, Masato Mikami (Graduate School of Sciences and Technology for Innovation, Yamaguchi University)
20199527	High Frequency Structure-Borne Noise Analysis on Agricultural Tractor by Using Combined Dynamical Energy Analysis and Transfer Path Analysis Approach Satoshi Morita (Yanmar R&D Europe), Martin Richter, Gregor Tanner (University of Nottingham)
20199531	Acoustic Study on Motorcycle Helmets with Application of Novel Porous Material Hans Rämmal, Jüri Lavrentjev (TalTech, Mechanical and Industrial Engineering)
20199533	Endurance of Micro-Perforated Elements in Unmanned Ground Vehicle's Small Diesel Engine Silencer Application Hans Rämmal, Jüri Lavrentjev (TalTech, Mechanical and Industrial Engineering)
20199587	Extraction of Modification Parts of Mechanical Structure Based on Mutual Mode Kinetic Energy Distribution for Vibration Reduction Masami Matsubara, Koki Morikawa (Toyohashi university of technology), Tomohiko Ise (Kindai University), Shozo Kawamura (Toyohashi university of technology), Kohei Furuya (Gifu university)
20199593	Pass-By Noise Prediction of a Vehicle Raja Gopal Balakrishnan, Santosh Kumar Gannu, Krishnamurthy GS, Rod Giles, Abhilash Maiti (Royal Enfield)
20199594	Establishment of Evaluation Model for Sound Quality Applicable for Motorcycle Exhaust Sound Having Temporal Variations Kazuhiko Tanaka (Honda R&D Co.,Ltd.), Shigeaki Nishina (Honda Reserch Institute Japan Co., Ltd.), Haruomi Sugita, Takeo Kato, Masahiko Sekita (Honda R&D Co.,Ltd.)
20199609	Performance Evaluation & Optimization of Torsional Vibration Damper System (TVDS) in Multi-Plate Clutches for Improved Driving Comfort Girish Raghunath Kokane, Ashutosh Padmakar Jahagirdar, Ravindra Vyankatrao Kharul (Endurance Technologies Ltd)

Technical Sessions

(As of October 31, 2019)

Two Stroke Engine

Organizers: Tatsuya Kuboyama (Chiba University), Roland Kirchberger (Graz University of Technology)

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| 20199524 | Intermittent Injection for a Two-Stroke Direct Injection Engine
Francesco Balduzzi, Luca Romani, Lorenzo Bosi, Giovanni Ferrara (Università degli Studi di Firenze) |
| 20199549 | Simulation Analysis of the Scavenging Process Between a Uniflow and Loop Scavenging Concept
Stefan Sturm, (Graz University of Technology) |
| 20199562 | The Influence of Lean Combustion by the Spark Ignition Under Flow Conditions
Kojiro Yoshida , Yosuke Abe, Masaya Iimura, Takuma Furusho, Takafumi Imai, Kazutoshi Hoshi, Akira Iijima (Nihon University) |
| 20199579 | Calcium in Oil Effects on Pre-Ignition of Two-Stroke Engine
Kuniyoshi Eto, Masaki Kihara (YAMABIKO CORPORATION) |
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Vehicle Dynamics

Organizers: Masayuki Baba (Honda R&D Co., Ltd.), Hisayuki Sugita (SUZUKI MOTOR CORPORATION), Pierluigi Zampieri (Ducati Motor Holding spa)

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| 20199569 | A Study of the Control Logic of Electronically Controlled Suspension for Motorcycle
Takenori Terada, Kazuhiro Ichikawa, Hideyuki Kato, Taro Iwamoto (Kawasaki Heavy Industries, Ltd.) |
| 20199572 | Rider Model for Motorcycle Racing Simulation
Masatsugu Nishimura, Yoshitaka Tezuka (Honda Racing Corporation), Mattia Bruschtta (University of Padova), Toru Yoshii (VI-grade Japan Ltd.), Francesco Ambrogi (VI-grade s.r.l.) |
| 20199578 | Motorcycle Out-of-Plane Dynamics Estimation: An Approach Based on Sharp 71 Model
Alexander Winkler, Gernot Grabmair (University of Applied Sciences Upper Austria) |
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Vehicle Components

Organizers: Masayuki Baba (Honda R&D Co., Ltd.), Hisayuki Sugita (SUZUKI MOTOR CORPORATION), Nicolae Vlad Burnete (Technical University of Cluj-Napoca)

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| 20199597 | Effect of Dean Number on Heat Transfer Characteristics for Square Channel Spiral Coil Sub-Cooled Condenser
Hardeep Singh (Sophia University), Junya Washiashi, Jun Liu (Keihin Corporation), Mitsuhsa Ichiyanagi, Takashi Suzuki (Sophia University) |
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Functional Safety

Organizers: Takashi Mitome (SUZUKI MOTOR CORPORATION), Marco Pierini (University of Florence)

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| 20199537 | Estimation of Rider's Compensatory Control Action Useful for Controllability Class Evaluation by Vehicle Dynamics Simulation
Maki Kawakoshi, Takashi Kobayashi, Makoto Hasegawa (Japan Automobile Research Institute) |
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Technical Sessions

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Small and Micro Combined Heat and Power Systems

Organizers: Toru Nakazono (LEMA/YANMAR Co. Ltd.), Alessandro Bellissima (YANMAR R&D Europe)

20199576 **Intake Manifold Exhaust Condensed Water Injection for a Clean and Efficient Natural Gas Micro-CHP-Engine: Strategies and Restraints.**

Youssef Beltaifa, Maurice Kettner (Karlsruhe University of Applied Sciences)

20199588 **Miller Valve Timing and Stoichiometric Combustion for a Naturally Aspirated Single Cylinder Cogeneration Gas Engine**

Jörn Judith, Maurice Kettner, Denis Neher (Karlsruhe University of Applied Sciences), Danny Schwarz, Markus Klaissle (SenerTec Kraft-Wärme-Energiesysteme GmbH)

20199604 **Effect of Fuel Composition in Bio-Syngas on NO in Emission with SI-ICE**

Shota Iwai, Kazushi Fukadu, Hiroshi Enomoto (Kanazawa University)
