

Small Powertrains and Energy Systems Technology Conference

Technical Session Schedule

As of November 06, 19:40:14 PM

Tuesday, October 31

Measurement and Simulation, Part 1

Session Code SETC12

Room Lakeshore Ballroom A Session 10:00 a.m.

Organizers - Kai W. Beck, Andreas Stihl AG & Co. KG; Keisuke Ito; Gaku Naoe, HONDA R&D CO LTD; Tadao Okazaki, Kubota Corp.; Stephan Schmidt, Graz University of Technology; Tomoaki Yatsufusa

Chairperson - Sebastian Schurl, Graz University of Technology; Tomoaki Yatsufusa

Time	Paper No.	Title
10:00 a.m.	2023-01-1810	Experimental and Numerical Analysis of an Outward Opening Injector Pintle Dynamics Rodrigo Eguiluz, Luke Stover, Tommy Powell, Tiago Costa, Alexander Kopache, Peter Hartman, LiquidPiston Inc.; Joonsik Hwang, Mississippi State University; Alexander Shkolnik, LiquidPiston Inc.
10:30 a.m.	2023-01-1818	Measurement of Liquid Fuel Film Attached to the Wall in a Port Fueled SI Gasoline Engine Tatsuya Kuboyama, Tsukasa Yoshihashi, Yasuo Moriyoshi, Chiba University; Osamu Nakabeppu, Meiji University; Satoshi Takayama, Suzuki Motor Corp
11:00 a.m.	2023-01-1819	Effects of Throat Shape on Combustion Improvement in a Swirl-Chamber Diesel Engine with Electronically Controlled Multi Hole Injector Tsukasa Fujiwara, Kubota Corp.; Kosuke Suematsu, Tadao Okazaki, Yasushi Kobayashi, Kiichi Suehiro, Kubota Corp

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

Tuesday, October 31

Measurement and Simulation, Part 2

Session Code SETC12

Room Lakeshore Ballroom A Session 1:00 p.m.

Organizers - Kai W. Beck, Andreas Stihl AG & Co. KG; Keisuke Ito; Gaku Naoe, HONDA R&D CO LTD; Tadao Okazaki, Kubota Corp.; Stephan Schmidt, Graz University of Technology; Tomoaki Yatsufusa

Chairperson - Keisuke Ito, Suzuki Motor Corporation; Sebastian Schurl, Graz University of Technology

Time	Paper No.	Title
1:00 p.m.	2023-01-1814	Investigation of Multiple-Ion-Probe Measurement and Data Analysis Method for Flame Propagation in SI Engines Tomoaki Yatsufusa, Hiroshima Institute of technology
1:30 p.m.	2023-01-1815	Simulation of Temperatures of Three Way Catalytic Converter for Motorcycles at Higher Temperatures GENKI Shigeno, Shinji Fujita, toyoyuki yogo, Honda Motor Co. Ltd.

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Time	Paper No.	Title
2:00 p.m.	2023-01-1809	A PN-Measurement System for Small Engine Applications
		Sebastian Schurl, Martin Kupper, Helmut Krasa, Stephan Schmidt, Stefan Sturm, Andreas Heidinger, Graz University of Technology

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

Tuesday, October 31

Measurement and Simulation, Part 3

Session Code SETC12

Room Lakeshore Ballroom A Session 3:30 p.m.

Organizers - Kai W. Beck, Andreas Stihl AG & Co. KG; Keisuke Ito; Gaku Naoe, HONDA R&D CO LTD; Tadao Okazaki, Kubota Corp.; Stephan Schmidt, Graz University of Technology; Tomoaki Yatsufusa

Chairperson - Roland Kirchberger, Graz University of Technology; Gaku Naoe, HONDA R&D CO LTD

Time	Paper No.	Title
3:30 p.m.	2023-01-1816	Investigation of the Performance of Electric Bicycles in Interaction with Cyclists' Driving Behaviour in Driving Cycles on a Chassis Dynamometer
		Sven Helms, Yannick Rauch, Martin Bejarano, Maurice Kettner, Jochen Eckert, Karlsruhe University of Applied Sciences
4:00 p.m.	2023-01-1817	Research of Vehicle Behavior Classification of Off-Road Motorcycles Using Gradient Boosting
		Yuki Uto, Kawasaki Motors, Ltd.; Hisato Tokunaga, Taichi Inaba, Takayuki Higashi, Kawasaki Heavy Industries, Ltd.
4:30 p.m.	2023-01-1811	Development of Method for Improvement Motorcycle Frame Accuracy by Utilizing Weld Distortion Visualization Technology and Expert Knowledge and Thinking
		YOJI MATSUMOTO, STAMPING AND WELDING DEPT.; Hiroaki Kobayashi, DIGITAL ENGINEERING DEPT.

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

Tuesday, October 31

Renewable Energy and Alternative Fuels

Session Code SETC2

Room Lakeshore Ballroom B Session 10:00 a.m.

Organizers - Yuji Araki, Yamaha Motor Co., Ltd.; Toru Nakazono, Yanmar Agribusiness Co., Ltd.; Paul Richards; KENSUKE SUZUKI, Suzuki Motor Corporation

Chairperson - Georg Stefan Pflieger, University of Graz; KENSUKE SUZUKI, Suzuki Motor Corporation

Small Powertrains and Energy Systems Technology Conference

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Time	Paper No.	Title
10:00 a.m.	2023-01-1838	Impacts of eFuels on Solid and Gaseous Emissions of Powersport Two-Wheelers Guilherme Pellizzaro Batalha, Sebastian Schurl, Stephan Schmidt, Graz University of Technology; Marcus Bonifer, Heraeus Deutschland GmbH & Co KG
10:30 a.m.	2023-01-1839	Modeling of Diluted Combustion Characteristics of Gasoline Alternative Fuels Using Single Cylinder Engine Yasuo Moriyoshi, Chiba Univ.; Tatsuya Kuboyama, Chiba Univ; Zhiyuan Wang, Chiba Univ.
11:00 a.m.	2023-01-1840	Use of Detailed Hydrocarbon Emission Analysis to Identify Synergistic Effects in Renewable Gasoline Fuel Blends for Significant Reduction of Aromatic Hydrocarbon As Well As Total Hydrocarbon Emissions of a Small Gasoline-Powered ICE Georg Stefan Pflieger, Sigurd Schober, University of Graz
11:30 a.m.	2023-01-1841	MCH(metylcyclohexane) Blended Fuel for Diesel Engine Takuma Uehara, Junya Tanaka, Kogakuin University

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

Tuesday, October 31

Two-Stroke Engine

Session Code SETC14

Room Lakeshore Ballroom B

Session

1:00 p.m.

Organizers - Giovanni Ferrara, Univ. of Florence; Akira Iijima, Nihon University

Chairperson - Akira Iijima, Nihon University; Roland Kirchberger, Graz University of Technology

Time	Paper No.	Title
1:00 p.m.	2023-01-1823	Development of Supercharged Two-Stroke Engine with Intake and Exhaust Valve for Hybrid System Atsushi Hisano, Masahito Saitou, Yota Sakurai, Yoshimoto Matsuda, Kawasaki Heavy Industries, Ltd.; Satoaki ichi, Kawasaki Motors, Ltd.
1:30 p.m.	2023-01-1824	A Study of the Mechanism of High-Speed Knocking in a Two-Stroke SI Engine with High Compression Ratio Kuniyoshi Eto, Tatsuya Kuboyama, Yasuo Moriyoshi, Chiba Univ; Toshio Yamada, Sustainable Engine Research Center; Tomoaki Yatsufusa, Hiroshima Institute of Technology; Yusuke Suzuki, Yamabiko-Corp.
2:00 p.m.	2023-01-1825	On the Effects of Piston Pocket, Intake Port, and Transfer Duct Geometries in a Small Stratified-Scavenging Two-Stroke Engine Marco Ciampolini, Sandro Raspanti, Luca Romani, Giovanni Ferrara, Università degli Studi di Firenze; Santo Merolla, Vincenzo Gagliardi, EMAK Spa

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Time	Paper No.	Title
2:30 p.m.	2023-01-1826	The Flathead Valved Boosted Uniflow Two Stroke Engine
		Roberto Begnis Hausen, Mario Martins, Juliano silveira, Jean Lucca Fagundez PhD, Federal University of Santa Maria

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

Tuesday, October 31

Vehicle Dynamics and Safety

Session Code SETC15

Room Lakeshore Ballroom B Session 3:30 p.m.

Organizers - Justin David Magri, Robert Bosch LLC; Shingo UEDA, Honda Motor Co., Ltd.

Chairperson - Shingo UEDA, Honda Motor Co., Ltd.; Alexander Winkler, Univ. Of Applied Sciences Upper Austria

Time	Paper No.	Title
3:30 p.m.	2023-01-1827	Estimation of Motorcycle in-plane and out-of-plane Dynamics using a Nonlinear Robust Observer Concept
		Alexander Winkler, Univ. Of Applied Sciences Upper Austria; Gernot Grabmair, Univ Of Applied Sciences Upper Austria; Johann Reger, Technische Universität Ilmenau, Germany
4:00 p.m.	2023-01-1828	Reproducing the Motorcycle Equation of Motion with Lumped Stiffness on Multi-Body Dynamics Model
		Takashi Terayama, Shota Yamaguchi, Hiroshi Kitagawa, Noboru Yabe, Yamaha Motor Co Ltd

Tuesday, October 31

SETC Opening Session

Session Code SETCOP

Room Nicollet Ballroom Session 8:00 a.m.

Learn more about the Participants

Moderators - Kai W. Beck, Andreas Stihl AG & Co. KG

Panelists - Mike Chrzanowski, Yamaha Motor Corp. USA; Jeff Matthews, Polaris Inc.; Takashi Mitome, Suzuki Motor Corporation;

Small Powertrains and Energy Systems Technology Conference

Technical Session Schedule

As of November 06, 19:40:16 PM

Tuesday, October 31

Advanced Combustion, Part 1

Session Code SETC1

Room Nicollet Ballroom Session 10:00 a.m.

This session focuses on advanced combustion technologies in both 4-stroke and 2-stroke engines. The scope of topics includes studies of mixture formation, dilution effects, ignition, abnormal combustion, engine efficiency, flame propagation, and emissions formation. This session focuses on studies of auto ignition combustion including HCCI and other low temperature combustion regimes. Experimental and simulation studies pertaining to various means of controlling combustion are welcome.

Organizers - Akira Iijima, Nihon University; Tatsuya Kuboyama, Chiba Univ.; Simona Silvia Merola, CNR; Hideki Saito, Honda Motor Co., Ltd.

Chairperson - Luca Romani, Universita degli Studi di Firenze; Hideki Saito, Honda Motor Co., Ltd.

Time	Paper No.	Title
10:00 a.m.	2023-01-1805	Improvement of the EGR Dilution Tolerance in Gasoline Engines by the Use of a HSASI Pre-Chamber Spark Plug Sascha Holzberger, Maurice Kettner, University Of Applied Sciences Karlsruhe; Roland Kirchberger, Graz University of Technology
10:30 a.m.	2023-01-1800	Operation Range Extension of Homogeneous Charge Compression Ignited Small-Bore Off-Road Diesel Engine Using Acetone-Gasoline Blends Aneesh Vijay Kale, Anand Krishnasamy, Indian Institute of Technology - Madras
11:00 a.m.	2023-01-1801	Investigation of the Effect of Pre-Chamber Specifications on Pre-Chamber Jet Combustion Characteristics Using an Optically Accessible Engine Takaaki Chiba, Taisei UGAJIN, Kaito Shinozaki, Ryota Tahara, Ryo Sugiyama, Nihon University Graduate School; Akira Iijima, Nihon University
11:30 a.m.	2023-01-1802	Effects of Hydrocarbon with Different Ignition Properties and Hydrogen Blended Fuels on Autoignition and Combustion in an IC Engine Kenta Kuwabara, YUSUKE MANABE, Shinji Mito, REO YAMAGIWA, Nihon University Graduate School; Takahiro Yamaguchi, Shintaro Yoshihara, Sekai MIYAMOTO, Kawasaki Heavy Industries Ltd; Akira Iijima, Nihon University

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

Tuesday, October 31

Advanced Combustion, Part 2

Session Code SETC1

Room Nicollet Ballroom Session 1:00 p.m.

This session focuses on advanced combustion technologies in both 4-stroke and 2-stroke engines. The scope of topics includes studies of mixture formation, dilution effects, ignition, abnormal combustion, engine efficiency, flame propagation, and emissions formation. This session focuses on studies of auto ignition combustion including HCCI and other low temperature combustion regimes. Experimental and simulation studies pertaining to various means of controlling combustion are welcome.

Organizers - Akira Iijima, Nihon University; Tatsuya Kuboyama, Chiba Univ.; Simona Silvia Merola, CNR; Hideki Saito, Honda Motor Co., Ltd.

Chairperson - Guilherme Pellizzaro Batalha, Graz University of Technology; Tatsuya Kuboyama, Chiba Univ.

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Time	Paper No.	Title
1:00 p.m.	2023-01-1804	Numerical Analysis on the Characteristics of the Pressure Wave Generation Initiated by the Onset of the Auto-Ignition in the End-Gas Kenji YOSHIDA, Hiroshima Institute of Technology
1:30 p.m.	2023-01-1803	Study on Knocking Intensity and Autoignitive Propagation Velocity with the Same Methane Number Mixtures of Methane/Ethane and Methane/ n -Butane Masanori Saito, Ryo Kato, Yuma Komatsu, Keigo Takagi, Masaki Otani, Mitsuaki Tanabe, Nihon University

Tuesday, October 31

NVH Technology

Session Code SETC13

Room Nicollet Ballroom Session 2:00 p.m.

Organizers - Thomas Lago; Keisuke Namekawa, KEISUKE NAMEKAWA; Gaku Naoe, HONDA R&D CO LTD; Shenger Ying, Harley Davidson

Chairperson - Kai W. Beck, Andreas Stihl AG & Co. KG; Koji Yoshida, Nihon University

Time	Paper No.	Title
2:00 p.m.	2023-01-1821	Validate the Sound Quality Index and Discuss of Enhancing the Sound Quality About 183 to 257 kW Class Outboard Engines Gaku Naoe, Hideta Muramatsu, Minako Niinaka, Yasukata Kohashi, Takashi Kondo, HONDA R&D CO LTD

Tuesday, October 31

Diesel Engine

Session Code SETC4

Room Nicollet Ballroom Session 3:30 p.m.

Organizers - Paul Litke, USAF; Tadao Okazaki, Kubota Corp.; Tomoaki Yatsufusa; Koji Yoshida, Nihon University

Chairperson - Kai W. Beck, Andreas Stihl AG & Co. KG

Assistant Chairpersons - Tadao Okazaki, Kubota Corp.

Time	Paper No.	Title
3:30 p.m.	2023-01-1844	Development of the Electrically Controlled Off-Road Small Diesel Engine below 19kW Kensuke Fujita, Hiroaki Mochizuki, Yasushi Kobayashi, Takashi Onishi, Kubota Corporation

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Time	Paper No.	Title
4:00 p.m.	2023-01-1843	Experimental Study on Diesel Spray Combustion and Wall Heat Transfer with Multiple Fuel Injection Strategies - Results of Rapid Compression and Expansion Machine Experiment Herry Sufyan HADI, Hiroshima University; Chengyuan FAN, Haier Water Heater Co., Ltd; Atsushi Takayama, Hiroshima University; Keiya Nishida, Univ of Hiroshima; Youichi Ogata, Hiroshima Univ; Rizal Mahmud, Meiji University
4:30 p.m.	2023-01-1845	Turbo Compounding of a Naturally Aspirated Single Cylinder Diesel Engine – A Simulation and Experimental Study J Ramkumar, MRV, Mahindra & Mahindra & IIT Madras; Anand Krishnasamy, A Ramesh, IIT Madras

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

Wednesday, November 1

Materials and Manufacturing

Session Code SETC11

Room Lakeshore Ballroom A

Session 8:00 a.m.

Organizers - Teresa Castiglione, University Of Calabria; Hirotaka Kurita, Yamaha Motor Co., Ltd.; Michihisa Nakagawa, Kawasaki Motors, Ltd.

Chairperson - Roland Kirchberger, Graz University of Technology; Hirotaka Kurita, Yamaha Motor Co., Ltd.

Time	Paper No.	Title
8:00 a.m.	2023-01-1807	Development of Lightweight Oil Catch Tank Produced by Laser Powder Bed Fusion Keita Watanabe, Hirotaka Kurita, Shinya Iwasaki, Riku Mitsui, Yamaha Motor Co., Ltd.; Takashi Nagao, Tsuguharu Tashiro, Nippon Light Metal Company, Ltd; Makoto Ichimura, Yoshiaki Kano, Matsuura Machinery Corporation; Jun Kusui, Toyo Aluminium K.K.
8:30 a.m.	2023-01-1806	Effect of Impurity Elements in Recycled Ingots on Seizure Properties of Die-Cast Cylinders made of Hypereutectic Al-Si Alloy Atsushi Owada, Yamaha Motor Co., Ltd.; Takaharu Suzuki, Yamaha Motor Co Ltd
9:00 a.m.	2023-01-1808	Development of a Lightweight One-Piece Aluminum Casting Swingarms Kodai Yamamoto, Takafumi Ito, Kentaro Watanabe, Shohei Hosokawa, Kazuya Nagasaka, Kawasaki Heavy Industries, Ltd.; Yudai Endo, Masuda Yoshihiro, Yusuke Imamura, Fujio Maeda, Kawasaki Motors, Ltd.

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

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Wednesday, November 1

Emission and Environmental Impact

Session Code SETC5

Room Lakeshore Ballroom A Session 10:00 a.m.

Organizers - Tadao Okazaki, Kubota Corp.; Leonid Tartakovsky, Technion Israel Inst. of Technology

Chairperson - Tadao Okazaki, Kubota Corp.; Georg Stefan Pflieger, University of Graz

Time	Paper No.	Title
10:00 a.m.	2023-01-1846	Exhaust Aftertreatment Technologies for PN Reduction of Motorcycles Sebastian Schurl, Graz University of Technology; Marcus Bonifer, Heraeus Catalysts; Stephan Schmidt, Niko Bretterklieber, Graz University of Technology; Pragati Joshi, Heraeus Deutschland GmbH & Co KG
10:30 a.m.	2023-01-1848	Potential for Particulate Reduction by Use of eFuels in MPFI Engines Sebastian Schurl, Guilherme Batalha, Martin Kupper, Stephan Schmidt, Helmut Krasa, Graz University of Technology

Wednesday, November 1

Data-driven Digitization for Small Powertrain and Energy

Session Code SETC19

Room Lakeshore Ballroom A Session 1:00 p.m.

Organizers - Bernhard Claus Geiger, Know-Center GmbH; Shigeo Sakoda, Yamaha Motor Co., Ltd.; Stephan Schmidt, Graz University of Technology

Chairperson - Luca Romani, Universita degli Studi di Firenze; Shigeo Sakoda, Yamaha Motor Co., Ltd.

Time	Paper No.	Title
1:00 p.m.	2023-01-1837	Virtual Sensors in Small Engines – Previous Successes and Promising Future Use Cases Andreas Benjamin Ofner, Know-Center GmbH; Jonas Sjoblom, Chalmers Univ of Technology; Stefan Posch, LEC GmbH; Markus Neumayer, Graz University of Technology; Bernhard Geiger, Know-Center GmbH; Stephan Schmidt, Graz University of Technology
1:30 p.m.	2023-01-1836	Improving Reliability of 2 Wheelers Using Predictive Diagnostics Srikanth Vijaykumar, Bosch Limited; Abhijith Sabu, Bosch India Limited; DEBAYAN PRADHAN, Bosch; Yash Shrivardhankar, Robert Bosch Engrg & Bus Solutions Ltd

Small Powertrains and Energy Systems Technology Conference

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As of November 06, 19:40:17 PM

Wednesday, November 1

Engine Technology

Session Code SETC8

Room Lakeshore Ballroom B Session 8:00 a.m.

Organizers - Keisuke Ito; Arun Ravindran, Cummins Inc.; KENSUKE SUZUKI, Suzuki Motor Corporation; Masahito Saitou, Kawasaki Heavy Industries, Ltd.; Shogo Tadakuma, Satoshi Takayama, Suzuki Motor Corp.

Chairperson - Shogo Tadakuma, Suzuki Motor Corp.; Senthilkumar Venkatesan, Cummins

Time	Paper No.	Title
8:00 a.m.	2023-01-1851	Change of Relative Local Velocity in Pulley Groove at Sliding between Belt and Pulleys for Metal Pushing V-Belt Type CVT Taku Kamiya, Kiyotaka Obunai PhD, Kazuya Okubo, Doshisha University
8:30 a.m.	2023-01-1850	Development of Direct Injection Technology for Motorcycle Gasoline Engine Masahito Saitou, Atsushi Hisano, Yota Sakurai, Yoshimoto Matsuda, Kawasaki Heavy Industries, Ltd.; Satoaki ichi, Kawasaki Motors, Ltd.

Wednesday, November 1

Powertrain Controls

Session Code SETC7

Room Lakeshore Ballroom B Session 9:00 a.m.

Organizers - Mikael Bergman, Orbital Australia Pty, Ltd.; Shigeo Sakoda, Yamaha Motor Co., Ltd.

Chairperson - Shogo Tadakuma, Suzuki Motor Corp.; Senthilkumar Venkatesan, Cummins

Time	Paper No.	Title
9:00 a.m.	2023-01-1849	CCBS- Continuous Control of Binary Oxygen Sensor, Enhancing Control and Efficiency Srikanth Vijaykumar, Bosch Limited; Andrew Karpin

Wednesday, November 1

Hybrid and Electric Drives

Session Code SETC9

Room Lakeshore Ballroom B Session 10:00 a.m.

Organizers - Kai W. Beck, Andreas Stihl AG & Co. KG; Yasuyuki Muramatsu, Yamaha Motor Co., Ltd.

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Chairperson - Kai W. Beck, Andreas Stihl AG & Co. KG; Yasuyuki Muramatsu, Yamaha Motor Co., Ltd.

Time	Paper No.	Title
10:00 a.m.	2023-01-1853	Hybrid Electric Two-Wheeled Vehicle Fitted with an EVT System (Electrical Variable Transmission System) Hideki Furuta, Jun Yoshida, Yamaha Motor Co., Ltd.
10:30 a.m.	2023-01-1852	Conversion of a Three-Wheeler Into an Electric Vehicle for In-Campus Transportation Senthilnathan Subbiah, Sivanesa Selvam THANGARAJAN, Siddapura Nagaraju Prashanth, V. Pattabiraman, Saravanan JAGANATHAN, TVS Motor Company Limited
11:00 a.m.	2023-01-1854	Hybrid-MC as a Solution in the Transit Stage for the Carbon Neutral Society Yoshimoto Matsuda, KHI and Kawasaki Motors, Ltd.

The papers in this session are available in SAE Technical Paper Collection, COLL-TP-00723, and also

Wednesday, November 1

New Product Technology, Part 1

Session Code SETC18

Room Nicollet Ballroom Session 8:00 a.m.

Organizers - Yuji Araki, Yamaha Motor Co., Ltd.; Maurizio Marcacci, EDI Progetti & Sviluppo; Michihisa Nakagawa, Kawasaki Motors, Ltd.; Hiroya Ueda, Honda Motor Co., Ltd.

Chairperson - Yuji Araki, Yamaha Motor Co., Ltd.; Stephan Schmidt, Graz University of Technology

Time	Paper No.	Title
8:00 a.m.	2023-01-1832	Engine and Electronic Control Development For the New GSX-8S and V-STROM800DE ORAL ONLY Yuma Uenaka, Suzuki Motor Corp
8:30 a.m.	2023-01-1831	Alternative small powertrains for forestry, agriculture, landscaping and construction – STIHL's innovative and sustainable products in a changing global environment Kai W. Beck, Robert Olma, Armin Kölmel, Rene Schwerin PhD, Jens Melder PhD, Andreas Stihl AG & Co. KG
9:00 a.m.	ORAL ONLY	The Changing Roles of (Precious Metal) Catalysts with Advancing Decarbonization Christian Breuer, Heraeus Deutschland GmbH & Co KG; Marcus Bonifer, Heraeus Deutschland GmbH & Co. KG

Small Powertrains and Energy Systems Technology Conference

Technical Session Schedule

As of November 06, 19:40:17 PM

Wednesday, November 1

New Product Technology, Part 2

Session Code SETC18

Room Nicollet Ballroom Session 10:00 a.m.

Organizers - Yuji Araki, Yamaha Motor Co., Ltd.; Maurizio Marcacci, EDI Progetti & Sviluppo; Michihisa Nakagawa, Kawasaki Motors, Ltd.; Hiroya Ueda, Honda Motor Co., Ltd.

Chairperson - Stephan Schmidt, Graz University of Technology; Hiroya Ueda, Honda Motor Co., Ltd.

Time	Paper No.	Title
10:00 a.m.	ORAL ONLY	Ru as Alternative for Rh in TWC for Gasoline Engines Marcus Bonifer, Heraeus Catalysts
10:30 a.m.	2023-01-1830 ORAL ONLY	Development of 2024 Model ROV YXZ1000R SS Takashi Isoda, YAMAHA MOTOR COLTD
11:00 a.m.	2023-01-1834	Development of Integrated Electro-Hydraulic SBW Yuhei Suzuki, Yamaha Motor Co., Ltd.
11:30 a.m.	ORAL ONLY	Advanced Hybrid Motorcycle Powertrain Wolfgang Schoeffmann, AVL LIST GmbH; Gernot Fuckar, Christian Hubmann, AVL GmbH Graz

Wednesday, November 1

New Product Technology, Part 3

Session Code SETC18

Room Nicollet Ballroom Session 1:00 p.m.

Organizers - Yuji Araki, Yamaha Motor Co., Ltd.; Maurizio Marcacci, EDI Progetti & Sviluppo; Michihisa Nakagawa, Kawasaki Motors, Ltd.; Hiroya Ueda, Honda Motor Co., Ltd.

Chairperson - Michihisa Nakagawa, Kawasaki Motors, Ltd.; Stephan Schmidt, Graz University of Technology

Time	Paper No.	Title
1:00 p.m.	2023-01-1833 ORAL ONLY	Concurrent development of new middle size motorcycle for "Road Sports" and "Adventure Sports" segment Hiroki Mori, Yoshinobu Ozaki, RYO HATAE, Honda Motor Co Ltd

Small Powertrains and Energy Systems Technology Conference

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Time	Paper No.	Title
1:30 p.m.	2023-01-1829	Development of the 2024 Model "Eliminator" Takeshi Kashihara, Kawasaki Motors, Ltd.
2:00 p.m.	2023-01-1835	Introduction of Automatic Factory Vehicle "FG-01" with the 3D-Map Based Autonomous Driving System Minoru Iida, Yamaha Motor Co., Ltd.

Wednesday, November 1

Research Forum Panel: Innovating Small Powertrains for the Challenges of the Changing Global Environment

Session Code SETCP1

Room Nicollet Ballroom Session 3:00 p.m.

Innovation means more than transferring technologies from the automotive application to the small powertrain applications. Different boundary conditions, production technologies, product time lines and development resources as well customer demands need novel approaches and ideas. In this panel we will discuss about possible future energy sources and energy paths for small powertrain applications, if and how the changing global environment will lead to a more global development approach, what future CO2 regulations mean for small powertrains and if the future will bring more technology diversification or more reduction of powertrain propulsion variety? Learn more about the Participants

Moderators - Stephan Schmidt, Graz University of Technology

Panelists - Roland Kirchberger, Graz University of Technology; Yasuo Moriyoshi, Chiba Univ.; Keiya Nishida, Univ. of Hiroshima; Senthilkumar Venkatesan, Cummins;

Thursday, November 2

Panel Discussion: Electric Energy Storage for Small Powertrain Applications

Session Code SETCP2

Room Nicollet Ballroom Session 8:00 a.m.

Being the major energy source for the electric powertrains, the battery is of greatest interest from the research and application as well as production point of view. In this panel we will discuss on battery technologies for small powertrain applications starting from boundary conditions and demands over technologies to topics like education and training of involved engineers and workshop staff. Learn more about the Participants

Moderators - Kai W. Beck, Andreas Stihl AG & Co. KG

Panelists - Bob Clatterbuck, National Transportation Safety Board; Brian Engle, Amphenol; JUNICHI INAMI, YAMAHA MOTOR; Judith Jeevarajan, UI Research Institutes;

Thursday, November 2

Panel Discussion: Transition to Electric Propulsion for Small Engine Applications

Session Code SETCP3

Room Nicollet Ballroom Session 10:00 a.m.

In the discussion about the transition of propulsion technologies for small engine applications to electric there are several unresolved issues: are there any limits like power or energy storage for this transition? Does the transition (speed) depend on the application and are there synergies between applications which can be used? How different is the small engine application world from the automotive one? Can we guess about a timeline and what are the major bottlenecks for the transition? Amongst others these are the major topics to be discussed in this panel. Learn more about the Participants

Small Powertrains and Energy Systems Technology Conference

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As of November 06, 19:40:17 PM

Moderators - Kelly Schmitz, Cummins Inc.

Panelists - Brian D. Krosschell, Polaris Inc.; Wolfgang Schoeffmann, AVL LIST GmbH; Anna Stefanopoulou, University of Michigan; Stephen Teng, Automotive Research & Testing Center;