The 30th Internal Combustion Engine Symposium, December 10-12, 2019, Hiroshima, Japan

Technical Session Program Matrix

Dec.10(Tue)

*Presented in English

	Room A (Cosmos)	Room B("Lan"(Orchid))	Room C (Conference room1・2)	Room D (Conference Room 5・6)
10:00	**Opening Ceremony 【Room A(Cosmos)】**			
10:10	Coffee Break (10:10-10:20)			
	SI 1 Chairperson: Kenji Yoshida (Hiroshima Institute of Technology)	**Diesel Spray 1** Chairperson: Michihiko Tabata (Kindai Univ.)	**Lubricants 1** Chairperson: Yuji Mihara (Tokyo City Univ.)	**Gas Turbine and Novel Powertrain** Chairperson: Tomoaki Yatsufusa (Hiroshima Institute of Technology)
10:20	1 Improvement of Lean limit in the DI gasoline engine (1st report) -Effect of flow and ignition reinforcement on Lean limit- Shogo Namba (Hitachi, Ltd.)	10 Nozzle Hole-Spacing Effect on Diesel Spray Dynamics in Near-Nozzle Field Huang Weidi (National Institute of Advanced Industrial Science and	19 Engine Boundary Lubrication Modeling using Molecular Dynamics Method Kentaro Kawaguchi (Mazda Motor Corporation)	28 Water-ethanol mixture injection in a micro gas turbine Haruki Ota (Kanazawa Institute of Technology)
10:45	2 Improvement of Lean limit in the DI gasoline engine (2nd report)- Effect of multiple injection and High fuel pressure on Lean limit- Ryo Kusakabe (Hitachi, Ltd.)	11 Comparison of Nozzle Internal Flow and Spray Characteristics of Multi-hole and Single-hole Diesel Injectors Jin Yu (Hiroshima Univ.)	20 A Study of Mechanism of Effect of Piston Pattern Coating on Friction Yusuke Nagano (Tokyo City Univ.)	29 Effects of Chevron nozzles on the performance and jet noise of a small turbojet engine Yumiko Yasaki (Kanazawa Institute of Technology)
11:10	3 Mixture formation technology by retarded injection with ultra-high pressure for knock prevention Kenji Aoyagi (Denso Corporation)	12 Development of a Simple Model Unsteady Injection Prediction of Diesel Fuel Ryotaro Ebara (Tottori Univ.)	21 Study on oil transport around piston ring based on gas-liquid two-phase flow simulation Yuki Kawamoto (Tokai Univ.)	30 Combustion Experiments of High-thermal Efficiency Engine with Octagonal Colliding Pulsed Supermulti-jets and Double Piston Unit Nozomu Kikuchi (Waseda Univ.)
11:35	4 Control of Compression Ignition Using High Pressure Multiple Gasoline Injection Naoy Ito (Mazda Motor Corporation)	13 Prediction method of Spray Angle Considering Flow Characteristics in Diesel Nozzle Akitoshi Fujita (Toyota Central R&D Labs., Inc.)	22 Investigation of Oil Transport Around a Piston Ring Based on Multiphase Flow Simulation Yuiki Kuramoto (Tokai Univ.)	31 The Double Compression Expansion Engine towards 60% fuel efficiency Bengt Johansson (King Abdullah University of Science and Technology)
12:00	Lunch Break (12:00-13:00)			
	Knock and Autoiginition Chairperson: Daisuke Shimokuri (Hiroshima Univ.)	**CI 1** Chairperson: Jun Hashimoto (Oita Univ.)	**Engine Control** Chairperson: Masataka Yamakawa (Mazda Motor Corporation)	**Gas Engine 1** Chairperson: Kiyoshi Kawasaki (The Univ. of Shiga Prefecture)
13:00	5 The Effect of ignition characteristics of fuels on the knock under super lean burn condition Masaki Naruke (Ibaraki Univ.)	14 Ignition Delay Dependence on Operating Conditions in Diesel Engines Taisuke Yamazaki (Hokkaido Univ.)	23 Correction and Estimation Method for Turbocharger's Compressor Map Takuro Mita (Isuzu Advanced Engineering Center, Ltd.)	32 Effect of Injection Characteristics on Improving Thermal Efficiency and NOx Formation in Direct Injection Hydrogen Engine Keisuke Goma (Tokyo City Univ.)
13:25	6 *There is no Englsih title. The purpose of this study is to clarify the relationship between the end gas auto-ignition phenomenon and the pressure wave intensity Hiroaki Naka (Hiroshima Institute of Technology)	15 The effect of close after injection on performance and emissions of a Diesel engine Ryo Kishigami (Kyoto Univ.)	24 Basic Study on Engine Cycle Simulation Model Using Modelica Language (2nd Report) - Appropriateness Validation of Calculation Results and Application Method to Vehicle Simulation Model - Norifumi Mizushima (National Institute of Advanced Industrial Science	33 Research of Argon closed cycle Hydrogen engine (First Report) -A small engine system feasible for renewable energy network- Daisaku Sawada (Tokai Univ.)
13:50	7 Study on Mechanism Producing Pressure Oscillations by Analyzing Growth Process of Autoignition Iijima Akira (Nihon Univ.)	16 Study on Fuel Efficiency Improvement Mechanism of Small-Scale Diesel Engine by Fine Bubble A-heavy Oil Tatsuji Kudo (National Institute of Technology, Kurume College)	25 Developing an NVO control-oriented model of HCCI engine in intake / exhaust process Yuya Muto (The Univ. of Tokyo)	34 Research of Argon Closed-cycle Hydrogen Engine (Second Report) - Influence of Working Gas Characteristics, Compression Ratio, Expansion Ratio and Explosion Degree on Thermal Efficiency - Motoaki Ono (Tokai Univ.)
14:15	8 Visualization of end gas auto-ignition in dual fuel gas engine Masaki Tsuda (Okayama Univ.)	17 Effect of EGR Rate and Common Rail Pressure by Gas Mixture Fuel Satoru Tatemichi (Kurume Institute of Technology)	26 Construction of Combustion Control Model for Dual Fuel Engine Hiroaki Ichihashi (The Univ. of Tokyo)	35 Reserch of Argon Closed cycle Hydrogen Engine (Third Report) —Characteristics of residual combustion product water on thermal efficiency— Yuki Yanagawa (Tokai Univ.)
14:40	9 Numerical simulation of auto-ignition of natural gas in the end gas region Eigo Kawanishi (Okayama Univ.)	18 The influence of bleed air from compressor outlet on turbojet engine performance Ryotaro Ito (Kanazawa Institute of Technology)	27 Development of Particulate Matter Emission Amount Estimation Model for Engine Control Ryutaro Koiwai (Hitachi, Ltd.)	36 Study of Combustion Characteristic and Optimum Cycle on an Argon Cycle Hydrogen Premixed Engine Mihiro Kobayashi (Tokai Univ.)
15:05	Coffee Break (15:05-15:20)			
15:20	**Forum I 【Room A(Cosmos)】** Moderator : Prof. Akira Miyoshi(Hiroshma Univ.) 「Next-generation mobility technology and power source」			
17:20				