Program of the 26th ILASS-Japan Symposium

Venue
National Institute of Advanced Industrial Science and Technology (AIST), Tokyo Waterfront
http://www.aist.go.jp/waterfront/en/access/ : English cite
http://www.aist.go.jp/waterfront/ja/access/ : Japanese cite

Invited Lecture
December 19 (Tuesday) 14:25～15:25 Room A
[Chair : Nobuyuki KAWAHARA (Okayama Univ.)]
「Evaporation and Combustion Characteristics of a Droplet in Rapid Compression Machine」
Prof. Hyemin Kim (Korea National University of Transportation)

Special Lecture
December 19 (Tuesday) 15:35～16:35 Room A
[Chair : Norihiko IKI (AIST)]
「(Tentative title) Practical Application and Challenge of Metal Additive Manufacturing (Metal 3D Printing)」
−Relation between Additive Manufacturing and Liquid Atomization−
Shizuka NAKANO (AIST)

Organized Session and Organizers
Recent Measurement Technique
Yoshio ZAMA (Gunma Univ.)
Seoksu MOON (AIST)

Banquet
December 19 (Tuesday) 18:00 ～ 19:30
Venue : Time 24 Building 11F Sky Restaurant SEAGULL
(http://www.bigsight.jp/facilities/time/shop/restaurant02/)
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<tr>
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<td>9:00—</td>
<td>Registration</td>
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<td>10:00—10:10</td>
<td>Opening Ceremony (Room A)</td>
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<td>10:10—11:50</td>
<td>A11: Recent Measurement Technique (OS)</td>
<td>B11: Wall Impingement (GS)</td>
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<td>11:50—13:00</td>
<td>Lunch</td>
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<td>13:00—14:15</td>
<td>A12: Combustion (GS)</td>
<td>B12: Atomization Mechanism (GS)</td>
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<td>14:15—14:25</td>
<td>Break</td>
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<td>Invited Lecture (Room A)</td>
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<td>15:25—15:35</td>
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<tr>
<td>15:35—16:35</td>
<td>Special Lecture (Room A) (Tentative title)</td>
<td>Practical Application and Challenge of Metal Additive Manufacturing (Metal 3D Printing)</td>
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<td>16:35—16:45</td>
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<td>16:45—17:35</td>
<td>ILASS-Japan General Assembly Meeting (Room A)</td>
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<td>18:00—19:30</td>
<td>Banquet</td>
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**December 20 (Wednesday)**

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<tr>
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<td>10:45—10:55</td>
<td>Break</td>
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<td>12:10—13:20</td>
<td>Lunch</td>
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<td>13:20—15:00</td>
<td>A23: Diesel Spray (GS)</td>
<td>B23: Spray Characteristics (GS)</td>
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<td>15:10—15:30</td>
<td>Award Ceremony of Best Presentation (Room A)</td>
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Program of Technical Sessions

December 19 (Tuesday)

A11: Recent Measurement Technique (OS) 10:10–11:50 Room A

[A-111] PDA Measurement near the Nozzle Exit of the Injector in a DISI Engine
*Bunta MORI (Okayama Univ.), Nobuyuki KAWAHARA, Eiji TOMITA

*Yoshiaki OKUBO (Osaka Univ.), Noriaki NAKATSUKA, Jun HAYASHI, Fumiteru AKAMATSU, Yasue TANAKA (KANOMAX, Inc.), Tomohiro HORIZ

[A-113] Effect of Ambient Gas Pressure on Characteristics of a Fuel Spray Ejected from DI Injector
*Shota SUGIYA (Gunma Univ.), Yoshio Zama, Tomohiko FURUHATA

[A-114] X-Ray High Speed Visualization and Measurement of Cavitation Flow in a Nozzle under Transient Injection Condition
*Kazuya KOTANI (Kobe Univ.), Rubby PRASETYA, Takashi MIWA, Akira SOU, Seoksu MOON (AIST), Raditya Hendra

A12: Combustion (GS) 13:00–14:15 Room A

[A-121] Bi-Propellant Thruster Performance Modeling with Film Cooling Fuel
*Chihiro INOUE (The Univ. of Tokyo), Go FUJII (JAXA), Yu Daimon

[A-122] Effect of Temporally-Splitting High-Pressure Injection on Diesel Spray Mixture Formation and Combustion in 2-D Piston Cavity
*Shintaro YASAKI (Hiroshima Univ.), Tomoya SHIWAKU, Kang YANG, Keiya NISHIDA, Yoichi OGATA

[A-123] The Effect of Spray Characteristics on Ignitability of Laser Induced Breakdown Ignition in Fuel Spray
*Hiromichi TATEISHI (Yamaguchi Univ.), Takehiko SEO, Masato MIKAMI

B11: Wall Impingement (GS) 10:10–11:50 Room B

[B-111] Experimental Investigation of Collision Behavior of High-Speed Microdroplets onto a Dry Surface
Naoya YAMANE (Tottori Univ.), Keisuke YAMAMOTO (Mazda Motor Corp.), *Tetsuya ODA (Tottori Univ.), Hideaki YOKOHATA, Katsuyuki OHSAWA
[B-112] An Experimental Study on Characteristics of Spray-wall Impingement under Cross-Flow Condition
*Zhanbo Si (Hiroshima Univ.), Nagisa SHIMASAKI, Yuji ASHIDA, Keiya NISHIDA, Youichi OGATA, Chenglong TANG (Xi’an Jiaotong Univ.)

*Kengo JINNAI (Tokyo Denki Univ.), Yoshihiro KOBAYASHI, Masataka ARAI

[B-114] Wall Impingement Behavior and Liquid Film Formation of Gasoline Spray under High-Temperature and High-Pressure Ambient Conditions
*Shintaro UCHITOMI (Hiroshima Univ.), Hongliang LUO, Keiya NISHIDA, Youichi OGATA, Wu ZHANG (Mazda Motor Corp.), Tatsuya FUJIKAWA, Ryosuke HARA

B12: Atomization Mechanism (GS) 13:00–14:15 Room B

[B-121] Effect of Liquid Film Breakup Formation on Spray Characteristic in Prefilming Airblast Atomizer
*Toshihiro SAKAKI (Hiroasaki Univ.), Naoki KATAGATA, Takahiro OKABE, Takao INAMURA, Minori SHIROTA

[B-122] Experimental Study of Upwash Generated by Splash Plate Atomization
*Miku KOBAYASHI (Hiroasaki Univ.), Takahiro OKABE, Takao INAMURA, Satoshi HIMORI

B-123) Determination of Surface Physical Properties of a Soap Film using Thermo-Capillary Effect
*Tatsuro WAKIMOTO (Osaka City Univ.), Nozomu TANAKA, Yoshimi HASHIGUCHI, Kenji KATOH

December 20 (Wednesday)

A21: Numerical Simulation I (GS) 9:30–10:45 Room A

[A-211] Development of a Hybrid Spray LES Code Based on a Novel Turbulent Atomization Model
*Junji SHINJO (Shimane Univ.), Akira UMEMURA (Nagoya Industrial Science Research Institute)

[A-212] Numerical Simulation of Liquid Fuel Atomization in a Cross-flow Involved with Wall Impingement
*Taisuke NAMBU (JAXA), Yasuhiro MIZOBUCHI
Development of Internal Mixing Multi Exit Port Twin Fluid Atomizer for Heavy Oil Fired Boilers (2nd Report : Twin Fluid Internal Mixing Analysis and Spray Fluctuations)
*Kazuaki HASHIGUCHI (Mitsubishi Heavy Industries, Ltd), Fumiya YAMANE, Hiroshi FUJII (Mitsubishi Hitachi Power Systems, Ltd), Kazunori SATOU, Keiya NISHIDA (Hiroshima Univ)

A22: Numerical Simulation II (GS) 10:55-12:10 Room A

Hybrid Numerical Simulation of Turbulent Cavitation Flow in a Nozzle and Liquid Jet
*Masaki YAMAMOTO (Kobe Univ.), Kensho WASHIMI, Akira SOU, Yoshitaka WADA (MAZDA Motor Corp.), Yoshiharu UEKI, Hideaki YOKOHATA

Numerical Simulation of Cavitating Flow Considering Compressibility of Both Gas-Phase and Liquid-Phase under High Pressure Conditions
*Akitoshi FUJITA (Toyota Central R&D Labs., Inc.), Kiyomi KAWAMURA, Norikazu KATSUMI, Makoto NAGAOKA

Effect of Off-axis Valve Motion on Spray Shape of Fuel Injector
*Kazuki YOSHIMURA (Hitachi, Ltd.), Tomoyuki HOSAKA, Yoshihito YASYKAWA, Eiji ISHIKAWA, Kiyotaka OGURA (Hitachi Automotive Systems, Ltd.)

A23: Diesel Spray (GS) 13:20-15:00 Room A

Spray Penetration Prediction Method of Diesel Injector Nozzle
*Yuta HASHIMOTO (SOKEN, Inc.), Kazufumi SERIZAWA (DENSO Corp.)

Study of Spray Dispersion near Diesel Nozzle Orifice by L2F
*Shinichiro Seki (Nagasaki Univ.), Manabu Saito (IRS Corp.), Keisuke Komada (Nagasaki Univ.), Daisaku SAKAGUCHI, Hironobu UEKI

A Study on Entrainment Characteristics in Diesel Spray (Fourth report) (Effects of Nozzle Hole Diameter on Spray Characteristics)
*Kohsuke NISHIURA (Doshisha Univ.), Naoto TERASHI, Eriko MATSUMURA, Jiro SENDA

Flow Analysis on a Diesel Spray Impinging on a Circular Cylinder
*Wataru YATABE (Gunma Univ.), Yoshio ZAMA, Tomohiko FURUHATA

B21: Material Production (GS) 9:30-10:45 Room B

Fabrication and Evaluation of Nitrogen Doped Titanium Oxide Hollow Particles by Reaction Crystallization in Droplets
*Kotaro OSHIMA (Doshisha Univ.), Mikio YOSHIDA, Atsuko SHIMOSAKA, Yoshiyuki SHIRAKAWA

Synthesis and Evaluation of Hydrotalcite Using Instillation Process of Simulated Bittern
*Shinya MASAKI (Doshisya Univ.), Mikio YOSHIDA, Atsuko SHIMOSAKA, Yoshiyuki SHIRAKAWA
Fabrication of Cathode of Solid Oxide Fuel Cell by Electrostatic Spray Deposition and Power Generation Performance Test
Ryoya SHIMIZU (Nihon univ.), Shinya SHIMIZU, Hiroshi NOMURA, Yusuke SUGIYAMA

B22: Secondary Atomization (GS) 10:55-12:10 Room B

Flash Boiling Effect with Ethane Mixed Fuel for Improvement of Premixed Diesel Combustion Performance
*Shinnosuke Hirako (Kanazawa Institute of Tech.), Kaname Naganuma, Yoshimitsu Kobashi (Hokkaido Univ.)

Occurrences of Secondary Atomization during Combustion Processes of a FAME/Alcohol Mixture Droplet
*Chiaki KATO (Nihon Univ), Osamu IMAMURA, Kazuhiro AKIHAMA, Hiroshi YAMASAKI

Observation of Secondary Atomization Phenomena in Electrostatic Atomization of BDF/Water Emulsion
*Chien-hua FU (Nihon Univ), Osamu IMAMURA, Kazuhiro AKIHAMA, Hiroshi YAMASAKI

B23: Spray Characteristics (GS) 13:20-14:35 Room B

Formation of High Dispersion Spray by Twisted Triangular Hole Nozzle
*Kiyomi KAWAMURA (Toyota Central R&D Labs., Inc.), Ryo MASUDA, Reiko UEDA, Yoshinori IDOTA, Makoto NAGAOKA

Effect of the Swirling Air Flow on Atomization Characteristics with Swirl Injector at Sub-Atmospheric Pressure
*Shuai HUANG (Yamagusci Univ.), Takehiko SEO, Masato MIKAMI

Influence of Nozzle Arrangement on Flow Rate and Droplet Diameter in Electrostatic Atomization
*Tomoro YAJIMA (Gunma Univ.), Akito ONOZATO, Juan C. GONZALEZ PALENCIA, Mikiya ARAKI, Seiichi SHIGA