

**November 1st** Meeting Room 304 (3rd Floor)

17:30 Registration  
 18:00  
 | Welcome reception  
 19:30

**November 2nd**

|       | HALL 300                                  | A   | B                                 | C   | D  |
|-------|---|---|-----------------------------------|---|--|
| 8:30  | Registration                              | /   | /                                 | /   | Exhibition                                   |
| 10:00 | Opening Ceremony                          |   |                                   |   |  |
| 10:30 | Keynote Lecture 1<br>Prof. Keh-Chin Chang |   |                                   |   |  |
| 11:30 | Lunch                                     |   |                                   |   | Registration<br>Exhibition<br>Coffee Service |
| 13:00 | /   | Session 1A-1<br>Materials Science and Engineering | Session 1B-1<br>Civil Engineering | Session 1C-1<br>Nuclear Power Generation        |  |
| 14:50 |   | Coffee Break                                      |                                   |   |  |
| 15:10 |   | Session 1A-2<br>Composite Materials               | Session 1B-2<br>Solid Mechanics   | Session 1C-2<br>Micro Phenomena and Measurement |  |
| 17:00 |   |   |                                   |   |  |

### November 3rd

|       | HALL 300  | Outside the Hall 300                        |  |
|-------|---|---|--|
| 8:30  |   |   |  |
| 9:00  | Keynote Lecture 2<br>Prof. Takashi<br>Tsubouchi |   |  |
| 10:00 |   | Poster<br>Session/Special<br>Poster Session | Registration<br>Exhibition<br>Coffee Service |
|       | Award Ceremony                                  |   |  |
| 12:00 | Lunch   |   |  |

12:45 Excursion: Visiting Tsukuba Science City!

Tour bus departs from the entrance.      Group 1 : at 12:45

Group 2: at 13:15

☆Tour at JAXA requires your ID card (passport,  
driving license card, student card etc.).

17:30 Banquet: Okura Frontier Hotel Tsukuba

Room "Jupiter" on the 3rd floor

## November 4

|       | E                                    | A   | B   | C                                   | D  |
|-------|--------------------------------------|---|---|-------------------------------------|--|
| 8:30  | Registration                         |   |   |                                     | Registration<br>Exhibition<br>Coffee Service |
| 9:00  | Keynote Lecture 3<br>Prof. Igor Emri |   |   |                                     |  |
| 10:00 |                                      | Coffee Break                                |   |                                     |  |
|       |                                      | Session 3A-1<br>Instrumentation and Testing | Session 3B-1<br>Thermodynamics            | Session 3C-1<br>Flow around Body    |  |
| 12:00 |                                      | Lunch                                       |   |                                     |  |
| 13:00 |                                      | Session 3A-2<br>Optical Methods             | Session 3B-2<br>Instrumentation for Fluid | Session 3C-2<br>Sports and Vehicles |  |
| 14:50 |                                      | Coffee Break                                |   |                                     |  |
| 15:10 |                                      | Session 3A-3<br>Sound and Vibration         | Session 3B-3<br>Material Properties       |                                     |  |
| 16:30 |                                      |   |   | Closing Ceremony                    |  |

## Technical Program Schedule and Contents

The affiliation is the first author's one.  
The underline denotes the speaker of the presentation.  
The A-number is the abstract number.  
The FL-number is the paper number bound in the proceedings of the symposium.

### November 2<sup>nd</sup>

#### 10:00-10:20 Opening Ceremony (HALL 300)

Chairperson: Kar-Hooi CHEONG (AIST)

Mirei CHIBA (Vice-president of the Japanese Society for Experimental Mechanics, Tohoku Univ.)

Hideaki MONJI (Chairperson of Organizing Committee of 14<sup>th</sup> ISEM, Univ. of Tsukuba)

#### 10:30-11:30 Keynote Lecture 1 (HALL 300)

Chairperson: Kenji KATOH (Osaka City Univ.)

Two-phase PIV measurement in turbulent near wake laden with binary-size group of particles

K. C. Chang and W. C. Chen

*National Cheng Kung University, Taiwan*

----- **Room A (November 2<sup>nd</sup>)** -----

#### 13:00-14:50 1A-1:Materials Science and Engineering

Chairperson: Yuichi ONO (Tottori Univ.)

A052 Study on Damage of Metal Thin Films Deposited on Polymer Thin Films

(FL-424) Toshiro KOBAYASHI, Hideaki FURUMOTO, Akinobu YAMAGUCHI,

Hideyuki KANEMATSU and Ion Cosmin GRUESCU

*National Institute of Technology, Tsuyama College, Japan*

A022 Effects of Pre-milling of Raw Powders on Reaction Sequence of Thermite

Combustion Synthesis of Tri-Nickel Aluminide

Tatsuya OHMI, Motohiro IBUKI

*Hokkaido University, Japan*

A025 An Effect of Centrifugal Force on Growth of Carbon Nanotubes

(FL-393) Hayato KOBAYASHI, Shuichi ARIKAWA

*Meiji University, Japan*

A074 Transfer of Cu through Multiple Phases of Iron and Silver  
(FL-378) Kengo KATO, Hiroki ITO and Hideki ONO  
*Osaka University, Japan*

A028 Evaluation of Elastic Modulus of bcc Fe Including Edge Dislocation under  
(FL-401) Cyclic Shear Stress by Molecular Dynamics  
Tsubasa UETA and Shuichi ARIKAWA  
*Meiji University, Japan*

**15:10-17:00 1A-2:Composite Materials**

Chairperson: Shuichi ARIKAWA (Meiji University)

A042 Development of Joining Method by Cylindrical Pin Using Thermal Expansion  
(FL-392) of CFRTP  
Yuya KODAIRA, Nobuhiko KOBAYASHI, Naofumi KODAIRA,  
Atuko TAKEI and Noboru NAKAYAMA  
*Taiyo industry Co.,ltd , Japan*

A096 Fundamental Study of Sensing Technique Using MCF Rubber Sensor Under  
(FL-410) Radiation Environment  
Ryo IKEDA, Kunio SHIMADA, Hideharu TAKAHASHI  
and Hiroshige KIKURA  
*Tokyo Institute of Technology, Japan*

A057 NO<sub>2</sub> Adsorptivity of Porous Ceramics from Glass Fiber-Reinforced Plastic  
(FL-399) and Clay  
Naoya IKEDA, Khairul Azhar Bin MOKHTAR, Kentaro YASUI,  
Koya SASAKI, Toshifumi YUJI and Hiroyuki KINOSHITA  
*University of Miyazaki, Japan*

A056 Methylene Blue Dye Adsorptivity of Reductively Fired GFRP/Clay Ceramics  
(FL-397)  
Koya SASAKI, Kentaro YASUI, Yuko MIYAKAWA  
and Hiroyuki KINOSHITA  
*University of Miyazaki, Japan*

A058 The Solar-Radiant Heat-Reducing Effects of Moss-Covered and Lawn-  
(FL-400) Covered Ceramics  
Tomoyuki HATA, Keita KAMICHIKA, Kentaro YASUI, Kenichi ITO,  
Minoru FUJISAKI and Hiroyuki KINOSHITA  
*University of Miyazaki, Japan*

----- **Room B (November 2<sup>nd</sup>)** -----

**13:00-14:50 1B-1: Civil Engineering**

Chairperson: Hiroshi SAITO (Kanazawa Inst. of Tech.)

A012 Study on Strength Properties of Fiber-Liquefied Stabilization Soil Produced  
(FL-381) by Using Corn Husk Fiber

Nga Thanh DUONG, Tomoaki SATOMI and Hiroshi TAKAHASHI

*Tohoku University, Japan*

A013 Study on Possibility of Predicting the Ground Strength in Disaster Sites by  
(FL-380) Falling Cone from UAV

Kyosuke SUNEYA, Tomoaki SATOMI and Hiroshi TAKAHASHI

*Tohoku University, Japan*

A014 Study on Workability and Strength Properties of Fiber-Liquefied Stabilization  
(FL-376) Soil

Isao KIMURA, Tomoaki SATOMI and Hiroshi TAKAHASHI

*Tohoku University, Japan*

A020 Experimental Study on Seismic Device for Rectangular Water Tank at Short  
(FL-371) Period Earthquake

Daisuke AOKI, Satoshi NAMEDA, Yoshiyuki BANDO,

Naohiko WATANABE and Moriaki SUZUKI

*Morimatsu Industry Co., Ltd, Japan*

A076 A Study of Flow over a Complex Topography near Northeast Coast in Taiwan

Yi-Xuan LIU, Jiun-Jih MIAU and Yng-Ru CHEN

*National Cheng Kung University, Taiwan*

**15:10-17:00 1B-2: Solid Mechanics**

Chairperson: Motoharu FUJIGAKI (Univ. of Fukui)

A099 Experimental Evaluation of Mode III Interlaminar Crack Growth in CFRP  
Laminates by ECT Test

Yuki KATAYAMA, Hiroshi SAITO and Isao KIMPARA

*Kanazawa Institute of Technology, Japan*

A092 Influence of Coupling Effect on Mode I Static Interlaminar Fracture  
Toughness of CFRP Laminates

Ryosuke KIKUCHI, Yoshiki FURUSAWA,

Hiroshi SAITO and Isao KIMPARA

*Kanazawa Institute of Technology, Japan*

- A066 Influence of Stent Deployment on Mechanical Response of Coronary Artery  
(FL-374) Haruna KITAGAWA, Ichiro SHIMIZU, Akira WADA,  
Tatsuyuki NAKATANI, Xinming ZHAO and Takashi TAMURA  
*Okayama University of Science, Japan*
- A067 Finite Element Analysis for Optimization of Forming Process of Thin-Walled  
AZ31 Magnesium Alloy Tube by Multistage Deep Drawing-Ironing  
Kodai USHIRO, Ichiro SHIMIZU, Xinming ZHAO, Akira WADA  
and Haruna KITAGAWA  
*Okayama University of Science, Japan*
- A060 Effects of the Residual Stress Generated in an Acetabular Cup on the Pull-Out  
Force in the Artificial Hip Joint with a Structure for Preventing Dislocation  
Yuki KAWAMURA, Yuki TANIFUJI,  
Mitsushi OHMASA and Ei YAMAMOTO  
*Kindai University, Japan*

----- **Room C (November 2<sup>nd</sup>)** -----

**13:00-14:50 1C-1:Nuclear Power Generation**

Chairpersons: Masaaki TANAKA (JAEA) and Takashi NAOE (JAEA)

- A008 Acoustic Vibration Measurement for the Pulsed Spallation Neutron Source  
(FL-363) Takashi NAOE, Hiroyuki KOGAWA, Takashi WAKUI,  
Makoto TESHIGAWARA, Katsuhiko HAGA and Masatoshi FUTAKAWA  
*Japan Atomic Energy Agency, Japan*
- A082 Effects of Temperature Fluctuation on PIV Measurement of Natural  
(FL-402) Circulation Flow Field  
Mitsuyo TSUJI, Kosuke AIZAWA, Jun KOBAYASHI,  
Akikazu KURIHARA and Yasuhiro MIYAKE  
*Japan Atomic Energy Agency, Japan*
- A083 Planar Triple Parallel Jet Sodium Test for Thermal Striping Analysis Code  
Validation in Sodium-cooled Fast Reactor  
Masaaki TANAKA, Kazuhiro NAGASAWA and Jun KOBAYASHI  
*Japan Atomic Energy Agency, Japan*

A061 Observation of Melting Metal Behavior Caused by High Power Pulsed Laser Irradiation Using High Speed Photography Technique

Yuji USHITSUKA, Makoto TESHIGAWARA, Takashi NAOE,  
Masatoshi FUTAKAWA, Koichi SARUTA, Toshiharu MURAMATSU,  
Tomonori YAMADA, Nobuatsu TANAKA and Kazuhiko YAMASAKI  
*Ibaraki University, Japan*

A051 Hydrodynamic Evaluation of Pool Scrubbing under Wetwell Venting

(FL-413) Giedre ZABLACKAITE, Hideo NAGASAKA and Hiroshige KIKURA  
*Tokyo Institute of Technology, Japan*

**15:10-16:40 1C-2:Micro Phenomena and Measurement**

Chairpersons: Masaaki TANAKA (JAEA) and Takashi NAOE (JAEA)

A091 Removal of Micrometer-Sized Particles on a Solid Wall by High-Speed  
(FL-422) Impinging Air Jet

Tatsuro WAKIMOTO, Akihiro TAKAHASHI, Kazuhiko SOEMOTO  
and Kenji KATOH  
*Osaka City University, Japan*

A075 Improving the Efficiency of the Filtered Containment Vessel System via  
(FL-419) Developing the Venturi-nozzle Scrubber of the Wet-type Filter

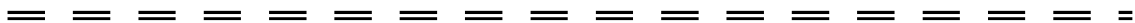
Tri Vien TRAN, Hideharu TAKAHASHI, Tadashi NARABAYASHI  
and Hiroshige KIKURA  
*Tokyo Institute of Technology, Japan*

A047 Effect of Wall Boundary on Growing and Collapsing Behaviors of Cavitation  
Bubble

Shunsuke KAWAMURA, Takashi NAOE, Nobuatsu TANAKA and  
Masatoshi FUTAKAWA  
*Ibaraki University, Japan*

A105 Development of Vector Ultrasonic Velocity Profiler Method using Multi-  
elements Ultrasonic Transducer

Hideharu TAKAHASHI, Jevin TANIUS OWEN,  
Wongsakorn WONGSAROJ, Ari HAMDANI and Hiroshige KIKURA  
*Tokyo Institute of Technology, Japan*





## November 3<sup>rd</sup>

### 9:00-10:00 Keynote Lecture 2 (HALL 300)

Chairperson: Hideaki MONJI (Univ. of Tsukuba)

Robots, Go out to the City!

Takashi TSUBOUCHI

*University of Tsukuba, Japan*

### 10:00-12:00 Poster Session (Outside HALL 300)

A003 Wind Loads on a tilted Plate

Ping-Han CHUNG, Chin-Cheng CHOU, Cheng-Yang CHUNG,

Ray-Yeng YANG and Kung-Ming Chung

*National Cheng Kung University, Taiwan*

A004 Surface Pressure Patterns for a Compressible Cavity Flow Using Pressure Sensitive Paint

Kung-Ming CHUNG, Yi-Xuan HUANG, Han-Yi WU, Keh-Chin CHANG

and Kuan-Tsung KAO

*National Cheng Kung University, Taiwan*

A006 Flow and Mixing Characteristics of Excited Elevated Transverse Jets

Rong Fung HUANG and Ching Min HSU

*National Taiwan University of Science and Technology, Taiwan*

A011 Comparison of Tar in Syngas under Pyrolysis and Steam Gasification Conditions in a Fluidized Bed Gasifier

Takahiro MURAKAMI and Hajime YASUDA

*National Institute of Advanced Industrial Science and Technology, Japan*

A016 Analyzing of Free Surface Behavior in Continuous Casting Process through Physical Water Model

Pooria Nazem JALALI, Somesh Bharadwaj TOLETY, Reza Safavi NICK,

and Taishi MATSUSHITA

*SWERIM AB, Sweden*

A018 Preparation of Hollow Silica Nanoparticles Using Ultrasonically Generated (FL-391) Microbubbles as Template

Shunpei TAZAKI, Takaya KAJIHARA, Tatsuya MAKINO

and Toshinori MAKUTA

*Yamagata University, Japan*



- A053 Fracture Simulation of Membrane Structure Applied a Dynamic Load  
Toshiro KOBAYASHI, Kiyokazu IGA, Wataru IKEDA,  
Hideaki FURUMOTO, Shigeru NAGASAWA and Hideyuki KANEMATSU  
*National Institute of Technology, Tsuyama College, Japan*
- A059 Influence of Collision Chips by Using Drop Tower  
Shuta FUJWIARA, Hiroyuki FUJIWARA and Takahiro ENDOH  
*National Defense Academy, Japan*
- A062 Visualization of the Load on the Human Body and Mechanical Analysis of  
(FL-421) Injury Mechanism Caused by the Posture during da Vinci Surgery  
Kazuya CHIGIRA, Yasumi ITO, Toshie SUGITA, Kaori SAKURAMOTO,  
Ryuichi YAMADA, Tatsuya FUKUOKA, Sota KONDO,  
Yoshiyuki KAGIYAMA, Tetsuya NEMOTO and Hiroshi MITSUI  
*University of Yamanashi, Japan*
- A069 Fatigue Strength Properties of QT Hollow Steel using Super Rapid Heating  
(FL-382) Tadao FUKUTA, Yoshihito KUROSHIMA, Manato KANESAKI  
and Koichi OZAKI  
*Okayama Prefectural University, Japan*
- A070 Detection of Pressure Wave in-service Pipeline by AE Parameters  
(FL-407) Tetsuya SUZUKI, Masaomi KIMURA, Yohei ASADA and Issaku AZECHI  
*Niigata University, Japan*
- A077 Effect of Ultrasonic Needle Punching on Inter-laminar Tensile Strength and  
(FL-383) Mode I Inter-laminar Fracture Toughness of Unidirectional CFRTP Laminate  
Iori NISHIHARA, Kiyotaka OBUNAI, Manato KANESAKI,  
Tadao FUKUTA and Kouichi OZAKI  
*Okayama Prefectural University, Japan*
- A078 On the Magnus Effect of a Circular Cylinder near Surface - Experiment and  
Computation  
Hsin-Hua LEE, Chin-Chou CHU, Jie-Chao LEI and Chien C. CHANG  
*National Taiwan University, Taiwan*
- A080 Measurement of Photoelastic Constant of Diamond-Like Carbon Film  
(FL-398) Ryosuke SAITO, Kenji GOMI and Yasushi NIITSU  
*Tokyo Denki University, Japan*
- A081 Accuracy Evaluation of 2-D Displacement Measurement using Image of  
Square Grid Pattern  
Haruki YOKOYAMA, Kenji GOMI and Yasushi NIITSU  
*Tokyo Denki University, Japan*

A085 Use of X-ray CT and Elastic Wave Method for Evaluation of Cracking  
(FL-415) Damage in-service Structure

Yuma SHIMAMOTO and Tetsuya SUZUKI

*Kitasato University, Japan*

A098 Accuracy Evaluation of Microsoft Kinect Sensor during Dynamic  
(FL-385) Movements in Cardiopulmonary Resuscitation (CPR)

Satoru OKAMOTO, Hiroki IWASHIKI, Kenji KARINO and Nao SATO

*Shimane University, Japan*

A104 Modeling of Excitation Source Using Measurement Data for Electromagnetic  
Wave Analysis

Takuma WAKI and Toru TAKAHASHI

*University of Tsukuba, Japan*

**10:00-12:00 Special Poster Session (Outside HALL 300)**

Poster presentation by students of High Schools and Colleges of Technology

C01 A study on Spatter Spheroidizing Mechanism in Metal Arc Welding

Tatsuki ANDO, Akihiro TAKAHASHI, Naoyuki YAMAMOTO,

Mitsuteru TOMIYAMA and Toshinobu TOYOHIRO

*National Institute of Technology, Miyakonojo College, Japan*

C02 Two Types of Tensile Fracture Morphologies on Latewood in Japanese Cedar

Shuma YUKI, Akihiro TAKAHASHI, Naoyuki YAMAMOTO

and Toshinobu TOYOHIRO

*National Institute of Technology, Miyakonojo College, Japan*

C03 Fracture Toughness of Stabilizing ZrO<sub>2</sub> Ceramics at Different Sintering  
Temperatures

Rina FUKUSHIGE, Kasidit DITSOPHA, Akihiro TAKAHASHI,

Don KAEWDOOK, Naoyuki YAMAMOTO and Toshinobu TOYOHIRO

*National Institute of Technology, Miyakonojo College, Japan*

C04 Tensile Mechanical Properties of MDFed Magnesium Alloy at Cryogenic  
Temperature

Kaito NONAKA, Akihiro TAKAHASHI, Naoyuki YAMAMOTO,

Toshinobu TOYOHIRO, Hiromi MIURA and Masakazu KOBAYASHI

*National Institute of Technology, Miyakonojo College, Japan*

- C05 Tensile Test of Notched Round Bar Tensile Specimen and Stress Triaxiality in Wrought Magnesium Alloy  
Keita HIROIKE, Akihiro TAKAHASHI, Naoyuki YAMAMOTO  
and Toshinobu TOYOHIRO  
*National Institute of Technology, Miyakonojo College, Japan*
- C06 Behavior of Motile Sperm in Microfluidic Channels  
Toranosuke SAKAMOTO, Yasutaka HAYAMIZU, Toru HYAKUTAKE,  
Takeshi GONDA, Shinichi MORITA, Shigeru OHTSUKA  
and Shinichiro YANASE  
*National Institute of Technology, Yonago College, Japan*
- C07 Effect of Torsion on the Mixing of Helical Pipe Flow  
Akihiro NAKAMURA, Yasutaka HAYAMIZU, Toru HYAKUTAKE,  
Takeshi GONDA, Shinichi MORITA, Shigeru OHTSUKA  
and Shinichiro YANASE  
*National Institute of Technology, Yonago College, Japan*
- C08 Experimental Study on the Straight-Bladed Vertical-Axis Turbine for Wave Energy Conversion  
Keisuke KITANO, Yasutaka HAYAMIZU, Takayuki SUZUKI,  
Shinichi MORITA<sup>1</sup>, Shigeru OHTSUKA, Manabu TAKAO,  
Youichi KINOUE and Toshiaki SETOYUCHI  
*National Institute of Technology, Yonago College, Japan*
- C09 Heat Transfer Characteristics of a Horizontal Tube in an Inner Circulated Fluidized Bed  
Takahiro OISHI, Hideki TAKEUCHI, Yusumi NAGAHASHI,  
Hirokazu KAJIWARA, Tetsuo TAKEUCHI and John R GRACE  
*National Institute of Technology, Kochi College, Japan*
- C10 Sensing on Arc Welding -Effect of Disturbance and Its Avoidance Method-  
Tomoki TATSUMI, Tatsuya YOSHIOKA and Katuya KUGAI  
*Kindai University Technical College, Japan*
- C11 Development of Tuna-Type Robot - Optimal swimming motion-  
Shougo TAKAYAMA and Katsuya KUGAI  
*Kindai University Technical College, Japan*
- C12 Study on Aerodynamic Characteristics of Flapping Wing based on a Bird's structure  
Sakichi OTSUBO, Yasuaki TAKAGI and Tadateru ISHIDE  
*National Institute of Technology, Kisarazu College, Japan*

- C13 Aerodynamic Drag Reduction using a Coating Material in Flapping Wing  
 Yasuaki TAKAGI, Sakichi OTSUBO and Tadateru ISHIDE  
*National Institute of Technology, Kisarazu College, Japan*
- C14 Residual Stress Characteristics in Gear Grinding using CBN Wheels  
 Masateru OUE and Takeshi MIYAMOTO  
*Kobe City College of Technology, Japan*
- C15 A Study on Development of Robot Arm Control Terminal for Robotics  
 Education Targeted at Elementary and Junior High School Students  
 Kohei IIDA and Natsuki TAKAGI  
*National Institute of Technology, Miyakonojo College, Japan*
- C16 Monitoring the Local Flexibility of Backbone Structure of a Protein Molecule  
 by Nuclear Magnetic Resonance Spectroscopy  
 Shun ARAI, Yuichi ISE and Kaori CHIBA  
*National Institute of Technology, Ibaraki College, Japan*
- (11:45-12:00) Award Ceremony of Special Poster Session (HALL 300)



## November 4

### 9:00-10:00 Keynote Lecture 3 (Room E)

Chairperson: Masayuki NAKADA (Kanazawa Inst. of Tech.)

Open Questions in Behavior of Polymers at High-Rates of Loading

Ivan SAPUNOV, Marko BEK and Igor EMRI

*University of Ljubljana, Slovenia*

### ----- Room A (November 4) -----

#### 10:10-12:00 3A-1: Instrumentation and Testing

Chairperson: Shien RI (AIST)

A048 Change of Ultrasonic Reflecting Echo Induced by Growth of Barnacles  
 (FL-404) Adhered on Test Piece

Shuhei FUJIMOTO, Michihiro KAMEYAMA, Micho SHIMADA

and Tomoyuki TANIGUCHI

*National Maritime Research Institute, Japan*

- A005 Development of an Electromagnetic Acoustic Transducer Using a Complex Magnetic Pole for Direct and Alternating Current  
Riichi MURAYAMA, Qiang LIU and Takumi WATANABE  
*Fukuoka Institute of Technology, Japan*
- A030 Nondestructive Testing for Surface Crack in Metal Additive Manufacturing  
Wenxiong SHI, Qi ZHANG, Huimin XIE and Zhanwei LIU  
*Tsinghua University, China*
- A071 Measurement Method of Crack Width Change Using Sampling Moire Method  
Takuya MIYAJIMA, Motoharu FUJIGAKI, Junki SUGIYAMA,  
 Tomoaki NAKAJIMA, Yoshiyuki KUSUNOKI, Masato ISO,  
 Shigekatsu MINAMIDE and Masahumi OBATA  
*University of Fukui, Japan*
- A093 Full-field Defect Detection and Strain Mapping at the Nanoscale and Atomic Scale Using Moiré Phase Analysis  
Qinghua WANG, Shien RI, Hiroshi TSUDA  
*National Institute of Advanced Industrial Science and Technology, Japan*

**13:00-14:50 3A-2: Optical Methods**

Chairperson: Takenobu SAKAI (Saitama Univ.)

- A088 Full-color and Real-time 3D Measurement System Using Whole-space Tabulation Method with Multi-thread Processing  
Motoharu FUJIGAKI and Takumi KISHIMOTO  
*University of Fukui, Japan*
- A072 Dynamic Small Rotate Angle Measurement Using Sampling Moire Camera  
Junki SUGIYAMA and Motoharu FUJIGAKI  
*University of Fukui, Japan*
- A094 Dynamic Displacement Measurement by Moiré Methodology Using Video Recording and Compressed Images  
Shien RI, Qinghua WANG, Peng XIA and Hiroshi TSUDA  
*National Institute of Advanced Industrial Science and Technology, Japan*
- A015 Displacement Measurement by Speckle Interferometry with Phase Analysis (FL-394) Method Using Mean Intensity Image  
 Kyoma TAKAHASHI and Shuichi ARIKAWA  
*Meiji University, Japan*

A045 AAC Symbol Identification Task Performed by Individuals with a Variety of  
(FL-403) Aphasia

Tomu DANURA, Tetsuya HIROTOMI, Mineko BOOKA,  
Chisato SHIBASAKI and Haruka IKENO  
Shimane University, Japan

**15:10-16:20 3A-3: Sound and Vibration**

Chairperson: Qinghua WANG (AIST)

A026 Study on Regular Structure Deformed by Acoustic Waves  
(FL-395) Yu IGAKI and Shuichi ARIKAWA  
*Meiji University, Japan*

A027 A Study of Tire Cavity Resonance Using Expanded Thompson Theory  
(FL-405) Hiroshi SUGIYAMA, Yohsuke TANAKA and Shigeru MURATA  
*Kyoto Institute of Technology, Japan*

A036 Experimental Study on the Effects of the Materials of the Pick Guard for the  
Electric Guitar on the Performance Sounds  
Taisei ITO, Osamu TERASHIMA, Hiroyuki YAMADA  
and Shota MIZUKAMI  
*Toyama Prefectural University, Japan*

----- **Room B (November 4)** -----

**10:10-12:00 3B-1: Thermodynamics**

Chairpersons: Toru SAWAI (Kindai Univ.) and Manabu FUCHIHATA (Kindai Univ.)

A010 Effect of Pyrolysis Treatment on Aspect Ratio of Crushed Biofuels  
Toru SAWAI  
*Kindai University, Japan*

A024 Droplet Evaporation of Azeotropic Mixture on a Superheated Surface  
(FL-389) Takashi SUZUKI, Akihiko MITSUISHI and Kenzo KITAMURA  
*Toyohashi University of Technology, Japan*

A084 Effect of Water Droplet Diameter Profile in Water-in-Oil Emulsion Fuel on  
Diesel Engine Operation Characteristics  
Manabu FUCHIHATA and Takafumi TENTORA  
*Kindai University, Japan*



A101 Measurement of Heat Transfer Performance on Multi-port Tube under Actual Condition for Air Conditioner

Chen ZHENG, Tomoki HIROKAWA, Ryuhei KAJI and Hirokazu FUJINO  
*Daikin Industries, LTD, Japan*

A089 Bioactive Effects by Means of Microbubble Bathing

(FL-420) Hiroto NARITA, Hiroaki HASEGAWA and Yutaka MASUDA  
*Utsunomiya University, Japan*

### 13:00-14:50 3B-2: Instrumentation for Fluid

Chairpersons: Takashi SUZUKI(Toyohashi Univ. of Tech.)  
and Kar-Hooi CHEONG(AIST)

A050 Sonoluminescence Elemental Analysis using External Transducer in Aqueous  
(FL-416) Solution

Sardini Sayidatun NISA SAILELLAH, Hideharu TAKAHASHI  
and Hiroshige KIKURA  
*Tokyo Institute of Technology, Japan*

A079 Development of the National Standard of Japan for Measurement Traceability  
in Low Liquid Hydrocarbon Flow Rates

Kar-Hooi CHEONG, Ryouji DOIHARA and Noriyuki FURUICHI  
*National Institute of Advanced Industrial Science and Technology, Japan*

A090 Development of a Liquid Micro Flowrate Measurement Method Using Image  
Processing

Masahiko YODA, Kar-Hooi CHEONG and Hideaki MONJI  
*University of Tsukuba, Japan*

A087 Visualization of pH Change and Flow in a Liquid Induced by Atmospheric  
(FL-379) Pressure Plasma Irradiation

Ryosuke KOBAYASHI and Tetsuya YANO  
*Hirosaki University, Japan*

### 15:10-16:20 3B-3: Material Properties

Chairperson: Ichiro SHIMIZU (Okayama Univ. of Tech.)

A100 Evaluation for Non-linear Viscoelasticity of Polypropylene with Static Tests

(FL-384) Takenobu SAKAI, Munira Binti AZUMI, Takumi MIMURA  
and Kensuke KAGEYAMA  
*Saitama University, Japan*

A033 Computing Stresses from Measured In-plane Strains in Viscoelastic Body  
(FL-387) under Plane Stress Condition

Shotaro TAGUCHI, Kyohei TAKEO and Satoru YONEYAMA

*Aoyama Gakuin University, Japan*

A064 Evaluation of Torsional Characteristics of A6061 Aluminum Alloy Friction  
(FL-373) Welded Butt Joint by Digital Image Correlation Method

Sho OGAWA, Yuichi ONO and Takashi YOKOYAMA

*Tottori University, Japan*

----- **Room C (November 4)** -----

**10:10-12:00 3C-1: Flow around Body**

Chairperson: Jiun-Jih MIAU (National Cheng Kung Univ.)

A007 Investigation of Aerodynamic Stability of a Long-span Flat Roof based on  
(FL-418) Wind Tunnel Experiment and FSI Simulation with Free-vibration Technique

Yuki TAKADATE and Yasushi UEMATSU

*Building Research Institute, Japan*

A009 Aerodynamic Characteristics of High Fitness Ratio Missile with Non-  
(FL-417) Axisymmetric Fore Head

Ting Tsung CHANG and Hsien Hao TENG

*National Chung-Shan Institute of Science and Technology, Taiwan*

A038 Experimental Study on the Influence of Reduced Frequency on Thrust Force  
(FL-409) of Oscillating Wing in a Periodic Flow

Yoshitaka ISODA, Yohsuke TANAKA and Shigeru MURATA

*Kyoto Institute of Technology, Japan*

A095 Experimental Study of Unsteady Fluid Forces of the Airfoil during Impulsive  
(FL-423) Incidence Variation

Naoto KATO, Hiroki TAKAYANAGI and Hiroaki HASEGAWA

*Utsunomiya University, Japan*

A031 Experimental Study on Characteristics of Turbulent Boundary Layer over  
(FL-412) Compliant Wall

Yukinori ICHINOSE and Nobuyoshi FUJIMATSU

*Toyo University, Japan*

**13:00-14:50 3C-2: Sports and Vehicles**

Chairpersons: Tatsuro WAKIMOTO (Osaka City Univ.)

A034 An Application of DMT Analysis to the Flow around a Tire on Vehicle Body  
Masahiro TANAKA, Shigeru MURATA, Yohsuke TANAKA  
and Hayato YOGOU  
*Kyoto Institute of Technology, Japan*

A065 Aerodynamic Effects of Soccer Ball's Surface Texture  
Sungchan HONG, Seunghee LEE and Takeshi ASAI  
*University of Tsukuba, Japan*

A068 Estimation of Pressure Field Around a Circular Cylinder Rolling on the  
(FL-396) Ground  
Katsuyuki YOKOYAMA, Shigeru MURATA, Yohsuke TANAKA  
and Hayato YOGOU  
*Kyoto Institute of Technology, Japan*

A073 Flow Over a Complex Bluff Body: Investigation of Flow Around the Cyclist  
(FL-425) Jia-Jun CHEN, Jiun-Jih MIAU, Yng-Ru CHEN and Chien-Hsun TSENG  
*National Cheng Kung University, Taiwan*

A097 Study on Drag Force Acting on Car Line Model  
Yuta KUROSAWA, Hideaki MONJI, Takeshi ASAI  
and Sungchan HONG  
*University of Tsukuba, Japan*

**16:30-17:00 Closing Address**

Chairperson: Kar-Hooi CHEONG (AIST)

Ichiro SHIMIZU (Okayama Univ. of Science)