ISEM'16-Ho Chi Minh City, Technical Program

November 1st, 2016

15:00-17:00 **Registration (1st Floor Lobby)**

17:00-18:30 **Reception (1st Floor Lobby)**

November 2nd, 2016

8:30-9:30 **Registration**

9:30-9:40

Opening Ceremony (Ocean Hall – Room A) Chair: H.Takahashi (Tohoku Univ.,)

Prof. YUJI TANABE (Niigata University)

Assoc.Prof. NGUYEN MINH TAM (Chairperson of Organizing Committee of 11th ISEM, Ho Chi Minh City Univ. of Technology)

9:40-10:40

Keynote Lecture 1 (Ocean Hall – Room A) Chair: H.Takahashi (Tohoku Univ.,)

"Management, control and beneficial environmentally usage of aquatic plants: A mini review"

Assoc.Prof. Mohd Fadhil Md Din (Universiti Teknologi Malaysia)

10:40-10:50 ---------- (Break) ----------

10:50-11:50

Keynote Lecture 2 (Ocean Hall – Room A) Chair: Nguyen D. Thao (HCMC Univ. of Technology)

"On tridimensional nearshore ocean dynamics"

Dr. Patrick Marchesiello (Institute of Research for Development of France-IRD)

12:05-13:00 ---------- (Lunch) ----------

13:00-14:15

====== Fluid Dynamics I (Room A) ======

Chairperson: Tatsuro WAKIMOTO (Osaka City University)

24 An experimental study of secondary flow and sediment transport in a laboratory-scale model of a meandering river.
HO Tuan Duc , NGUYEN Quoc Y, LUU Xuan Loc

45 Experimental and Numerical Visualization of Airflow around a Wind-powered Device for Natural Ventilation of Houses and Buildings
Y Q. NGUYEN, Phuong HA

47 Change in Micellar Structure in Surfactant Solution Induced by Periodical Shear Flow
Takashi KOSHIBA, Takehiro YAMAMOTO

57 Flow Field Investigation in a Cooling Channel with Finger-Stacked Structure Using PIV Measurement
Shohei YASUNAGA, Shinji EBARA and Hidetoshi HASHIZUME

58 Two Mechanisms of Flow Instabilities at Low Reynolds Number in the Pulsating Pipe Flows
Y. T. HSU and J. J. Miau

====== Material Engineering I (Room B) ======

Chairperson: Kee Bong YOON (Chung Ang University)

5 Fatigue monitoring of metals based on mechanical hysteresis, electrical resistance, temperature and electromagnetic ultrasound
Dietmar EIFLER

16 Effect of Dimple Size on Tribological Characteristics of Surface Textured PKAC-E Composite
Mohd Fadzli Bin ABDOLLAH

23 Friction and Surface Damage of Bearing Steel in Cyclic Ring-on-ring test by Making Use of Fatigue Testing Machine
Yuya TANAKA, Masahiro ENDO, and Shigeaki MORIYAMA

27 Effects of Argon Concentration and Heat Treatment on the Mechanical Properties of Al65Cu20Fe15 Quasicrystal Alloy
Chee Wayne TAN, Joy Rizki Pangestu DJUANSJAH and Mohd Hasbullah IDRIS

48 Wetting Behavior of Carbon Un-saturated Iron on Graphite Substrate
Cao Son NGUYEN, Ko-ichiro OHNO, Takayuki MAEDA and Kazuya KUNITOMO

====== Instrumentation and Testing I (Room C) ======

Chairperson: Fu-min CHANG (Chaoyang University of Technology)

20 Optimal Three-threshold Replacement Policy in a Cumulative Damage Model
Yu-Hung CHIEN and Chung-Piao CHIANG

25 The Optimal (T,k)-Policies for Multi-phase Service and an Unreliable Server
Ching-Chang KUO and Cheng-Hwai LIOU

30 Retrial queue with server breakdowns
Jau-Chuan KE and Tzu-Hsin LIU

52 A standby system with unreliable server and imperfect coverage
Fu-min CHANG, Jau-chuan KE and Cheng-hwai LIOU

55 A Discrete-Time Queueing System Subject to Service Interruptions
Tsung-Yin WANG and Fu-Min CHANG

====== Solid Mechanics I (Room D) ======

Chairperson: Makoto UCHIDA (Osaka City University)

8 Thermal decohesion model in polycrystalline advanced ceramics
Marin PETROVIC

17 Influence of Internal Structure on Deformation of Hollow Rectangular Wing of Low-density Expanded Polypropylene
Misao ITOH and Takahiro SHIMAZU

26 Improvement of the Stiffness of the Roller Straightener by Using CAE Method
Tatsuro AOKI

51 Effects of Defects with a Wide Range of Sizes on the Fatigue Strength of Ferritic-Pearlitic Ductile Cast Iron
Tomohiro DEGUCHI, Takashi MATSUO, Hyojin KIM, Tomohiro IKEDA and Masahiro ENDO

56 Evaluation of Fields of Stress and Strain of Pure Copper during Uniaxial Tensile Test using Digital Image Correlation Method and Finite Element Method
Makoto UCHIDA, Towa UENO, Takahiro ABE and Yoshihisa KANEKO

14:15-14:30---------- (Break) ----------

====== Fluid Dynamics II (Room A) ======

Chairperson: Nguyen Quoc Y (Ho Chi Minh City Univ. of Technology)

60 Parallel View Stereo Approach for Light Field PTV
Kazuo OHMI, Junda HAO and Sudat TULADHAR

69 BALANCE DESIGN FOR DRAG MEASUREMENT
Z. X. Tsai, J. J. Miau, T. L. Chen, Y. H. Lai, H. Wong

73 Aerodynamic study of cycling hood position: Using CFD and experiment methods to analyze visualization results
PHUNG Mai Van, MIAU Jiun-Jih, LI Shang-Ru, WONG Hsi

74 The Relation between Surface Shape and Magnetic Field Distribution in Magnetic Fluid Bridge System in Alternating Magnetic Field
Seiichi SUDO, Kazuya TAKAHASHI, Yukitaka ISHIMOTO and Stephanie NIX

80 Effect of Wettability on Dynamics of a Rotating Cylinder When Plunging into Water
Tatsuro WAKIMOTO, Yoshiaki UEDA, Kenji KATOH and Manabu IGUCHI

====== Material Engineering II (Room B) ======

Chairperson: Ichiro SHIMIZU (Okayama University of Science)

76 Development of Torsional Fatigue Testing Machine for Investigating Fatigue Strength of Spring Steel with Small Flaws
Yuichi IKEDA, Yoshiro NISHIMURA, Yuya TANAKA, Keiji YANASE and Masahiro ENDO

96 Stress-Strain Behavior of Ti-Nb Alloys under Compressions along Linear Strain Paths and Bilinear Plane Strain Path
Ichiro SHIMIZU, Yoshito TAKEMOTO, Shinichi ISHIKAWA and Tomohiro KUMURA

103 Fracture Toughness Testing by Thermal Shock Loading and K-Estimation
Tuan Son NGUYEN, Jong Min YUand Kee Bong YOON

104 An Experimental Study on Creep Crack Growth Model for Base and Weld Metal of P91 Steel
Kee Bong YOON, Jin Ho CHOI, Thanh Tuan NGUYEN

109 Improving mechanical and cracking resistances of beam using Ultra-high-performance fiber reinforced-concretes in critical zone
Duy-Liem NGUYEN, Tuan-Kiet TRAN and Trung-Kien Le

113 Monitoring of Dislocation in Lath Martensitic Steels during Deformation
Stefanus HARJO, Takuro KAWASAKI, Satoshi MOROOKA and Yo TOMOTA

====== Civil Engineering I (Room C) ======

Chairperson: Nguyen Minh Tam (Ho Chi Minh City Univ. of Technology)

2 Reaction of silicafume and nano-silicate and alkaline liquid on strength of geopolymer materials
Anh-Tuan LE, Xuan - Loc LUU and Minh- Tam NGUYEN

3 Factors influencing strength development in soft soil clay mixed rice husk ash based geopolymer
Nguyen Tan No, Le Anh Tuan, Nguyen Minh Tam

18 Fuzzy natural frequencies analysis of planar steel frame structure with fixity factor and mass modeled as triangular fuzzy numbers
Tran Thanh VIET, Vu Quoc ANH and Le Xuan HUYNH

19 Relationship between Sound Waves and Water Quality Improvement
Akira HIRATSUKA and Yugo TOMONAGA

10 Study on Sludge Reinforcement with Placing type Fiber-Cement-Stabilized Soil Method by using Raw Rice Husk
Phan Thanh CHIEN, Tomoaki SATOMI and Hiroshi TAKAHASHI

12 Study on Application of Geopolymer for Fiber-Cement-Stabilizes Soil Method to Improve the Sludge Generated in the Disaster Sites
Vu Minh Chien, Le Anh Tuan, Tomoaki SATOMI, Hiroshi TAKAHASHI

====== Sound and Vibration /Visualization and Image Processing (Room D) ======

Chairperson: Shuichi ARIKAWA (Meiji Univetsity)

34 Friction and Wear Properties Investigation for Nanoparticle Enhanced Natural Oil-Based Lubricants
Kai Fang YONG, Boon Tuan TEE, Mohd Asri YUSUFF, Imran Syakir MOHAMAD and Cheng Tung CHONG

37 Dynamic Deformation Measurement by One-Pitch Phase Analysis (OPPA) Method
Yoshiharu MORIMOTO, Yoshiyuki KUSUNOKI, Masaki UEKI, Akifumi TAKAGI and Akihiro MASAYA

44 Simulation of meandering behavior of steel plate by Multi-Body Dynamics
Shoichiro HIROIKE1 , Yuji OHARA1 , Junichi TATENO1 and Koji YAMASHITA

59 Measurement of sound pressure level distribution using variable spacial scale microphone array
Taichi FUKUI, Yohsuke TANAKA and Shigeru MURATA

62 Determination of Three-Dimensional Camera Parameters from the Information on Two-Dimensional Plane
Yasushi NIITSU

95 Experimental study of the tunnel micro-pressure wave
Dai MORITA, Tatsuro INAGE, Ken-ichiro YAMASHITA, Luis A. MARQUES, Ken KURIHARA, Masanori OTA, Tomoo KAMAKURA and Kazuo MAENO

November 3rd, 2016

10:00-12:00 Poster Session (1st Floor Lobby)

13:00-20:00 Excursion and Banquet

November 4th, 2016

09:00-10:15

Fluid Dynamics III /Heat and Mass Transfer/Multi Phases Flow/Thermodynamics (Room A)

Chairpersons: Tee Boon Tuan (Universiti Teknikal Malaysia Melaka)

94 Evaluation of the reconstruction results based on projection angles for the BOS-CT measurement
Takumi ITO, Luis A. MARQUES, Tatsuro INAGE, Ken KURIHARA, Masanori OTA and Kazuo MAENO

97 A new method for extraction of helium from natural gas
Vasily FOMIN, Ivan KAZANIN, Vadim LEBIGA, Aleksey PAK, Vitaly ZINOVIEV

21 Effect of Channel Geometry on Laminar Dispersion of Soluble Matter in Micro-Channels
Shohei Akane ISHIDA, Tetsumi KUBOTA, Taiki TANIKOSHI and Shusaku HARADA

29 Velocity and shape of single bubble in horizontal cylindrical channel
Ryo KURIMOTO, Hisato MINAGAWA and Takahiro YASUDA

88 Explosion characteristics of syngas/air premixed flames
Manh-Vu TRAN and Jeong PARK

Bio-Engineering I (Room B) ======

Chairpersons: Jonas A. PRAMUDITA (Niigata University)

04 Development of Dielectrophoresis Aided Cell Patterning Device for Elucidation of Nerve-network Generation Mechanism
Hirotaka KOGA, Yusuke MORITA and Eiji NAKAMACHI

06 Development of Diagnostic Camera System using Visible Light for Articular Cartilage
Masae SUMIHI, Eiji NAKAMACHI, Koji YAMAMOTO and Yusuke MORITA

07 Quantitative Evaluation of ECM Structure of Articular Cartilage with Multiphoton Microscopy
Ryotaro KOJIMA, Eiji NAKAMACHI, Koji YAMAMOTO and Yusuke MORITA

49 Fabrication of Biocompatible MgSiO3 Piezoelectric Thin Film to Stimulate Bone Cells
Takuya AYUKAWA, Eiji NAKAMACHI, Koji YAMAMOTO and Yusuke MORITA

====== Civil Engineering II (Room C) ======

Chairperson: Le Anh Tuan (Ho Chi Minh City Univ. of Technology)

13 Study on Production of Spherical Aggregates using Dehydrated Cake Discharged from Various Crushed Stone Quarries
Yuji ICHINOSE, Tomoaki SATOMI and Hiroshi TAKAHASHI

50 An upper bound procedure considering the effect of earthquake on bearing capacity of footing strip
Le Nguyen HAI, Chau Ngoc AN, Vo Minh THIEN and Nguyen Minh TAM

53 Validation of Computational Models of Steel Slag Used as Large Particles in Concrete Beams
Anh-Thang LE, Tat-Thanh NGUYEN and Trong-Quang HOANG

9 A Study on Characteristics of Soil Adhesion to Material Surface
Kohei MASUDA, Tomoaki SATOMI and Hiroshi TAKAHASHI

11 Study on Effect of Gravel Content on Resistive Forces Acting on the Bucket in Soil Excavation Works
Riki ICHIMURA, Tomoaki SATOMI and Hiroshi TAKAHASHI

100 Study on Leak Detection in Water Distribution System by Using WaterGems
Vo Anh Tuan , Nguyen Quang Truong and Pham Thi Minh Lanh

====== Solid Mechanics II (Room D) ======

Chairperson: Akihiro TAKAHASHI (National Institute of Technology, Miyakonojo College)

54 Damage Evaluation of Perforated Sheet Using Anisotropic Gurson's Yield Function
Takuya KATAOKA, Shigeru NAGAKI and Kenichi OSHITA

67 Mechanical Property on Wrought Magnesium Alloy Fabricated by Multi-Directional-Forging Process
Akihiro TAKAHASHI, Muhammad Bin SAMSUDDIN, Masashi OHARA, Naoyuki YAMAMOTO, Hiromi MIURA and Masakazu KOBAYASHI

75 Temperature Dependence of Critical Cracking Strain of Thin Films for Organic Light Emitting Diode
Toshiro KOBAYASHI, Munkhzul MUNKHTSOG, Yuichi UTUMI, Hideyuki KANEMATSU and Tsuyoshi MASUDA

114 J-integral Evaluation for the Measured Displacement Data
Hiroto YAMANE, Shuichi ARIKAWA, Satoru YONEYAMA, Yasuaki WATANABE, Tatsuhiko ASAI, Kunio SHIOKAWA and Mitsuo YAMASHITA

10:15-10:30 ---------- (Break) ----------

====== Instrument and Testing II (Room A) ======

Chairperson: Misao ITOH (National Institute of Technology, Kisarazu College)

33 Circuit Design for Experimental Testing of the Energy Management System for Electric Vehicles
Ilya KAVALCHUK, Thanh Chi PHAM and Alex STOJCEVSKI

79 Experimental and Analytical Study on Method for Bending Flexibility Evaluation of Vascular Stent
Daiki IWATA, Ichiro SHIMIZU, Tatsuyuki NAKATANI, Akira WADA, Teigyoku KIN and Makoto SASAKI

86 3D Shape Measurement Using Optimal Number of Phase-shifting Steps Based on Light-source-stepping Method
Yuichi AKATSUKA and Motoharu FUJIGAKI

====== Bio Engineering II (Room B) ======

Chairperson: Ei YAMAMOTO (Kindai University)

63 Analysis of Kinetic Load of Plastic Ankle Foot Orthosis during Swing Phase
Daisuke MORIOKA, Ichiro KITAYAMA, Masato KITANO, Takashi YAMANAKA, Hideyo KOYAMA, Takashi MORIMOTO, Hideki SONOBE, Noriyuki MIYAZAKI

90 Characterization of Soft Tissue Simulant Materials
Jonas A. PRAMUDITA, Makoto SASAKI, Masato ITO, Ryoji WATANABE and Yuji TANABE

110 Temperature Dependent Behaviour in Fracture Toughness of Bovine Compact Bone
Motohiro KOMORI, Jonas A. PRAMUDITA and Yuji TANABE

====== Civil Engineering III (Room C) ======

Chairperson: Hiroshi TAKAHASHI (Tohoku University)

72 Evaluation of the FWD Backcalculation Moduli of a Flexible Pavement Using Finite Element Model with Dynamic Load
Anh-Thang LE and T. T. Ngan TRAN

77 The Moving Element Method for Dynamic Analysis of 3D High Speed Rail Model on Pasternak Foundation

Tan Ngoc Than CAO, Muneo HORI, Van Hai LUONG, Minh Thi TRAN and Kok Keng ANG

78 Integrating Bootstrap Technique And Neuron Network To Estimate Cost Bound Region Of Transportation Project

Quang Sang Van, Long Le-Hoai, Nguyen Vi Nguyen, and Ngoc Duyen Pham-Minh

98 Laboratory Evaluation of Hot-Mix Asphalt Mixtures Containing Low Percentage of Reclaimed Asphalt Pavement in South of Vietnam

Manh Tuan NGUYEN

99 Effect of Tafpack Super in Porous Asphalt Mixture for South of Vietnam

Thanh Vuong TRUONG-NGUYEN

11:45-12:00

Closing Address (Room A)

Prof. Ichiro Shimizu (Okayama University of Science)

Poster Session

General Presentation

22 Effect of torrefaction on flow characteristics of thermo-fluid wood powder by hotextrusion process
Hiroki IMAMURA1, Satoru MIZUNO, Toru SAWAI and Takeshi KAJIMOTO

32 Examination of a Seat Angle in an Exercise Effect by a Chair with a Forward-Declined Seat and a Footrest
Ken'ichi ITOSE, Tomoaki YAMAMOTO, Tomonori KAWAI, Keita AKIZUKI and Noriyasu HIROKAWA

35 Bi-directional thermal strain measurement of electronic package using digital image correlation with periodical error elimination
Yasuhisa FUJIMOTO, Shuichi ARIKAWA, Manabu MURATA and Satoru YONEYAMA

40 Resistive Transition of a Weakly Pinned Nb-Ti Superconductor
Shuto HIDAKA, Yoshiaki SERITA and Tsugio HAMADA

41 Influence of Addition of $Ba_4CuPt_2O_9$ Compounds on Orientation of C-axes in Fluorine -doped Y1 Ba_2Cu_3Ox Superconductors
Yoshiaki SERITA, Shuto HIDAKA , Tsugio HAMADA and Shin-ichiro HIKASAYAMA

43 Posture for Avoiding a Text Neck and Improving the Usability in Operating a Smartphone
Noriyasu HIROKAWA, Takayuki AZUMA, Ken'ichi ITOSE,Tadashi SHIBUE, Takashi HAYAMI and Mitsushi OHMASA

46 Interaction between Foam Structure and Inner Fluid in Foamed Polymer Materials using SPH-FEM Method
Kohei TATEYAMA, Hiroyuki YAMADA and Nagahisa OGASAWARA

64 Static Fracture Behavior on MDFed AZ70 Magnesium Alloy at Cryogenic Temperature
Masashi OHARA, Muhammad Bin SAMSUDDIN, Akihiro TAKAHASHI, Naoyuki YAMAMOTO, Hiromi MIURA and Masakazu KOBAYASHI

65 Three-Dimensional Printing ABS Resin Treated by Organic Solvent
Kodai ENOKIDA, Akihiro TAKAHASHI and Naoyuki YAMAMOTO

66 Bonding Property of Stainless Steel Tube by Ring-Projection Welding with High Current
Yasutaka TOKITO, Akihiro TAKAHASHI and Naoyuki YAMAMOTO

83 An experimental for depth data correction of RGB-D camera
Shota USUI, Tomoki INOUE, Hiroki GOTO and Seiya YAMANAMI

87 Fluid Flow and Heat Transfer of Combined Forced-Natural Convection around Vertical Plate Placed in Vertical Downward Flow of Water
Fumiyoshi KIMURA, Jyunji KIDA and Kenzo KITAMURA

89 Mechanical Behavior of Anisotropic Bone Tissues After Overloading