

ICMS2012, Kobe, Program

Opening Ceremony, Tuesday October 9, 13:30~13:45

Convention Hall, Kobe University

Plenary Lectures:

Professor Jack Dongarra, University of Tennessee, Oak Ridge National Laboratory, University of Manchester, USA

“Algorithmic and Software Challenges when Moving Towards Exascale”

Tuesday, October 9, 13:45~13:30, Convention Hall, Kobe University

Professor Jiun Shyan Chen, Civil & Environmental Engineering Department, University of California, Los Angeles, USA

“Stabilized and Regularized Semi-Lagrangian Meshfree Method for Fragment-Contact-Impact Problems”

Wednesday, October 10, 9:00~9:45, Convention Hall, Kobe University

Professor Roger Ohayon, Structural Mechanics and Coupled Systems Laboratory, Conservatoire National des Arts et Métiers, France

“Modal Analysis of Fluid-Structure Interaction Problems. Computational and Reduced Order Models”

Wednesday, October 10, 9:45~10:30, Convention Hall, Kobe University

Mr. Yuji Oinaga, Fujitsu Limited, Japan

“Technologies Implemented in the K Computer and Beyond”

Thursday, October 11, 9:00~9:45, Convention Hall, Kobe University

Professor Genki Yagawa, Toyo University, Japan

“Some Considerations on High Performance Computational Mechanics”

Thursday, October 11, 9:45~10:30, Convention Hall, Kobe University

K-Computer Tour

Tuesday, October 9, 9:30~11:00

Social Programs

Reception:

Kachoen, Tuesday, October 9, 18:30~20:30

Dinner Cruise (Conference Banquet):

Wednesday, October 10, 17:55~21:30

Shuttle service starts from the conference venue at 17:55

Dinner Cruise around the Kobe port: 18:45~21:30

List of Minisymposia

- MS1 Recent Advances in Meshfree and Particle Methods**
Professor Seiya Hagihara, Saga University, Japan
Professor Seiichi Koshizuka, The University of Tokyo, Japan
Professor Rong Tian, Chinese Academy of Sciences, Japan
- MS2 Continuum-based Multiscale Modeling and Simulation with Uncertainties**
Professor Naoki Takano, Keio University, Japan
Professor Tetsuya Matsuda, Tsukuba University, Japan
Professor Guillaume Haïat, Université Paris-Est Laboratoire Modélisation et Simulation Multi Echelle MSME, France
- MS3 Design Optimization, Exploration and Informatics**
Professor Shigeru Obayashi, Tohoku University, Japan
Professor In Lee, Korea Advanced Institute of Science & Technology, KAIST, Korea
Professor Carlo Poloni, Università di Trieste, Italy
- MS4 Computational Fracture Mechanics and Structural Integrity Analyses**
Professor Hiroshi Okada, Tokyo University of Science, Japan
Professor Toshio Nagashima, Sophia University, Japan
Professor Jai Hak Park, Chungbuk National University, Korea
Professor Takehiro Fujimoto, Kobe University, Japan
- MS5 Computational and Experimental Studies of Electronic Packaging**
Professor, Hideo Miura, Tohoku University, Japan
Professor Soon-Bok Lee, Korea Advanced Institute of Science & Technology, KAIST, Korea
Professor Toru Ikeda, Kyoto University, Japan
- MS6 Prediction and Control of Turbulent Flows**
Professor Makoto Yamamoto, Tokyo University of Science, Japan
Professor Koji Fukagata, Keio University, Japan
Professor Haecheon Choi, Seoul National University, Korea
- MS7 Recent Progress in Computational Fluid Dynamics and Related Topics**
Professor Hiroshi Kanayama, Kyushu University
Professor Daisuke Tagami, Kyushu University
Professor Frederic Magoules, Ecole Centrale Paris, France
Professor Shuyu Sun, King Abdullah University of Science and Technology, Saudi Arabia
- MS8 Fluid-Structure Interaction**
Professor Kenji Takizawa, Waseda University, Japan
Professor Tayfun E. Tezduyar, Rice University, USA
- MS9 Recent Progress in Biomechanical Modeling and Simulation**
Professor Shu Takagi, University of Tokyo, Japan
Professor Xiaobo Gong, Shanghai Jiao Tong University, China
- MS10 Advances in Inverse Problems**
Professor Hirotsugu Inoue, Tokyo Institute of Technology, Japan

Professor Shiro Kubo, Osaka University, Japan
Professor Toshiro Matsumoto, Nagoya University, Japan
Professor Kenji Amaya, Tokyo Institute of Technology, Japan

MS11 Recent Trends in Structural Optimization

Professor Shinji Nishiwaki, Kyoto University, Japan
Professor Kazuhiro Izui, Kyoto University, Japan
Professor Seungjae Min, Hanyang University, Korea

MS12 Recent Progress in Numerical Modeling of Heat/Mass Transfer and Combustion

Professor Mamoru Tanahashi, Tokyo Institute of Technology, Japan
Dr. Nedunchezian Swaminathan, University of Cambridge, UK

Program Overview

Tuesday, October 9

			Kobe University	FIBER, Konan University				
			Room 1 (Convention Hall)	Room 2 (7F Lecture Room 1)	Room 3 (7F Lecture Room 2)	Room 4 (6F Class room 1)	Room 5 (6F Class room 2)	
Afternoon								
13:30	~	13:45	Opening Ceremony					
13:45	~	14:30	Plenary 1	Prof. Jack Dongarra				
14:30	~	15:00	Coffee Break					
15:00	~	15:20	Afternoon Session 1	MS7-1	MS1-1	MS3-1	MS9-1	MS12-1
15:20	~	15:40						
15:40	~	16:00						
16:00	~	16:20						
16:20	~	16:40	Break					
16:40	~	16:50	Afternoon Session 2	MS7-2	MS1-2	MS3-2	MS9-2	MS12-2
16:50	~	17:10						
17:10	~	17:30						
17:30	~	17:50						
17:50	~	18:10						
18:30	~	20:30	Reception@Kachoen					

Wednesday, October 10

			Kobe University	FIBER, Konan University				
			Room 1 (Convention Hall)	Room 2 (7F Lecture Room 1)	Room 3 (7F Lecture Room 2)	Room 4 (6F Class room 1)	Room 5 (6F Class room 2)	
Morning								
9:00	~	9:45	Plenary 2	Prof. Jun Shyan Chen				
9:45	~	10:30	Plenary 3	Prof. Roger Ohayon				
10:30	~	11:00	Coffee Break					
11:00	~	11:20	Morning Session	MS7-3	MS1-3	MS3-3	MS6-1	MS12-3
11:20	~	11:40						
11:40	~	12:00						
12:00	~	12:30						
Lunch Break								
Afternoon								
13:30	~	13:50	Afternoon Session 1	MS7-4	MS1-4	MS4-1	MS6-2	MS12-4
13:50	~	14:10						
14:10	~	14:30						
14:30	~	14:50						
14:50	~	15:10	Coffee Break					
15:10	~	15:30	Afternoon Session 2		MS11-1	MS4-2	MS6-3	MS12-5
15:30	~	15:50						
15:50	~	16:10						
16:10	~	16:30						
16:30	~	16:50	Break					
16:50	~	17:10	Afternoon Session 3		MS11-2	MS4-3	MS6-4	MS2-1
17:10	~	17:30						
17:30	~	17:50						
Conference Party								
17:55	~	18:45	Transportation to Dinner Cruise					
18:45	~	21:30	Dinner Cruise					

Thursday, October 11

		Kobe University	FIBER, Konan University					
		Room 1 (Convention Hall)	Room 2 (7F Lecture Room 1)	Room 3 (7F Lecture Room 2)	Room 4 (6F Class room 1)	Room 5 (6F Class room 2)		
Morning								
9:00	~	9:45	Plenary 4	Mr. Yujō Inaga				
9:45	~	10:30	Plenary 5	Prof. Genki Yagawa				
10:30	~	11:00	Coffee Break					
11:00	~	11:20	Morning Session		MS8-1	MS4-4	MS5-1	MS2-2
11:20	~	11:40						
11:40	~	12:00						
12:00	~	12:20	Lunch Break					
Afternoon								
13:30	~	13:50	Afternoon Session 1		MS8-2	MS4-5	MS5-2	MS2-3
13:50	~	14:10						
14:10	~	14:30						
14:30	~	14:50						
14:50	~	15:10	Coffee Break					
15:10	~	15:30	Afternoon Session 2		MS8-3	MS10-1	MS5-3	MS2-4
15:30	~	15:50						
15:50	~	16:10						
16:10	~	16:30						
16:30	~	16:50	Break					
16:50	~	17:10	Afternoon Session 3		MS8-4	MS10-2		
17:10	~	17:30						
17:30	~	17:50						

Tuesday October 9

MS7-1 Recent Progress in Computational Fluid Dynamics and Related Topics-1

Tuesday, October 9, 15:00~16:40, Convention Hall, Kobe University

Chair: Professor Hiroshi KANAYAMA, Kyushu University, Japan

MS7-1-1(101) (Keynote) Asynchronous Optimized Schwarz Methods for Peta and Exascale Computing, Frédéric MAGOULÈS (Ecole Centrale Paris, Applied Mathematics and Systems Laboratory, France)

MS7-1-2(118) Applications of Domain Decomposition Method to Industrial Thermal Convection Problems, Hiroshi KANAYAMA (Kyushu University, Japan)

MS7-1-3 (113) Investigation on Spatial and Temporal Accuracy of Cartesian Grid Method, Norikazu SATO (Toyota Central R&D Labs., Inc., Japan), Takeo KAJISHIMA (Osaka University, Japan), Shintaro TAKEUCHI (Osaka University, Japan), Masahide INAGAKI (Toyota Central R&D Labs., Inc, Japan), Nariaki HORINOUCI (Toyota Central R&D Labs., Inc, Japan)

MS7-1-4 (10) Numerical Simulation of Incompressible Flows with Heat Transfer using Seamless Immersed Boundary Method, Kyohei Tajiri (Kyoto Institute of Technology, Japan), Hidetoshi NISHIDA (Kyoto Institute of Technology, Japan), Mitsuru TANAKA (Kyoto Institute of Technology, Japan)

MS7-2 Recent Progress in Computational Fluid Dynamics and Related Topics-2

Tuesday, October 9, 16:50~18:10, Convention Hall, Kobe University

Chair: Professor Daisuke TAGAMI, Kyushu University, Japan

MS7-2-1(65) Simulations of a Falling Sphere in a Long Bending Pipe with Trans-mesh Method and Moving Computational Domain Method, Shinichi ASAO (College of Industrial Technology, Japan), Kenichi MATSUNO (Kyoto Institute of Technology, Japan), Masashi YAMAKAWA (Kyoto Institute of Technology, Japan)

MS7-2-2(53) Numerical Analyses on Liquid-Metal Magnetohydrodynamic Flow in

180-Degrees U-Bend with Small Curvature Radius, Hiroshige KUMAMARU (University of Hyogo, Japan), Kazuhiro ITOH (University of Hyogo, Japan), Yuji SHIMOGONYA (University of Hyogo, Japan)

MS7-2-3(56) Three-point Flux Reconstruction Schemes Using Cell-center Multi-moment Constraints, Feng XIAO (Tokyo Institute of Technology, Japan)

MS7-2-4 Cancelled

MS1-1 Recent Advances in Meshfree and Particle Methods-1

Tuesday, October 9, 15:00~16:40, 7F Lecture Room 1, FIBER, Konan University
Chair: Professor Seiichi KOSHIZUKA, University of Tokyo, Japan

MS1-1-1(137) Generalized FEM without Extra DOF, Rong TIAN (Chinese Academy of Sciences, China)

MS1-1-2(138) particle Generalized FEM and its Parallel Implementation, Rong TIAN (Chinese Academy of Sciences, China), Zedong WU (Chinese Academy of Sciences, China)

MS1-1-3(121) Adaptive EFG method with nodal relocation for crack problems -bubble radius and error related approach-, Seiya HAGIHARA (Saga University, Japan), Yutaka HAYAMA (Saga University, Japan), Shinya TAKETOMI (Saga University, Japan), Yuichi TADANO (Saga University, Japan)

MS1-1-4(13) A Stable Rezoning Method for Large Deformation Finite Element Analysis using Incremental Equilibrium Equation, Yuki ONISHI (Tokyo Institute of Technology, Japan), Kenji AMAYA (Tokyo Institute of Technology, Japan)

MS1-1-5 Cancelled

MS1-2 Recent Advances in Meshfree and Particle Methods-2

Tuesday, October 9, 16:50~18:10, 7F Lecture Room 1, FIBER, Konan University
Chair: Dr. Kohei MUROTANI, The University of Tokyo, Japan

MS1-2-1(107) A Study of 2D flow past a square cylinder using SPH, Jun IMASATO (Yokohama National University, Japan), Yuzuru SAKAI (Yokohama National University, Japan)

MS1-2-2(48) Moving Particle Simulation for Complex Free Surface Flows, Seiichi KOSHIZUKA (The University of Tokyo, Japan), Kohei MUROTANI (The University of Tokyo, Japan), Kazuya SHIBATA (The University of Tokyo, Japan), Toshimitsu FUJISAWA (Prometech Software, Inc, Tokyo)

MS1-2-3(74) A Study of the Wave Transformation Passing over an Artificial Reef using SPH Method, Tamon SUWA (FUJITSU Limited, Japan), Tomokazu NAKAGAWA (KOBE STEEL, LTD., Japan), Keisuke MURAKAMI (University of Miyazaki, Japan)

MS1-2-4(90) Hierarchical domain decomposition explicit MPS method for a large-scale tsunami analysis, Kohei MUROTANI (The University of Tokyo, Japan), Seiichi KOSHIZUKA (The University of Tokyo, Japan), Toshimitsu FUJISAWA (Prometech Software, Inc, Japan), Naoto MITSUME (The University of Tokyo, Japan), Shinobu YOSHIMURA (The University of Tokyo, Japan)

MS3-1 Design Optimization, Exploration and Informatics-1

Tuesday, October 9, 15:00~16:40, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Shigeru OBAYASHI, Tohoku University, Japan

MS3-1-1(41) (Keynote) MOGA with surrogate model for design of hybrid composite blade, Akira TODOROKI (Tokyo Institute of Technology, Japan), Yuuki KAWASHIMA (Tokyo Institute of Technology, Japan)

MS3-1-2(72) A Multidisciplinary Aerodynamic Optimization Design Based on Discrete Adjoint Method, Jingjing LU (Xi' an Jiaotong University, China), Yingtao ZUO (Northwestern Polytechnical University, China), Bo ZHANG (Xi' an Jiaotong University, China), Gang CHEN, (Xi'an Jiaotong University, China/ Tokyo University of Science, Yamaguchi, Japan), Yueming LI (Xi'an Jiaotong University, China)

MS3-1-3(135) Investigation of Data Exploration Method for Thermal-Fluid Simulation Results Using Proper Orthogonal Decomposition, Nobuyuki ISOSHIMA (Hitachi, Ltd. , Japan)Shigeru OBAYASHI (Tohoku University, Japan)

MS3-1-4(59) Nonlinear Approximation Methods Applied in a Design Process of Valve Systems, Piotr CZOP (AGH University of Science and Technology, Poland), Antoni SKROBOL (Silesian University of Technology, Poland), Damian SŁAWIK (Silesian University of Technology, Poland), Jerzy ŚWIDER (Silesian University of Technology, Poland), Grzegorz WSZOLEK (Silesian University of Technology, Poland)

MS3-2 Design Optimization, Exploration and Informatics-2

Tuesday, October 9, 16:50~18:10, 7F Lecture Room 2, FIBER, Konan University

Chair: Professor Akira TODOROKI, Tokyo Institute of Technology, Japan

MS3-2-1(119) Wind Shear Effects on Aerodynamic and Aeroelastic Behavior of a HAWT Blade, In LEE (Korea Advanced Institute of Science and Technology, Korea), Min-Soo JEONG (Korea Advanced Institute of Science and Technology, Korea), Seung-Jae YOO (Hyundai Heavy Industries Co., Ltd., Korea)

MS3-2-2(26) Design and optimization of a gas burner for TPV application, Giulio CASSIO (University of Trieste, Italy), Carlo POLONI (University of Trieste, Italy), Valentino PEDIRODA (University of Trieste, Italy), Giovanni MOSETTI (University of Trieste, Italy)

MS3-2-3(24) Hybrid Evolutionary Optimizer Applicable to Large-Scale and Practical Design Problem, Kazuhisa CHIBA (Hokkaido Institute of Technology, Japan)

MS3-2-4(40) Multi-objective topology optimization of structures by genetic algorithms with Bar-system representation, Hyunjin SHIN (Tokyo Institute of Technology, Japan), YoshiyasuHIRANO (Japan Aerospace Exploration Agency, Japan), Akira TODOROKI (Tokyo Institute of Technology, Japan)

MS9-1 Recent Progress in Biomechanical Modeling and Simulation -1

Tuesday, October 9, 15:00~16:40, 6F Class Room 1, FIBER, Konan University

Chair: Professor Shu TAKAGI, The University of Tokyo, Japan

MS9-1-1(133) A Two-Layer Model for Biological Membrane, Satoshi II (Osaka University, Japan), Shigeo WADA (Osaka University, Japan)

MS9-1-2(75) A Numerical Study of the Motion of Endothelial Progenitor Cell in Simple Shear Flow, Xiaobo GONG (Shanghai Jiao Tong University, China), Yunqiao LIU (Shanghai

Jiao Tong University, China), Zonglai JIANG (Shanghai Jiao Tong University, China)

MS9-1-3(94) On the Development of Multiscale Thrombosis Simulator, Shu TAKAGI (The University of Tokyo, Japan), Satoshi II (Osaka University, Japan), Seiji SHIOZAKI (RIKEN, Japan), Norio SHIMAMOTO (The University of Tokyo, Japan), Kazuyasu SUGIYAMA (The University of Tokyo, Japan), Yoichiro MATSUMOTO (The University of Tokyo, Japan)

MS9-1-4(33) Effect of plastic deformation on surface roughness of Palmaz stent, Achmad SYAFUDIN (Institut Teknologi Sepuluh Nopember, Indonesia), Katsuhiko SASAKI (Hokkaido University, Japan)

MS9-1-5(130) Molecular dynamics simulation for the behavior of cations near ice wall, Yuta NOHARA (Kyoto Institute of Technology, Japan), Kohei KUROSHIMA (Kyoto Institute of Technology, Japan), Yoshimichi HAGIWARA (Kyoto Institute of Technology, Japan)

MS9-2 Recent Progress in Biomechanical Modeling and Simulation -2

Tuesday, October 9, 16:50~17:50, 6F Class Room 1, FIBER, Konan University

Chair: Dr. Fuyou LIANG, Shanghai Jiao Tong University, China

MS9-2-1 Cancelled

MS9-2-2(124) Numerical Models for Motoneuron and Musculoskeletal System towards Understanding of Motor Dysfunction, Kazuya SHIMIZU (The University of Tokyo, Japan), Naoto YAMAMURA (RIKEN, Japan), Shu TAKAGI (The University of Tokyo, Japan)

MS9-2-3(117) Patient-specific multi-scale hemodynamics modeling and computation, Fuyou LIANG (RIKEN, Japan/Shanghai Jiao Tong University, China), Marie OSHIMA (The University of Tokyo, Japan), Hao LIU (Chiba University, Japan), Shu TAKAGI (The University of Tokyo, Japan/ RIKEN, Japan)

MS12-1 Recent Progress in Numerical Modelling of Heat/Mass Transfer and Combustion -1

Tuesday, October 9, 15:00~16:40, 6F Class Room 2, FIBER, Konan University

Chair: Professor Nedunchezian SWAMINATHAN, University of Cambridge, UK

MS12-1-1(36) (Keynote) Combustion LES of a Multi-Burner Annular Aero-Engine Combustor, Christer FUREBY (The Swedish Defense Research Agency – FOI, Sweden)

MS12-1-2(11) Large Eddy Simulation of Syngas Combustion in a Premixed Swirling Combustor, Zheng Y. ZHE (Tsinghua University, China), Min ZHU (Tsinghua University, China), Jiang XI (Lancaster University, UK)

MS12-1-3(79) Numerical Simulation for H₂-O₂ turbulent flame under Non-Adiabatic Condition, Yusuke NAGAOKA (Hokkaido University, Japan), Koichi KISHIDA (Hokkaido University, Japan), Nobuyuki OSHIMA (Hokkaido University, Japan)

MS12-1-4(25) A Fractal-based Dynamic SGS Combustion Model for Turbulent Premixed Flames, Itaru YOSHIKAWA (Tokyo Institute of Technology, Japan), Young-Sam SHIM (Tokyo Institute of Technology, Japan), Mamoru TANAHASHI (Tokyo Institute of Technology, Japan), Toshio MIYAUCHI (Tokyo Institute of Technology, Japan)

MS12-2 Recent Progress in Numerical Modelling of Heat/Mass Transfer and Combustion -2

Tuesday, October 9, 16:50~18:10, 6F Class Room 2, FIBER, Konan University
Chair: Professor Mamoru TANAHASHI. Tokyo Institute of Technology, Japan

MS12-2-1(140) (Keynote) Impact of DNS on Industrial Gas Turbine Combustor Calculation, Nedunchezian SWAMINATHAN (University of Cambridge, UK)

MS12-2-2(34) Non-unity Lewis number effects of heat and mass on turbulent premixed combustion closure: A Direct Numerical Simulation analysis, Nilanjan CHAKRABORTY (Newcastle University, UK)

MS12-2-3(20) Numerical studies on the structure of H₂-CO-CO₂-air flames, Ratnakishore VELMATI (Amrita Vishwa Vidyapeetham, India), Ravi M. RAJAGOPALAN (Indian Institute of Technology Delhi, India), Anjan RAY (Indian Institute of Technology Delhi, India)

Wednesday October 10

MS7-3 Recent Progress in Computational Fluid Dynamics and Related Topics-3

Wednesday, October 10, 11:00~12:00, Convention Hall, Kobe University

Chair: Professor Frédéric MAGOULÈS, Ecole Centrale Paris Applied Mathematics and Systems Laboratory, France

MS7-3-1(44) Adaptive Polyhedral Mesh Generation Method for Compressible Flows,

Masashi YAMAKAWA (Kyoto Institute of Technology, Japan), Eiji KONISHI (Kyoto Institute of Technology, Japan), Kenichi MATSUNO (Kyoto Institute of Technology, Japan), Shinichi ASAO (College of Industrial Technology, Japan)

MS7-3-2(106) Numerical Simulation of Aerodynamic Interference of Nozzle Exhaust and Airframe,

Zhong LEI (Tokyo University of Science, Suwa, Japan)

MS7-3-3(58) On Some Aspects of Fluid-Structure Modeling Applied in a Valve System

Optimization, Grzegorz WSZOLEK (Silesian University of Technology, Poland), Damian GAŚSIÓREK (Silesian University of Technology, Poland), Jacek GNIŁKA (Silesian University of Technology, Poland), Piotr CZOP (AGH University of Science and Technology, Poland)

MS7-4 Recent Progress in Computational Fluid Dynamics and Related Topics-4

Wednesday, October 10, 13:30~14:30, Convention Hall, Kobe University

Chair: Dr. Kazuhiko SUGA. Osaka Prefecture University, Japan

Ms7-4-1(132) Optically Induced Thermal Marangoni Flow of Transparent Thin Liquid

Films on Absorbable Solid Substrates, Fumihiko SAEKI (Tottori University, Japan), Shigehisa FUKUI (Tottori University, Japan), Hiroshige MATSUOKA (Tottori University, Japan)

MS7-4-2(108) Phase-field Model-based Simulation of Motions of a Two-phase Fluid on Solid

Surface, Naoki TAKADA (National Institute of Advanced Industrial Science and Technology (AIST), Japan), Junichi MATSUMOTO (National Institute of Advanced Industrial Science and Technology (AIST), Japan), Sohei MATSUMOTO (National Institute of Advanced Industrial Science and Technology (AIST), Japan)

MS7-4-3(91) On the Velocity Scaling of Nano-channel Flows,

Haruka YASUOKA (Osaka

Prefecture University, Japan), M KANEDA (Osaka Prefecture University, Japan), Kazuhiko SUGA (Osaka Prefecture University, Japan)

MS1-3 Recent Advances in Meshfree and Particle Methods-3

Wednesday, October 10, 11:00~12:00, 7F Lecture Room 1, FIBER, Konan University
Chair: Professor Seiya HAGIHARA, Saga University, Japan

MS1-3-1(71) A Gradient Reproducing Kernel Collocation Method for Boundary Value problems, Hsin-Yun HU (Tunghai University, Taiwan), J.S. CHEN (University of California, Los Angeles (UCLA), USA), S.W CHI (University of California, Los Angeles (UCLA), USA), Judy YANG (University of California, Los Angeles (UCLA), USA)

MS1-3-2(8) Analyses on Poisson's Problem by Using a New Collocation Method, Yong-Ming GUO (Kagoshima University, Japan), Koki ISOZAKI (Kagoshima University, Japan), Shunpei KAMITANI (Kagoshima University, Japan)

MS1-3-3(3) Nonlinear Analyses by Using the ORCM, Yong-Ming GUO (Kagoshima University, Japan), Hirotaka OSAKO (Kagoshima University, Japan), Shunpei KAMITANI (Kagoshima University, Japan)

MS1-4 Recent Advances in Meshfree and Particle Methods-4

Wednesday, October 10, 13:30~14:30, 7F Lecture Room 1, FIBER, Konan University
Chair: Professor Yuki ONISHI, Tokyo Institute of Technology, Japan

MS1-4-1(7) Over-Range Collocation Analyses of the Linear Elastic Cantilever Beam Problem, Yong-Ming GUO (Kagoshima University, Japan), Wataru USHIJIMA (Kagoshima University, Japan), Shunpei KAMITANI (Kagoshima University, Japan)

MS1-4-2(31) Geometrical Nonlinear Analysis of Plates subjected to Uni-axial Thrust using Meshfree Mindlin-Reissner Formulation, Shota SADAMOTO (Hiroshima University, Japan), Satoyuki TANAKA (Hiroshima University, Japan), Shigenobu OKAZAWA (Hiroshima University, Japan)

MS1-4-3(42) Three-Dimensional Heat Conduction Analysis of Inhomogeneous Materials by Triple-Reciprocity Boundary Element Method, Yoshihiro OCHIAI (Kinki University, Japan)

MS11-1 Recent Trends in Structural Optimization-1

Wednesday, October 10, 15:10~16:10, 7F Lecture Room 1, FIBER, Konan University

Chair: Professor Kazuhiro IZUI, Kyoto University, Japan

MS11-1-1(86) (Keynote) Optimal Magnetization of Ring-type Magnet in a Surface-mounted PM Motor for Reducing Torque Ripple Using Level Set Method, Seahn OH(Hanyang University, Korea), Sunghoon LIM(Hanyang University, Korea), Seungjae MIN(Hanyang University, Korea), Jung-Pyo HONG(Hanyang University, Korea)

MS11-1-2(105) Topology optimization of steady incompressible viscous flow for fluidic devices, Seiji KUBO(IHI Corporation, Japan), Kentaro YAJI (Kyoto University, Japan), Takayuki YAMADA (Kyoto University, Japan), Kazuhiro IZUI (Kyoto University, Japan), Shinji NISHIWAKI (Kyoto University, Japan)

MS11-2 Recent Trends in Structural Optimization-2

Wednesday, October 10, 16:50~17:50, 7F Lecture Room 1, FIBER, Konan University

Chair: Professor Seungjae MIN, Hanyang University, Korea

MS11-2-1(63) Design of dielectric materials with prescribed effective permittivity by topology optimization, Masaki OTOMORI (Kyoto University, Japan), Jacob A. ANDKJÆR (Technical University of Denmark, Denmark), Ole SIGMUND (Technical University of Denmark, Denmark), Kazuhiro IZUI (Kyoto University, Japan), Shinji NISHIWAKI (Kyoto University, Japan)

MS11-2-2(22) Single Loop Reliability-Based Multiobjective Optimization Using Hybrid MOPSO with SLSV Concept, Shoichiro KAWAJI (Osaka Prefecture University, Japan), Nozomu KOGISO (Osaka Prefecture University, Japan), Atsushi ISHIGAME (Osaka Prefecture University, Japan), Keiichi SATO (IHI Corporation, Japan)

MS11-2-3(66) Optimal Design of Acoustic Metamaterials by Topology Optimization, Lirong LU (Kyoto University, Japan), Takashi YAMAMOTO (Kogakuin University, Japan), Takayuki YAMADA (Kyoto University, Japan), Masaki OTOMORI (Kyoto University, Japan), Kazuhiro IZUI (Kyoto University, Japan), Shinji NISHIWAKI (Kyoto University, Japan)

MS3-3 Design Optimization, Exploration and Informatics-3

Wednesday, October 10, 11:00~12:00, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Kazuhisa CHIBA, Hokkaido Institute of Technology, Japan

MS3-3-1 Cancelled

MS3-3-2(46) Feasibility Design of Nano-Displacement Simple Solid Actuator, Junji SONE
(Tokyo Polytechnic University, Japan), Laurent JALABERT (The University of Tokyo, Japan),
Hiroyuki FUJITA (The University of Tokyo, Japan)

MS3-3-3(60) Grammatical Evolution by Using Stochastic Schemata Exploiter, Takao
MIZUNO (Nagoya University, Japan), Eisuke KITA (Nagoya University, Japan)

MS4-1 Computational Fracture Mechanics and Structural Integrity Analyses
-1

Wednesday, October 10, 13:30~14:50, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Hiroshi OKADA, Tokyo University of Science, Japan

MS4-1-1(120) (Keynote) SURFACE CRACK GROWTH SIMULATION USING
S-VERSION FEM, Masanori KIKUCHI (Tokyo University of Science, Japan)

MS4-1-2(61) Current Development in Alternating Method for Analyzing Three-Dimensional
Cracks, Jai Hak PARK (Chungbuk National University, Korea)

MS4-1-3(47) Estimation of geometry effect on J_c using two-parameter description of crack-tip
fields, Gennadiy NIKISHKOV (University of Aizu, Japan)

MS4-2 Computational Fracture Mechanics and Structural Integrity Analyses
-2

Wednesday, October 10, 15:10~16:30, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Gennadiy NIKISHKOV, University of Aizu, Japan

MS4-2-1(5) Simulation of compressive failure in concrete using elasticity-spring network,
Shinya KAMINO (Ibaraki University, Japan), Shigenari SUZUKI (Ibaraki University, Japan),
Mao KURUMATANI (Ibaraki University, Japan)

MS4-2-2(76) Damage Evolution Equation Considering Three Dimensional Growth of Void,

Makoto IIZUKA (Tokyo University of Agriculture and Technology, Japan), Shigeru NAGAKI (Tokyo University of Agriculture and Technology, Japan), Kenichi OSHITA (Tokyo University of Agriculture and Technology, Japan)

MS4-2-3 **Cancelled**

MS4-2-4(102) Two-Dimensional Boundary Element Analysis of Edge Cracked Rectangular Plate Using Near-Tip Solution, Toshio FURUKAWA (University of the Ryukyus, Japan), Toshiyasu SUEYOSHI (University of the Ryukyus, Japan)

MS4-3 Computational Fracture Mechanics and Structural Integrity Analyses
-3

Wednesday, October 10, 16:50~17:50, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Jai Hak PARK, Chungbuk National University, Korea

MS4-3-1(43) Crack Propagation Analysis of Composite Structures by XFEM using the Cohesive Zone Model, Toshio NAGASHIMA (Sophia University, Japan), Wataru EBINA (Sophia University, Japan)

MS4-3-2(28) Loading Rate Dependence of Unstable Behaviors of Thin-shell Structured Columns under Axial Compression - Effects of Cross-sectional Shape and Column Length -, Toshihiro ARAKI (Nissan Motor Co., Ltd. , Japan), Yoji SHIBUTANI (Osaka University, Japan)

MS4-3-3(12) Interaction between a Crack and Tri-material Composite under Uniform Tension, Alief WIKARTA (National Taiwan University of Science and Technology (NTUST), Taiwan), Ching Kong CHAO (National Taiwan University of Science and Technology (NTUST), Taiwan)

MS6-1 Prediction and control of turbulent flows -1

Wednesday, October 10, 11:00~12:00, 6F Class Room 1, FIBER, Konan University
Chair: Professor Haecheon CHOI, Seoul National University, Korea

MS6-1-1(139) (Keynote) The Physics of Turbulent Friction-Drag Reduction by Oscillatory Spanwise Wall Motion, Michael A LESCHZINER (Imperial College London, UK), Sylvain LARDEAU (CD-Adapco, Icn., UK), Emile TOUBER (Imperial College London, UK),

Lionel AGOSTINI (Imperial College London, UK)

MS6-1-2(73) Turbulent drag reduction by streamwise traveling wave, Koji FUKAGATA (Keio University, Japan), Hiroya MAMORI (Keio University, Japan), Rio NAKANISHI (Keio University, Japan)

MS6-2 Prediction and control of turbulent flows -2

Wednesday, October 10, 13:30~14:50, 6F Class Room 1, FIBER, Konan University

Chair: Professor Koji FUKAGATA, Keio University, Japan

MS6-2-1(136) (Keynote) Control of Wall Turbulence, John KIM (University of California, Los Angeles, USA)

MS6-2-2(19) Direct Numerical Simulation of Supersonic Turbulent Channel Flow with Uniform Blowing and Suction, Ayane KOTAKE (Keio University, Japan), Yukinori KAMETANI (Keio University, Japan), Koji FUKAGATA (Keio University, Japan)

MS6-2-3(57) DNS of viscoelastic turbulent channel flow with three-dimensional finite ribs, Masaaki TANABE (Tokyo University of Science, Japan), Takahiro TSUKAHARA (Tokyo University of Science, Japan), Yasuo KAWAGUCHI (Tokyo University of Science, Japan)

MS6-3 Prediction and control of turbulent flows -3

Wednesday, October 10, 15:10~16:30, 6F Class Room 1, FIBER, Konan University

Chair: Professor Makoto YAMAMOTO, Tokyo University of Science, Japan

MS6-3-1(115) A wall-modeled large eddy simulation with mean-wall-shear-stress boundary condition, Haecheon CHOI (Seoul National University, Korea), Jungil LEE (Seoul National University, Korea), Minjeong CHO (Seoul National University, Korea)

MS6-3-2(109) On the Role of an Anisotropy-Resolving Extra Term for a Subgrid-Scale Model in Near-Wall Turbulence, Tadashi OHTSUKA (Kyushu University, Japan), Ken-ichi ABE (Kyushu University, Japan)

MS6-3-3(88) Large Eddy Simulation of Complex internal turbulent flows by the MRT-LBM, Kei TAKASHIMA (Osaka Prefecture University, Japan), Masayuki KANEDA (Osaka Prefecture University, Japan), Kazuhiko SUGA (Osaka Prefecture University, Japan)

MS6-3-4(89) LES of turbulence in porous media by the MRT lattice Boltzmann method,
Yusuke KUWATA (Osaka Prefecture University, Japan), K. SUGA (Osaka Prefecture
University, Japan)

MS6-4 Prediction and control of turbulent flows -4

Wednesday, October 10, 16:40~17:50, 6F Class Room 1, FIBER, Konan University
Chair: Professor Makoto YAMAMOTO, Tokyo University of Science, Japan

MS6-4-1(32) Numerical study of turbulent heat transfer in boundary layer with various wall thermal conditions, Hirofumi HATTORI (Nagoya Institute of Technology, Japan), Masahiro TANAKA (Nagoya Institute of Technology, Japan), Tomoya HOURA (Nagoya Institute of Technology, Japan), Masato TAGAWA (Nagoya Institute of Technology, Japan)

MS6-4-2(62) Transport Equation for Eddy Viscosity in Turbulence, Fujihiro HAMBА (The University of Tokyo, Japan)

MS6-4-3(125) Numerical Investigation on Tip Leakage Vortex Control with Discrete Tip Injection, Ryouta NAKAMURA (Tokyo University of Science, Japan), Masaya SUZUKI (Japan Aerospace Exploration Agency (JAXA), Japan), Makoto YAMAMOTO (Tokyo University of Science, Japan)

MS12-3 Recent Progress in Numerical Modelling of Heat/Mass Transfer and Combustion -3

Wednesday, October 10, 11:00~12:00, 6F Class Room 2, FIBER, Konan University
Chair: Professor Hirofumi HATTORI, Nagoya Institute of Technology, Japan

MS12-3-1(95) Numerical Simulation of Film Condensation Using Phase Boundary Conditions Derived from Kinetic Theory of Gases, Tsubasa OHSHIMA (Hitachizosen Corporation, Japan), Takeo KAJISHIMA (Osaka University, Japan)

MS12-3-2 Cancelled

MS12-3-3(1) Numerical Solution for Melting of an Ice Layer into a Binary Aqueous Solution, Yoshimi KOMATSU (Akita University, Japan), Makoto TAGO (Akita University, Japan), Yousuke SAITO (Akita University, Japan)

MS12-4 Recent Progress in Numerical Modelling of Heat/Mass Transfer and Combustion -4

Wednesday, October 10, 13:30~14:50, 6F Class Room 2, FIBER, Konan University
Chair: Professor Nilanjan CHAKRABORTY, Newcastle University, UK

MS12-4-1(21) Petascale direct numerical simulations (DNS) of turbulent combustion for fundamental insight towards predictive modeling, Hemanth KOLLA (Sandia National Laboratories, USA), Andrea GRUBER (SINTEF Energy Research, Norway), Evatt R. HAWKES (The University of New South Wales, Australia), Damir VALIEV (Princeton University, USA), Ray W. GROUT (National Renewable Energy Laboratory, USA), Jacqueline H. CHEN (Sandia National Laboratories, USA.)

MS12-4-2(16) DNS of Turbulent MILD Combustion, Yuki MINAMOTO (University of Cambridge, UK), Nedunchezian SWAMINATHAN (University of Cambridge, UK)

MS12-4-3(14) DNS Analysis of Flow Dynamics inside a Cubic MesoScale Combustion Chamber, Marianne SJOSTRAND-CUIF (INSA/CORIA UMR 6614 CNRS, France), Yves D'ANGELO (INSA/CORIA UMR 6614 CNRS, France)

MS12-4-4(98) DNS of Swirling Premixed Flame and Pressure Fluctuations in Micro Combustor, Kotaro KUCHIKI (Tokyo Institute of Technology, Japan), Masayasu SHIMURA (Tokyo Institute of Technology, Japan), Itaru YOSHIKAWA (Tokyo Institute of Technology, Japan), Naoya FUKUSHIMA (Tokyo Institute of Technology, Japan), Mamoru TANAHASHI (Tokyo Institute of Technology, Japan), Toshio MIYAUCHI (Tokyo Institute of Technology, Japan)

MS12-5 Recent Progress in Numerical Modelling of Heat/Mass Transfer and Combustion -5

Wednesday, October 10, 15:10~16:30, 6F Class Room 2, FIBER, Konan University
Chair: Professor Nobuyuki OSHIMA, Hokkaido University, Japan

MS12-5-1(116) (Keynote) Effect of wavelength of turbulent thermal boundary layer with sinusoidal wavy wall by direct numerical simulation, Hiroya MAMORI (Keio University, Japan), Shotaro UDAGAWA (Tokyo University of Agriculture and Technology, Japan), Kaoru IWAMOTO (Tokyo University of Agriculture and Technology, Japan), Akira MURATA

(Tokyo University of Agriculture and Technology, Japan), Koji FUKAGATA (Keio University, Japan), Hideki KAWASHIMA (National Maritime Research Institute, Japan), Yasuo KAWAGUCHI (Tokyo University of Science, Japan), Yoshiyuki TSUJI (Nagoya University, Japan)

MS12-5-2(35) DNS investigation of counter gradient diffusion phenomenon in stably thermally stratified turbulent boundary layer, Hirofumi HATTORI (Nagoya Institute of Technology, Japan), Kosuke HOTTA (Nagoya Institute of Technology, Japan), Tomoya HOURA (Nagoya Institute of Technology, Japan), Masato TAGAWA (Nagoya Institute of Technology, Japan)

MS12-5-3(6) Optimal Control Analysis in Heat Transfer Field Using Fictitious Domain FEM and Adjoint Equation Method, Takahiko KURAHASHI (Nagaoka National College of Technology, Japan)

MS2-1 Continuum-based Multiscale Modeling and Simulation with Uncertainties -1

Wednesday, October 10, 16:40~17:50, 6F Class Room 2, FIBER, Konan University
Chair: Professor Naoki TAKANO, Keio University, Japan

MS2-1-1(52) Numerical Calculation of Effective Material Properties of CFRP Laminates with Real Pore Geometries by Using the Gauss-Point Method, Janko KREIKEMEIER (German Aerospace Center, Germany), David CHRUPALLA (German Aerospace Center, Germany), Daniel KRAUSE (German Aerospace Center, Germany)

MS2-1-2(85) A Multiscale Stochastic Stress Analysis of a Heterogeneous Material considering Non-uniform Microscopic Random Variation, Sei-ichiro SAKATA (Kinki University, Japan), Fumihiro ASHIDA (Shimane University, Japan), Ken-ichi OHSUMIMOTO (Shimane University, Japan)

MS2-1-3(104) Effects of Random Laminate Misalignment on Elastic-Viscoplastic Properties of Ultrafine Plate-Fin Structures, Tetsuya MATSUDA (University of Tsukuba, Japan), Naoki YAMAMOTO (University of Tsukuba, Japan), Hiromu KOBORI (University of Tsukuba, Japan)

Thursday October 11

MS8-1 Fluid-Structure Interaction-1

Thursday, October 11, 11:00~12:00, FIBER, Konan University

Chair: Professor Kenji TAKIZAWA, Waseda University, Japan

MS8-1-1(127) (Keynote) Parallel fluid structure interaction analysis using

ADVENTURE_Coupler, S. KATAOKA (JGC Corporation, Japan), Shinobu YOSHIMURA (The University of Tokyo, Japan), S. MINAMI (The University of Tokyo, Japan), H. KAWAI (Tokyo University of Science, Japan)

MS8-1-2(112) Nitsche's Method for the Navier-Stokes Equations and Applications in

Fluid-Structure Interactions, Janos BENK (Technische Universität München, Germany), Hans-Joachim BUNGARTZ (Technische Universität München, Germany), Miriam MEHL (Technische Universität München, Germany), Michael ULBRICH (Technische Universität München, Germany)

MS8-2 Fluid-Structure Interaction-2

Thursday, October 11, 13:30~14:50, FIBER, Konan University

Chair: Professor Yohsuke IMAI, Tohoku University, Japan

MS8-2-1(92) FSI Simulation using Adaptive Cartesian Grids, Hans-Joachim BUNGARTZ

(Technische Universität München, Germany), Bernhard GATZHAMMER (Technische Universität München, Germany), Miriam MEHL (Technische Universität München, Germany), Tobias NECKEL (Technische Universität München, Germany)

MS8-2-2(82) Dynamical Analysis of Parachute Clusters, Kenji TAKIZAWA (Waseda

University, Japan), Tim SPIELMAN (Rice University, USA), Tayfun E. TEZDUYAR (Rice University, USA)

MS8-2-3(87) Fluid-Structure Interaction Validation Study of Horizontal Axis Wind Turbine

at Full Scale with Composite Blades and Spar Structures, Artem KOROBENKO (University of California, San Diego, USA), Ming-Chen HSU (University of California, San Diego, USA), Ido AKKERMAN (University of California, San Diego, USA), Yuri BAZILEVS (University of California, San Diego, USA)

MS8-2-4(97) Motions of Aquatic Plants interacting with Water Flows, Hiroshi SUITO

(Okayama University, Japan), Mayumi SATO (Okayama University, Japan)

MS8-3 Fluid-Structure Interaction-3

Thursday, October 11, 15:10~16:30, FIBER, Konan University

Chair: Professor Kenji TAKIZAWA, Waseda University, Japan

MS8-3-1(68) Development of a GPU-Implemented BEM Solver for Biological Cell

Suspensions, Yohsuke IMAI (Tohoku University, Japan), Daiki MATSUNAGA (Tohoku University, Japan), Kohei KYOYA (Tohoku University, Japan), Toshihiro OMORI (Tohoku University, Japan), Takuji ISHIKAWA (Tohoku University, Japan), Takami YAMAGUCHI (Tohoku University, Japan)

MS8-3-2(83) Patient-Specific Modeling of Fluid-Structure Interaction and Stenting in

Cerebral Arteries With Aneurysm, Kenji TAKIZAWA (Waseda University, Japan), Tyler BRUMMER (Rice University, USA), Kathleen E. SCHJODT (Rice University, USA), Nikolay KOSTOV (Rice University, USA), Anthony PUNTEL (Rice University, USA), Hirokazu TAKAGI (Waseda University, Japan), Tayfun E TEZDUYAR (Rice University, USA)

MS8-3-3(78) Lateral migration of capsules in a near-wall shear flow

Stephanie NIX (Tohoku University, Japan), Yohsuke IMAI (Tohoku University, Japan), Daiki MATSUNAGA (Tohoku University, Japan), Takuji ISHIKAWA (Tohoku University, Japan), Takami YAMAGUCHI (Tohoku University, Japan)

MS8-3-4(93) FEM Simulation of Coupled Flow and Bed Morphodynamic Interactions due to Sediment Transport Phenomena

José CAMATA (COPPE/Federal University of Rio de Janeiro (UFRJ), Brazil), Renato ELIAS (COPPE/Federal University of Rio de Janeiro (UFRJ), Brazil), Alvaro COUTINHO (COPPE/Federal University of Rio de Janeiro (UFRJ), Brazil)

MS8-4 Fluid-Structure Interaction-4

Thursday, October 11, 16:40~17:50, FIBER, Konan University

Chair: Professor Yohsuke IMAI, Tohoku University, Japan

MS8-4-1(111) Large eddy simulation of tsunami flow past a girder bridge and evaluation of fluid forces and motion of the bridge deck

Akihiko NAKAYAMA (Construction Engineering Research Institute, Japan), Tomohiro MIKI (Kobe University, Japan), Jeremy BRICKER (Tokyo Institute of Technology, Japan)

MS8-4-2(18) Active Aeroelastic Control via Multi-control Surfaces based on Reduced Order Model, Gang CHEN (Tokyo University of Science, Yamaguchi, Japan), Shun ZHANG (Xi'an Jiaotong University, China), Yueming LI (Xi'an Jiaotong University, China)

MS8-4-3(17) Modeling and Performance Analysis of Archimedes Screw Hydro Turbine Using Moving Particle Semi-implicit Method, Makoto SHIMOMURA (Nagoya University, Japan), Masao TAKANO (Nagoya University, Japan)

MS4-4 Computational Fracture Mechanics and Structural Integrity Analyses -4

Thursday, October 11, 11:00~12:20, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Toshihito OHMI, Tohoku University, Japan

MS4-4-1(29) Crack Propagation Analysis of Three-dimensional Complex-shaped Model Using Partitioned Iterative Coupling Algorithm, Yasunori YUSA (The University of Tokyo, Japan), Shunji KATAOKA (JGC Corporation, Japan), Hiroshi KAWAI (Tokyo University of Science, Suwa, Japan), Shinobu YOSHIMURA (The University of Tokyo, Japan)

MS4-4-2 Cancelled

MS4-4-3(49) 3D crack propagation analysis of welded joints using FE pre-processing software, Satoyuki TANAKA (Hiroshima University, Japan), Kosuke TAKANARITA (Hiroshima University, Japan), Shigenobu OKAZAWA (Hiroshima University, Japan), Hiroshi OKADA (Tokyo University of Science, Japan)

MS4-4-4 Cancelled

MS4-5 Computational Fracture Mechanics and Structural Integrity Analyses -5

Thursday, October 11, 13:30~14:50, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Toshio NAGASHIMA, Sophia University, Japan

MS4-5-1(77) Design of MEMS-Viscosity Sensor with Dual-Spiral Configuration, Seung C. CHOI (Advanced Industrial Science and Technology (AIST), Japan), Yasuyuki YAMAMOTO (Advanced Industrial Science and Technology (AIST), Japan), Sohei MATSUMOTO (Advanced

Industrial Science and Technology (AIST), Japan)

MS4-5-2(81) Failure Prediction for Membrane Electrode Assembly, Thibaud VERMOT DES ROCHES (Keio University, Japan), Masaki MASAKI (Keio University, Japan)

MS4-5-3(99) Numerical Analysis of Stress induced Particle Diffusion Based on the FEM - FDM Coupled Method - Hydrogen diffusion, Toshihito OHMI (Tohoku University, Japan), Toshimitsu YOKOBORI (Tohoku University, Japan), Yuusuke KAWASHIMA (Tohoku University, Japan), Masaaki NISHIKAWA (Kyoto University, Japan)

MS4-5-4(123) J and Interaction Integral Evaluation using the Tetrahedral Finite Element, Hiroshi OKADA (Tokyo University of Science, Japan), Shogo OHATA (Tokyo University of Science, Japan), Ryutaro DAIMON (Tokyo University of Science, Japan)

MS10-1 Advances in Inverse Problems -1

Thursday, October 11, 15:10~16:30, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Hirotugu INOUE, Tokyo Institute of Technology, Japan

MS10-1-1(134) (keynote) Crack Identification Using Electric Response -From Active Method to Passive Method, and Active Method Again-, Shiro KUBO (Osaka University, Japan),

MS10-1-2(54) Numerical Simulation of Visco-Elastic Material Measurement Process, Shiro YOSHIDA (SHONAN, R&D, Inc., Japan), Kouki MAEKAWA (OHARA, Inc., Japan)

MS10-1-3(129) Inverse Determination of the Optimum Temperature History Minimizing the Maximum Transient Stress Intensity Factor by Smoothing Its Time-Variation, Mitsumasa MAEKAWA (Osaka University, Japan), Shiro KUBO (Osaka University, Japan), Seiji IOKA (Osaka Electro-Communication University, Japan)

MS10-2 Advances in Inverse Problems -2

Thursday, October 11, 16:50~17:30, 7F Lecture Room 2, FIBER, Konan University
Chair: Professor Hirotugu INOUE, Tokyo Institute of Technology, Japan

MS10-2-1(131) Development of Aberration Retrieval Method using Low-Resolution Spot Images, Kazuyoshi OKADA (Tokyo Institute of Technology, Japan), Kenji AMAYA (Tokyo Institute of Technology, Japan), Yuki ONISHI (Tokyo Institute of Technology, Japan)

MS10-2-2(128) Estimation of Decaying Inner Surface Temperature History Induced by Slug Flow from Outer Surface Temperature, Shiro KUBO (Osaka University, Japan), Yoshiyuki MATSUMOTO (Osaka University, Japan), Seiji IOKA (Osaka Electro-Communication University, Japan)

MS5-1 Computational and Experimental Studies of Electronic Packaging -1

Thursday, October 11, 11:00~12:00, 6F Class Room 1, FIBER, Konan University

Chair: Professor Toru Ikeda, Kagoshima University, Japan

MS5-1-1(51) (keynote) Experimental and Numerical Approaches for Reliability Evaluation of Electronic Packaging, Soon-Bok LEE (KAIST, Korea),

MS5-1-2(15) Improvement of the accuracy of nonlinear finite element analysis for a 3D SIC package using SEM and DICM, Masatoshi OKA (Kyoto University, Japan), Shinya KAWAHARA (Kyoto University, Japan), Toru IKEDA (Kyoto University, Japan), Noriyuki MIYAZAKI (Kyoto University, Japan), Hiroyuki TANAKA (Sumibe Research Co., Ltd., Japan), Takuya HATAO (Sumitomo Bakelite Co., Ltd., Japan)

MS5-2 Computational and Experimental Studies of Electronic Packaging -2

Thursday, October 11, 13:30~14:50, 6F Class Room 1, FIBER, Konan University

Chair: Professor Soon-Bok LEE, KAIST, Korea

MS5-2-1(114) (keynote) Modeling Electromigration for Microelectronics Design, Xiaoxin ZHU (University of Greenwich, UK), Hiren KOTADIA (King's College London, UK), Sha XU (City University of Hong Kong, China), Hua LU (University of Greenwich, UK), Samjid MANNAN (King's College London, UK), Chris BAILEY (University of Greenwich, UK), Y.C. CHEN (City University of Hong Kong, China)

MS5-2-2(110) Micro Texture Dependence of Stress-induced Migration of Electroplated Copper Thin Film, Ken SUZUKI (Tohoku University, Japan), Osamu ASAI (Tohoku University, Japan), Ryosuke FURUYA (Tohoku University, Japan), Jaeuk SUNG (Tohoku University, Japan), Naokazu MURATA (Tohoku University, Japan), Hideo MIURA (Tohoku University, Japan)

MS5-2-3(37) High order theory of shells. Application in MEMs and NEMs devices and structures, Volodymyr ZOZULYA (Centro de Investigacion Cientifica de Yucatan, Mexico),

Andres SAEZ (University of Seville, Spain)

MS5-3 Computational and Experimental Studies of Electronic Packaging -3

Thursday, October 11, 15:10~16:30, 6F Class Room 1, FIBER, Konan University

Chair: Professor Hideo MIURA, Tohoku University, Japan

MS5-3-1(4) Evaluation of intensity of singularity for three-materials joints with power-logarithmic singularities using an enriched finite element method, Chonlada LUANGARPA (Nagaoka University of Technology, Japan), Hideo KOGUCHI (Nagaoka University of Technology, Japan)

MS5-3-2(80) Effect of the local strain distribution on the electronic conductivity of carbon nanotubes, Masato OHNISHI (Tohoku University, Japan), Ken SUZUKI (Tohoku University, Japan), Hideo MIURA (Tohoku University, Japan)

MS5-3-3(84) Mechanical Reliability of Advanced Thin Films, Taek-Soo KIM (KAIST, Korea),

MS5-3-4(23) Numerical Evaluation of Correlation between Stress Concentration and Electronic Characteristics on nMOSFETs, Naohiro TADA (Kyoto University, Japan), Masaaki KOGANEMARU (Fukuoka Industry, Science & Technology Foundation, Japan), Toru IKEDA (Kyoto University, Japan), Noriyuki MIYAZAKI (Kyoto University, Japan), Hajime TOMOKAGE (Fukuoka University, Japan)

MS2-2 Continuum-based Multiscale Modeling and Simulation with Uncertainties -2

Thursday, October 11, 11:00~12:00, 6F Class Room 2, FIBER, Konan University

Chair: Professor Guillaume HAIAT, CNRS, Université Paris-Est, France

MS2-2-1(2) (Keynote) High-Order X-FEM and Proper Generalized Decomposition for uncertain image-based analysis, Grégory LEGRAIN (LUNAM Université, France), Patrice CARTRAUD (LUNAM Université, France), Anthony NOUY (LUNAM Université, France)

MS2-2-2(96) Adhesion analysis for anisotropic materials considering surface stress and surface elasticity against a variation of indenter radiuses, Takao HAYASHI (Nagaoka University of Technology, Japan), Hideo KOGUCHI (Nagaoka University of Technology, Japan)

MS2-3 Continuum-based Multiscale Modeling and Simulation with Uncertainties -3

Thursday, October 11, 13:30~14:50, 6F Class Room 2, FIBER, Konan University

Chair: Professor Tetsuya MATSUDA, Tsukuba University, Japan

MS2-3-1(55) Issues on Volume Average Scale Linking for Simulation of Polycrystalline Solids using Two-scale Finite Element Analysis, Tong-Seok HAN (Yonsei University, Korea)

MS2-3-2(30) Convergence and Uncertainty in Homogenization-based Polycrystal Plasticity Analysis of FCC Metals, Yuichi TADANO (Saga University, Japan)

MS2-3-3(70) Image-Based Finite Element Modeling and Analyses of Periodic Microstructure with Unstructured Mesh, Sujit BIDHAR (National Institute for Material Science, Japan), Ikumu WATANABE (National Institute for Material Science, Japan)

MS2-3-4(64) Maximization of strengthening effect of microscopic morphology in dual component elastoplastic solids, Ikumu WATANABE (National Institute for Material Science, Japan), Gaku NAKAMURA (Seikei University, Japan), Kohei YUGE (Seikei University, Japan)

MS2-4 Continuum-based Multiscale Modeling and Simulation with Uncertainties -4

Thursday, October 11, 15:10~16:30, 6F Class Room 2, FIBER, Konan University

Chair: Professor Yuichi TADANO, Saga University, Japan

MS2-4-1(45) A three step homogenization model based on the Eshelby formulation to model the multiscale cortical bone structure, Vittorio SANSALONE (CNRS, Université Paris-Est, France), Valerie BOUSSON (Univ Paris Diderot, France), Salah NAILI (CNRS, Université Paris-Est, France), Catherine BERGOT (Univ Paris Diderot, France), Françoise PEYRIN (CREATIS, France), Jean-Denis LAREDO (Univ Paris Diderot, France), Guillaume HAIAT (CNRS, Université Paris-Est, France)

MS2-4-2(122) Stochastic Image-based Homogenization Analysis of Osteoporotic Trabecular Bone, Naoki TAKANO (Keio University, Japan), Khairul BASARUDDIN (Keio University, Japan)

MS2-4-3(126) Homogenization Analysis of Compressive Strength of Elastic Multilayered Corrugated Paperboard, Dai OKUMURA (Nagoya University, Japan), Takayuki ONODA

(Nagoya University, Japan), Masataka SOGA (Nagoya University, Japan), Nobutada OHNO
(Nagoya University, Japan)

MS2-4-4(69) Mesh Superposition Method Applied to Stochastic Multiscale Analysis, Kohta
OKAMOTO (Keio University, Japan), Naoki TAKANO (Keio University, Japan)