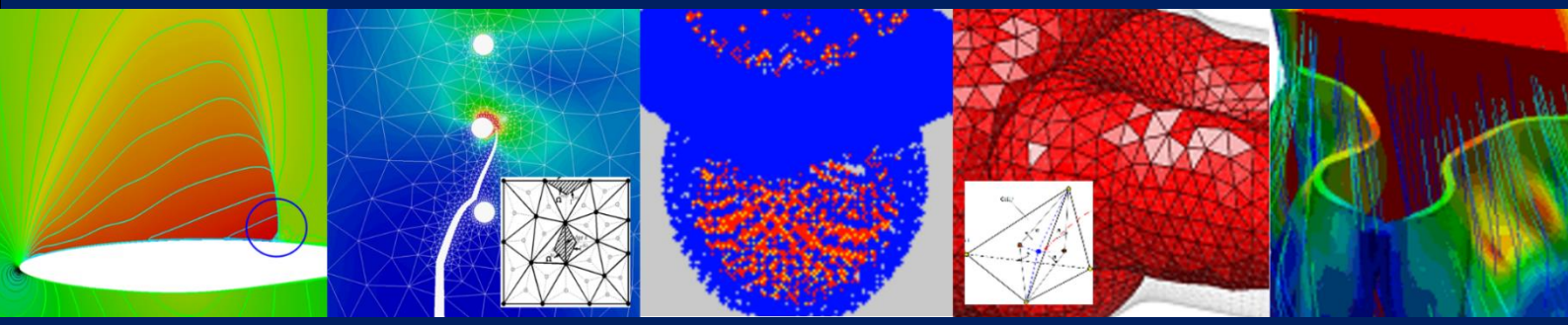
ICCM2016
Conference Program

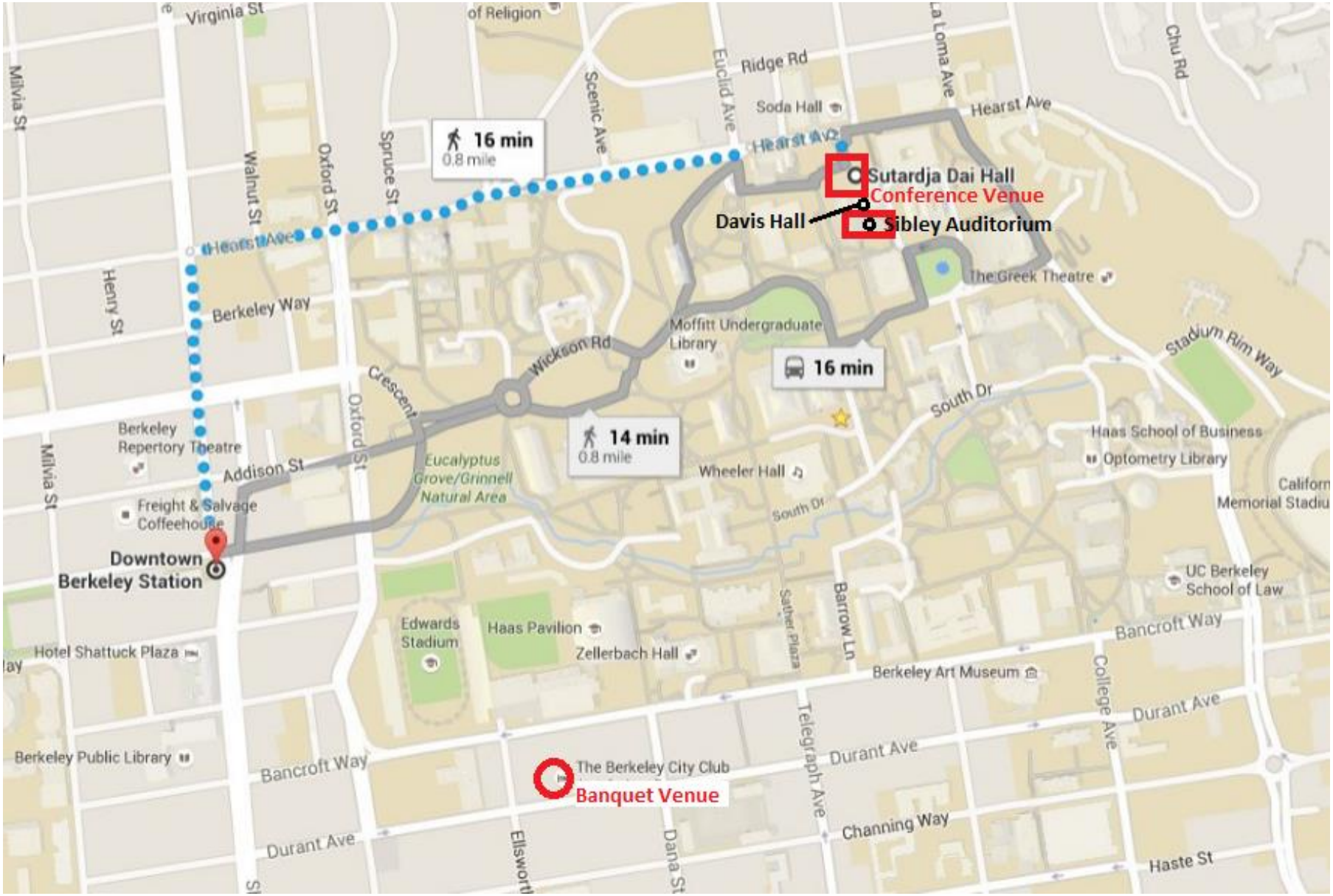


The 7th International Conference on Computational Methods

1-4 August 2016
Berkeley, CA, USA

Chairman: Professor Shaofan Li, University of California at Berkeley
Co-Chairman: Professor Gui-Rong Liu, University of Cincinnati

ScienTech Services

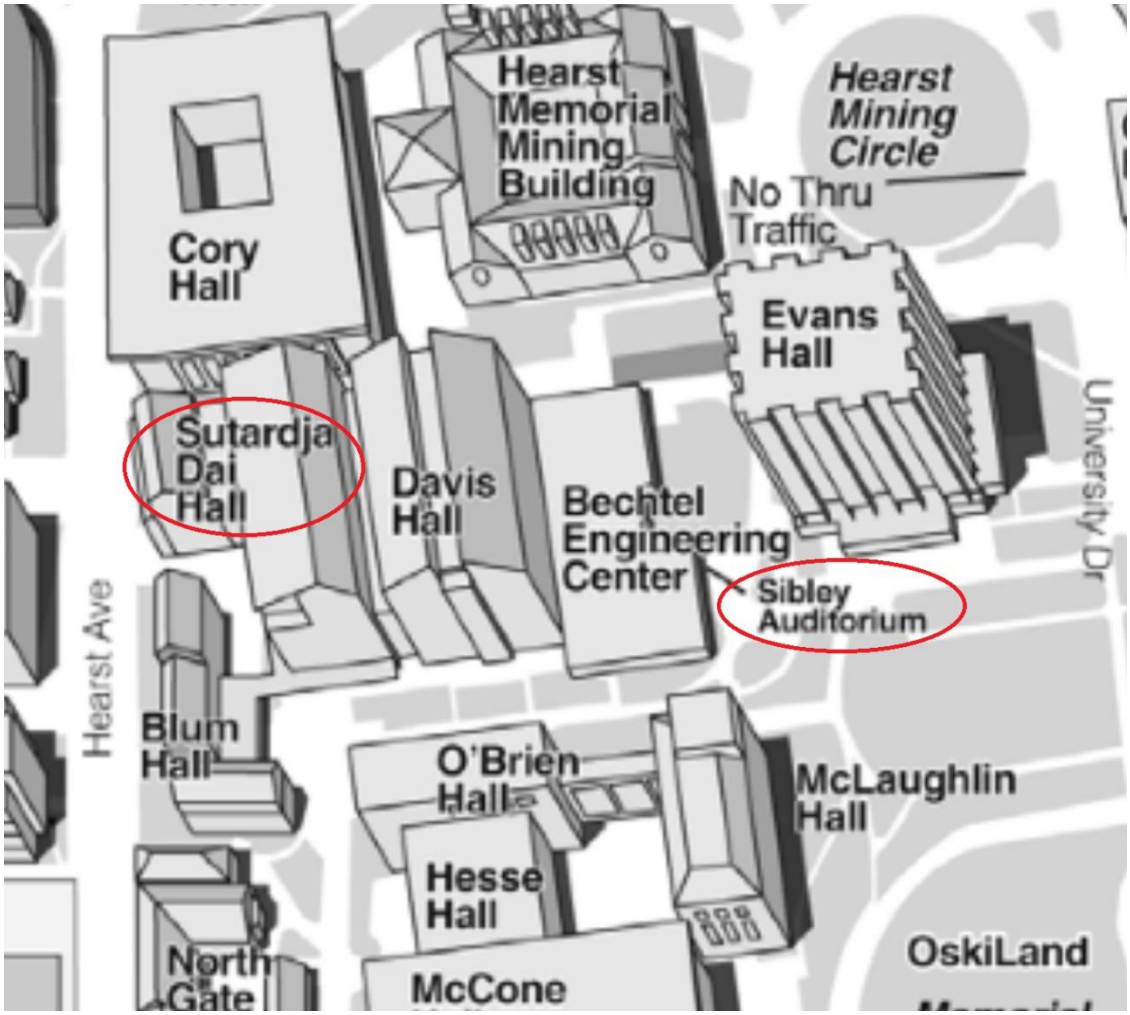

Virginia St
Milvia St
Walnut St
Oxford St
Spruce St
Scenic Ave
Euclid Ave
Ridge Rd
La Loma Ave
Chu Rd
Hearst Ave
16 min
0.8 mile
Soda Hall
Sutardja Dai Hall
Conference Venue
Davis Hall
Sibley Auditorium
The Greek Theatre
Henry St
Berkeley Way
Wickson Rd
Moffitt Undergraduate Library
16 min
Stadium Rim Way
Crescent
Oxford St
14 min
0.8 mile
South Dr
Haas School of Business
Optometry Library
Berkeley Repertory Theatre
Addison St
Eucalyptus Grove/Grinnell Natural Area
Wheeler Hall
Freight & Salvage Coffeehouse
Downtown Berkeley Station
Edwards Stadium
Haas Pavilion
Zellerbach Hall
Sather Plaza
Barrow Ln
UC Berkeley School of Law
Bancroft Way
Hotel Shattuck Plaza
Berkeley Art Museum
College Ave
Durant Ave
Berkeley Public Library
The Berkeley City Club
Banquet Venue
Telegraph Ave
Channing Way
Haste St
Ellsworth
Dana St

CONFERENCE VENUE

ICCM2016 will be held in the campus of University of California – Berkeley, United States.

- Plenary Lectures and Session 1A on Day 1 will be held at Sibley Auditorium.
- All other sessions will be in Sutardja Dai Hall.
- Conference Banquet will be at the Berkeley City Club (refer to the map on page 2).

Room A: Sibley Auditorium, Bechtel Engineering Center (2nd Floor)
Room B: Sutardja Dai Hall Room 310 (3rd Floor)
Room C: Sutardja Dai Hall Room 250 (2nd Floor)
Room D: Sutardja Dai Hall l Room 630 (6th Floor)
Room E: Sutardja Dai Hall Room 254 (2nd Floor)
Room F: Sutardja Dai Hall Room 242 (2nd Floor)



1. WELCOME MESSAGE

Dear Friends and Colleagues,

On behalf of the organising committee and the co-chairs, we would like to welcome you to the 7th International Conference on Computational Methods (ICCM2016) at Berkeley, California, USA, between August 1st and 4th, 2016. The conference aims at to provide an international forum for scholars, researchers, industry practitioners, engineers, and graduate and undergraduate students to promote exchange and disseminate recent findings on both contemporary and traditional subjects in computational methods, numerical modeling and simulation, and their applications in science and engineering. It accommodates presentations on a wide range of topics to facilitate inter-disciplinary exchange of ideas in science, engineering and allied disciplines, and helps to foster collaborations.

Computational Modelling and Simulation are fundamental subjects in engineering and sciences. They can be applied to many of the primary engineering disciplines, including Aerospace, Bio-medical, Civil, Chemical, Mechanical, and Materials Engineering among others. Computational Modelling and Simulation cover a broad range of research areas, from conventional structural and mechanical designs, failure analysis, dynamic and vibration analysis, and fluid mechanics to cutting-edge computational mechanics, nano-micro mechanics, multiscale mechanics, coupled multi-physics problems and novel materials. This is reflected in the variety of fields featured in the conference topics.

The genesis of the ICCM series dates back to 2004, when the first ICCM2004 conference was held in Singapore founded and chaired by Professor Gui-Rong Liu, followed by ICCM2007 in Hiroshima, Japan, ICCM2010 in Zhangjiajie, China, ICCM2012 in Gold Coast, Australia, ICCM2014 in Cambridge, UK, and ICCM2015, Auckland, New Zealand. The present ICCM conference in Berkeley, USA encompasses over 360 oral presentations in 68 technical sessions, including 2 Plenary Talks, 6 Thematic Plenary Talks, and a number of Keynotes.

The ICCM conference is unique in the sense that it showcases the current developments and trends in the general topic of Computational Methods and their relationship to global priorities in science and engineering. The papers scheduled for presentation at ICCM address many urgent and grand challenges in modern engineering and sciences. All ICCM abstracts and full papers were peer-reviewed by independent reviewers. Selected papers may be invited to be developed into a full journal paper for publication in special issues of some international journals. These papers encompass a broad range of topics related to computational mechanics, including applied mechanics theory and formulation, computational methods and techniques, modelling techniques and procedures, nano and macro-mechanics of materials, dynamics, manufacturing, biomechanics, processing of advanced materials, welding and joining, surface engineering and other related processes.

We would like to express my gratitude for the contributions of all ICCM2016 participants and presenters at this international event. We gratefully acknowledge the contributions from the International Scientific Committee, Mini-Symposium Organisers, and the expert reviewers and volunteers for their efforts and assistance in the organisation. Special thanks go to Ms Joanne Wang, Conference Manager, for her year-long management of the entire conference, excellent technical support, and patient services and daily communication to all the participants, authors and reviewers.

Finally, we would like to thank you for your contribution to the ICCM2016 conference. We are looking forward to your participation and continued engagement for the future ICCM conferences.

Professor Shaofan Li
Conference Chairman, ICCM2016
University of California at Berkeley

Professor Gui-Rong Liu
Conference Chairman, ICCM2016
University of Cincinnati

2. CITATION OF PAPERS PRESENTED IN THIS CONFERENCE

Papers in this proceeding may be identically cited in the following manner:
Author names, Paper title, Proceedings of the 6th International Conference on Computational Methods, 1st – 4th August 2016, Berkeley, ScienTech Publisher, Paper ID (ISSN 2374-3948, online).

3. CONFERENCE DETAILS

Conference venue

The ICCM2016 will be held at the Sutardja Dai Hall inside the University of California at Berkeley campus.
Address: Sutardja Dai Hall, MC 1764
Berkeley, CA 94720-1764, United States
(Nearest address: 2594 Hearst Ave., Berkeley, CA 94720, U.S.A.)

Instructions for chairs and presenters

Presentation Time: Plenary Lecture 35 minutes; Thematic Plenary Lecture 30 minutes; All other presentations: 20 minutes. The presentation time includes presentation and Q&A. It is advisable to give 5 minutes for Q&A. The conference program is fully packed. Please stick to the program to facilitate movement between the sessions.

Instructions for oral presenters

A data projector and a computer are provided in each room. Please bring your file on a USB stick to the room of your presentation during the break before your session, or 20 minutes before the start of the day's presentations. You may also use your own laptop. A volunteer in the room will help you to load your presentation file.

Name tags: Name tags are required for entry to all conference events. Please wear them at all times.

Free Wifi connection: "CalVisitor" (No password required).

Registration/Information desk

The registration desk at the Kvamme Atrium, 300 Sutardja Dai Hall, UC-Berkeley will be open from 16:00-20:00 on Monday 1st August, and 8:30 -17:00 on 2nd-4th August 2016.

Catering

Coffee breaks for all mornings and afternoons, lunches for all the presentation days 2st-4th August, a simple reception on the pre-conference day (1st August) and banquet dinner on 3 August are included for all registered participants.

Welcome Reception

All participants are cordially invited to the Welcome Reception hosted by Conference Chairmen. The Welcome Reception will be held at the Kvamme Atrium, Sutardja Dai Hall, UC-Berkeley from 18:00 to 20:00 on 1st August 2016. The reception will provide a unique networking opportunity for the participants, and will enable all to become acquainted with colleagues and invited speakers from all around the world.

Conference Banquet

The banquet dinner will be held between 18:30 – 21:00 on 3rd August 2016 at
Berkeley City Club (0.8 miles, 15 min walking from the conference venue)
2315 Durant Avenue, Berkeley, CA 94704; http://www.berkeleycityclub.com
Phone: (510) 280-1534, (510) 848-7800; Email: guestservices@berkeleycityclub.com

4. ORGANIZATION COMMITTEE

Chairman: Professor Shaofan Li, University of California at Berkeley, U.S.A.

Co-Chairman: Professor Gui-Rong Liu, University of Cincinnati, U.S.A.

Co-Chairs:

Jeng-Tzong Chen (National Taiwan Ocean University, Taiwan)

Seiichi Koshizuka (University of Tokyo, Japan)

Raj Das (Auckland University, New Zealand)

Moubin Liu (Peking University, China)

Sau Cheong Fan (Nanyang Technological University, Singapore)

Paulo Pimenta (University of São Paulo, Brazil)

Yuantong Gu (Queensland University of Technology, Australia)

Jagdish Prakash (University of Botswana, Botswana)

Tarun Kant (Arid Forest Research Institute, India)

Xiao-Wei Gao (Dalian University of Technology, China)

International Scientific Committee:

Umberto Alibrandi (Singapore)
Tinh-Quoc Bui (Viet Nam)
Song Cen (China)
Jeng-Tzong Chen (Taiwan)
Weiqiu Chen (China)
Zhen Chen (USA)
Raj Das (New Zealand)
Saucheong Fan (Singapore)
Xiqiao Feng (China)
Justin Fernandez (New Zealand)
Yuantong Gu (Australia)
Yu Huang (China)
Chao Jiang (China)
Hiroshi Kanayama (Japan)
Zhan Kang (China)
Tarun Kant (India)
Yoon-Young Kim (South Korea)
Adrian Koh (Singapore)
Seiichi Koshizuka (Japan)
Canh Le (Viet Nam)
Ik-Jin Lee (South Korea)
Quanbing Eric Li (China)
Wei Li (China)
Moubin Liu (China)
Ping Lu (USA)
Francesco Mammoliti (Italy)
Karol Miller (Australia)
Sundararajan Natarajan (India)
Francesco Noto (Italy)
Masao Ogino (Japan)
Marc Oudjene (France)
Joe Petrolito (Australia)
Paulo Pimenta (Brazil)
Jagdish Prakash (Botswana)
Ekkehard Ramm (Germany)
Alessandro Reali (Italy)
Daya Reddy (South Africa)
Erick Saavedra (Chile)
Lian Shen (USA)
Yuichi Tadano (Japan)
Zhaofeng Tian (Australia)
Cengiz Toklu (Turkey)
Patrizia Trovalusci(Italy)
Ken-ichi Tsubota (Japan)
Cheng Wang (China)
Yuesheng Wang (China)
Hengan Wu (China)
Yanling Wu (China)
Feng Xiao (Japan)
Jinyou Xiao (China)
Chao Xu (China)
Lixiang Yang (USA)
Jianyao Yao (China)
Hongling Ye (China)
Wenjing Ye (Hong Kong)
Jingjie Yeo (Singapore)
Sung-Kie Youn (South Korea)
Mengyan Zang (China)
Dia Zeidan (Jordan)
Chuanzeng Zhang (Germany)
Qing Zhang (China)
Xiong Zhang (China)
Kun Zhou (Singapore)

5. PROGRAM OVERVIEW

Overall Conference Program

ICCM2016, 1st-4th August 2016

Date	Time	Conference Program
Day 0 Aug. 1st (Mom)	16:00-18:30	On-site Registration
	18:00-20:00	Welcome reception
Aug. 2nd-4th	8:30-17:00	On-site Registration
Day 1 Aug. 2nd (Tuesday)	**8:00-8:10**	**Opening Ceremony**
	8:10-8:45	**Plenary Lecture I**
	8:45-9:20	**Plenary Lecture II**
	9:20-9:40	Morning Coffee/Tea
	9:40-12:40	**Parallel Sessions**
	12:40-13:40	Lunch
	13:40-15:40	**Parallel Sessions**
	15:40-16:00	Afternoon Coffee/Tea
	16:00-18:00	**Parallel Sessions**
Day 2 Aug. 3rd (Wednesday) **&** **Day 3** Aug. 4th (Thursday)	**8:00-8:30**	**Thematic Plenary Lectures**
	8:30-10:30	**Parallel Sessions**
	10:30-10:40	Morning Coffee/Tea
	10:40-12:40	**Parallel Sessions**
	12:40-13:40	Lunch
	13:40-15:40	**Parallel Sessions**
	15:40-15:50	Afternoon Coffee/Tea
	15:50-17:50	**Parallel Sessions**
Aug. 5th (Friday)	8:00-12:00	Free discussions & meetings

Conference Banquet: 18:30 – 21:00 on Wednesday, 3th Aug. 2016

6. DETAILED PROGRAM - PLENARY AND PARALLEL SESSIONS

Plenary Lecture (PL)

Mechanistic Data-Driven Design of Complex Multiscale Material Systems
Wing Kam Liu (Northwestern University, U.S.A.)

Real-Time Multiscale Modeling via Projection-Based Model Reduction
Charbel Farhat (Stanford University, U.S.A.)

Thematic Plenary Lecture (TPL)

Large-Scale Collapse Analyses of Buildings and Motion Analyses of Non-Structural Components within Them
Daigoro Isobe (University of Tsukuba, Japan)

Ill-conditioning with C∞ radial basis functions and asymmetric collocation
Edward John Kansa (Convergent Solutions, USA)

FSI Simulation with Coupled Incompressible Material Point Finite Element Method
Xiong Zhang (Tsinghua University, China)

Smoothed Particle Hydrodynamics (SPH) Applications in Some Sediment Dispersion Problems
Nhan Phan-Thien (National University of Singapore, Singapore)

Combined Effects on MHD Free Convection Rotating Flow of Visco-elastic Fluid Past an Infinite Vertical Oscillating Porous Plate with Chemical Reaction
Jagdish Prakash (University of Botswana, Botswana)

Damage and Failure in Natural Fibre Composites: A Multiscale Perspective
Raj Das (University of Auckland, New Zealand)

Proposed Mini-Symposium (MS) Proposed- Titles and Organizers

MS	Mini-symposium (MS) Title	Organizers
MS-000	General Papers	Shaofan Li (University of California) Gui-Rong Liu (University of Cincinnati)
MS-001	Theory and Formulation for Novel Computational Methods	Gui-Rong Liu (University of Cincinnati)
MS-002	Advanced Computational Modelling of Fracture and Damage	Raj Das (University of Auckland)
MS-003	Modelling and Simulation on Nanomechanics	Hengan Wu (University of Science and Technology of China)
MS-004	Computational Methods and Applications in Geoscience & Engineering	Yu Huang (Tongji University)
MS-005	Medical Rapidprototyping and Tissue Engineering	Abhaykumar Kuthe (Visvesvaraya National Institute of Technology)
MS-006	Computational Methods in Engineering	Zhao Zhang (Dalian University of Technology) Songying Chen (Shandong University)
MS-007	Fracture Modeling in Functional and Multifield Smart Materials and Structures	Tinh Quoc Bui (Tokyo Institute of Technology) Sohichi Hirose (Tokyo Institute of Technology) Chuanzeng Zhang (University of Siegen)
MS-008	Parallel and other high performance computing in the solution of partial differential equations	Ismael Herrera (National University of Mexico)
MS-009	Computational Modelling of Multi-Uncertainty and Multi-Scale Problems	Chenfeng Li (Swansea University)

MS-010	Particle Based Methods	Xiong Zhang (Tsinghua University) Zhen Chen (University of Missouri / Dalian University of Technology) Dongdong Wang (Xiamen University) Yan Liu (Tsinghua University)
MS-011	Large Scale Coupled Problems and Related Topics	Hiroshi Kanayama (Japan Women's University) Masao Ogino (Nagoya University) Ryuji Shioya (Toyo University)
MS-012	Multiscale and Multiphisics Modelling for Complex Materials	Patrizia Trovalusci (Sapienza University Di Roma) Bernhard Schrefler (University of Padua)
MS-013	Orthopaedic Biomechanics and Mechano-Biology	Lihai Zhang (University of Melbourne)
MS-014	Computational Modelling in Material Processing	Cho-Pei Jiang (National Formosa University)
MS-015	Advanced Computational Methods in Underwater Acoustics	Wei Li (Huazhong University of Science and Technology)
MS-016	Reconstruction and Extrapolation of N-dimensional Data	Dariusz Jacek Jakóbczak (Technical University of Koszalin)
MS-017	Modelling and Characterization of Mechanical Behaviour of Advanced Materials	Liguo Zhao (Loughborough University)
MS-018	Application and theory of mesh-free methods engineering and scientific problems	Edward Kansa (Convergent Solutions)
MS-019	New Horizons in FEM Analysis for Mechatronics in the Medical Applications	Francesco Noto (University of Catania) Francesco Mammoliti (University of Catania)
MS-020	Computational Methods for Intelligent Systems	Gui-Rong Liu (University of Cincinnati)
MS-021	Computational Methods for Internet, networks and Security	Gui-Rong Liu (University of Cincinnati)
MS-022	Software Development and Coding Techniques	Gui-Rong Liu (University of Cincinnati)
MS-023	Computational Methods for Big-Data	Gui-Rong Liu (University of Cincinnati)
MS-024	Computational Methods for Images, Graphics, and 4D-Data	Gui-Rong Liu (University of Cincinnati)
MS-025	Computational Methods for Business Operations	Gui-Rong Liu (University of Cincinnati)
MS-026	Numerical Modelling of Composite Structures Subjected to Extreme Loading Conditions	Zhongwei Guan (University of Liverpool)
MS-027	Computational Methods for Sound and Vibration	Heow-Pueh Lee (National University of Singapore)
MS-028	Phase-field Method: Theory, Algorithm and Application	Lei Chen (Mississippi State University) Yijia Gu (Alcoa)
MS-029	Methods for Multi-Phase Flows	Dia Zeidan (German Jordanian University)
MS-030	Computational Acoustics and Elastodynamics in Solids and Structures	Wenqiu Chen (Zhejiang University) Chuanzeng Zhang (University of Siegen) Yuesheng Wang (Beijing Jiaotong University)
MS-031	Numerical modelling of solar enhanced combustion and gasification	Zhao-Feng Tian (University of Adelaide)
MS-032	DE-FEM and its application	Mengyan Zang (South China University of Technology)
MS-033	Fluid-Structure Interaction and Multiphysics Problems in Aerospace Engineering	Jianyao Yao (Chongqing University)

MS-034	Multiscale Modelling of Advanced Engineering Materials and Structures	Richard Chunhui Yang (University of Western Sydney)
MS-035	Application of metaheuristic algorithms to structural design and analysis	Cengiz Toklu (Bayburt University)
MS-036	Numerical methods for structural dynamics, control and health monitoring	Chao Xu (Northwestern Polytechnical University) Haijun Peng (Dalian University of Technology) Mohamed Hamdaoui (Université de Lorraine)
MS-037	Multilevel direct and iterative solvers for linear systems: theory and applications	Pieter Coulier (KU Leuven / Stanford University) Eric Darve (Stanford University)
MS-038	Computational Biomechanics of Musculoskeletal Tissues	Justin Fernandez (University of Auckland) Qing Li (Sydney University)
MS-039	Advanced Computational Methods for Soft Matters	Hua LI (Nanyang Technological University)
MS-040	Multi-scale Computational Mechanics for Heterogeneous Materials	Erick Saavedra Flores (Universidad de Santiago de Chile)
MS-041	Advances in Simulation for Marine and Offshore Applications	Ping Lu (American Bureau of Shipping)
MS-042	Recent Advances In Meshfree and Particle Methods	Seiichi Koshizuka (University of Tokyo) Moubin Liu (Peking University) Bin Chen (Xian Jiaotong University)
MS-043	Modeling and Simulation of Cellular Migration: from Molecules to Multiple Cells	Ken-ichi Tsubota (Chiba University) Hiromi Miyoshi (RIKEN)
MS-044	MS-044 Advances in the BEM and Other Related Mesh-Reduction Methods	Yijun Liu (University of Cincinnati) Xiaowei Gao (Dalian University of Technology) Jianming Zhang (Hunan University) Wenjing Ye (Hongkong University of Science and Technology) Naoshi Nishimura (Kyoto University)
MS-045	Knowledge Based Artificial Intelligence Applied To Computer Aided Engineering	Pedro V. Marcal (Mpact Corp.)
MS-046	Smoothed Finite Element Methods: Theory and Applications	Yuki Onishi (Tokyo Institute of Technology) Gui-Rong Liu (University of Cincinnati)
MS-047	Innovative Techniques and their Applications to Fluid-Structure Interaction Problems	Rajeev K. Jaiman (National University of Singapore) Boo-Cheong Khoo (National University of Singapore)
MS-048	Advances in Numerical Methods for Multiple Inclusion Problems	Jungki Lee (Hongik University)
MS-049	Computational errors and their evaluation, from theory to engineering practice	Aram Soroushian (International Institute of Earthquake Engineering and Seismology)
MS-050	Multiphysics Computation and Applications	Dong Qian (University of Texas at Dallas) Shaofan Li (University of California) Gui-Rong Liu (University of Cincinnati)
MS-051	Direct Methods: Computations and Applications	Canh Le (International University - VNU)
MS-052	Numerical Methods in Financial Engineering and Risk Management	Hong-Ming Yin (Washington State University)
MS-053	Stochastic Dynamic Analysis for Performance Based Engineering Approach	Umberto Alibrandi (National University of Singapore)

MS-054	Failure and instabilities in soft materials and geomaterials	Steve WaiChing Sun (Columbia University) Joshua A. White (Lawrence Livermore National Laboratory) Pengcheng FU (Lawrence Livermore National Laboratory) Nikolaos Bouklas (University of Texas at Austin) Christian Linder (Stanford University)
MS-055	Structural uncertainty analysis and design	Jiang Chao (Hunan University) Zhan Kang (Dalian University of Technology) Wei Gao (University of New South Wales)
MS-056	Modeling and Characterization of Nanocomposites	Roham Rafiee (University of Tehran)
MS-057	Advanced modelling and simulation of linear and nonlinear dynamic systems	Eric Li (Shanghai Jiao Tong University) Zhicheng He (Hunan University)
MS-058	Computational Methods for Model Reduction and its Engineering Applications	Zhijie Xu (Pacific Northwest National Laboratory) Kejie Zhao (Purdue University)
MS-059	Theoretical and Computational Models for Additive Manufacturing	Sridhar Narayanaswamy (Institute of High Performance Computing, Singapore) Zhiqian Zhang (Institute of High Performance Computing, Singapore)
MS-060	CFD of turbulence for applied, industrial, or environmental flows	Lian Shen (University of Minnesota) Andres Tejada-Martinez (University of South Florida)
MS-061	Structural optimization methods and applications	Hongling Ye (Beijing Jiaotong University)
MS-062	Advanced Modeling and Simulation for Dynamics and Control	Zhiqin Cai (Dalian University of Technology) Qiang Gao (Dalian University of Technology)
MS-063	Computational modelling for environmental and water resources engineering applications	Wing-Keung Law (Nanyang Technological University) Kun Zhou (Nanyang Technological University)
MS-064	Structural damage by internal/external explosion	Sau Cheong Fan (Nanyang Technological University)
MS-065	Inverse problems in Engineering	Miao Cui (Dalian University of Technology)
MS-066	Uncertainty management approaches	Gui-Rong Liu (University of Cincinnati)
MS-067	Methods for complex material and structural systems	Gui-Rong Liu (University of Cincinnati)

7. CONFERENCE SESSIONS

Day 1: Tuesday, 2 August 2016

08:00-08:10 Opening Ceremony: Room A (Sibley Auditorium)

Day 1 Plenary Lectures: Tuesday, 2 August 2016

Plenary Lectures (PL), Room A (Sibley Auditorium), Chairs: Shaofan Li and Gui-Rong Liu

Time	ID	Presenter and Title
08:10-08:45	1926	Mechanistic Data-Driven Design of Complex Multiscale Material Systems / **Wing Kam Liu**, Northwestern University, USA
08:45-09:20	2111	Real-Time Multiscale Modeling Via Projection-Based Model Reduction / **Charbel Farhat**, Stanford University, USA

Day 2 Thematic Plenary Lectures (TPL): Wednesday, 3 August 2016

Time	ID	Presenter and Title
TPL-1, Room B (Sutardja Dai Hall Room 310), Chair: Seiichi Koshizuka		
08:00-08:30	2099	Large-Scale Collapse Analyses of Buildings and Motion Analyses of Non-Structural Components Within Them / **Daigoro Isobe**, Japan
TPL-2, Room C (Sutardja Dai Hall Room 250), Chair: Leevan Ling		
08:00-08:30	1410	Ill-conditioning with C∞ radial basis functions and asymmetric collocation / **Edward John Kansa**, USA
TPL-3, Room D (Sutardja Dai Hall Room 630), Chair: Zhen Chen		
08:00-08:30	1436	FSI Simulation with Coupled Incompressible Material Point Finite Element Method / **Xiong Zhang** , China

Day 3 Thematic Plenary Lectures (TPL): Thursday, 4 August 2016

Time	ID	Presenter and Title
TPL-4, Room B (Sutardja Dai Hall Room 310), Chair: Raj Das		
08:00-08:30	1647	Smoothed Particle Hydrodynamics (SPH) Applications in Some Sediment Dispersion Problems / **Nhan Phan-Thien**, Singapore
TPL-5, Room C (Sutardja Dai Hall Room 250), Chair: Manoj Kumar		
08:00-08:30	1870	Combined Effects on MHD Free Convection Rotating Flow of Visco-elastic Fluid Past an Infinite Vertical Oscillating Porous Plate with Chemical Reaction / **Jagdish Prakash**, Botswana
TPL-6, Room D (Sutardja Dai Hall Room 630), Chair: Jianyao Yao		
08:00-08:30	2101	Damage and Failure in Natural Fibre Composites: A Multiscale Perspective / **Raj Das**, New Zealand

Parallel Sessions

Day 1: Room A (Sibley Auditorium) Parallel Sessions: Tuesday, 2 August 2016

Session 1A- Chairs: Gui-Rong Liu, Zhaocheng Xuan

MS-001 Theory and Formulation for Novel Computational Methods

Time	ID	Title / Authors
9:40-10:00	1498	Keynote: Computing Contact Forces of Elastic Structure Based on Entropy in Statistical Physics / Zhaocheng Xuan
10:00-10:20	1581	Continuous Adjoint-based Adaptive Discontinuous Galerkin Method / Huiqiang Yue, Tiegang Liu, Shaydurov Vladimir
10:20-10:40	1442	An Innovative Approach to Computational Simulation of the Functional Characteristics of Poroelastic Materials Illustrated with Diffusion Into Articular Cartilage / Jamal Kashani, Lihai Zhang, Yuantong Gu, Adekunle Oloyede
10:40-11:00	1528	An Integrated Linear Reconstruction for Finite Volume Scheme on Unstructured Grids / Li Chen, Ruo Li
11:00-11:20	1559	Discrete Asymptotic Equations for Long Wave Propagation / Stevan Bellec
11:20-11:40	1548	An Isogeometric Discontinuous Galerkin Method for 2D Euler Equations / Shengjiao Yu, Renzhong Feng, Tiegang Liu

Day 1: Room B (Sutardja Dai Hall Room 310) Parallel Sessions: Tuesday, 2 August 2016

Session 1B1– Chairs: WaiChing Sun, Nikolaos Bouklas
MS-054 Failure and instabilities in soft materials and geomaterials
MS-057 Advanced modelling and simulation of linear and nonlinear dynamic systems

Time	ID	Title / Authors
9:40-10:00	1806	Keynote: Micro-mechanical Constitutive Formulation of Strain-induced Crystallization in Soft Rubber-like Materials / Reza Rastak, Christian Linder
10:00-10:20	1822	Keynote: An Assumed Enhanced Strain Method for Modeling Hydraulic Fracture Propagation / Joshua Alexander White, Wei Wang
10:20-10:40	1852	Keynote: A unified variational eigen-erosion framework for interacting fracture and compaction band in brittle porous media / WaiChing Sun, Zhijun Cai
10:40-11:00	1482	High-order Algorithms for Nonlinear Problems and Numerical Instability / Jose Elias Laier
11:00-11:20	1407	Parameters of Bowel Movement / Omar Kamel Alqatrawi
11:20-11:40	1615	A Fundamental Study for the Beat Phenomenon in Metal Nanowires / Zhuoqun Zheng, Xu Xu
11:40-12:00	1550	Elevated Temperature Fatigue and Failure Mechanism of 2.5D T300/QY8911-IV Woven Composites / Jian Song, Haitao Cui
12:00-12:20	1630	A Computational Methodology for Predicting Failure Initiation from V-notch Edges in 3D Brittle Elastic Materials / Brigit Mittelman, Zohar Yosibash
12:20-12:40	1520	A Stabilized Equal Order Finite Element Method for Coupled Diffusion and Large Deformation of Hydrogels / Nikolaos Bouklas, WaiChing Sun

Session 1B2– Chairs: Lucy Zhang, Mahmood Jabareen
MS-001 Theory and Formulation for Novel Computational Methods

Time	ID	Title / Authors
13:40-14:00	1939	Keynote: Towards Building a Robust Computational Framework to Simulate Multiphysics Problems - A Solution Technique for Simultaneous Three-Phase (Gas-Liquid-Solid) Interactions / Lucy T. Zhang, Chu Wang
14:00-14:20	1521	Keynote: The Cosserat Point Element (CPE) - A New Approach for Finite Element Formulation / Mahmood Jabareen
14:20-14:40	1713	Dislocation Dynamics in Polycrystals with Atomistic-informed Mechanisms of Dislocation-grain Boundary Interactions / Nathaniel J. Burbery, Giacomo Po, Raj Das, W. George Ferguson, Nasr Ghoniem
14:40-15:00	1714	Modelling Ideally Incompressible Hyperelasticity with a New Stabilized Equal-order Mixed Formulation: A Framework Applicable to Meshfree, Finite Element and Smoothed Finite Element Methods / Chun Meng Goh, Martyn Nash, Poul Nielsen
15:00-15:20	1974	Modeling, Computation and Simulation of Non-linear Soft-tissue Interaction with Flow Dynamics with Application to Biological Systems / Padmanabhan Seshaiyer, Manal Badgaish
15:20-15:40	2034	Axial Green's Function Methods on Free Grids / Do Wan Kim

Session 1B3– Chairs: Eric Li, Sarvesh Kumar
MS-001 Theory and Formulation for Novel Computational Methods
MS-022 Software Development and Coding Techniques
MS-057 Advanced modelling and simulation of linear and nonlinear dynamic systems

Time	ID	Title / Authors
16:00-16:20	1465	Keynote: Optimal Integration Points in the Explicit Formulation of Transient Heat Transfer Problems / Eric Li, Zc He
16:20-16:40	1766	Comparisons of Limiters in Discontinuous Galerkin Method / Su Penghui, Hu Pengju, Zhang Liang
16:40-17:00	2019	Multiscale Crystal Defect Dynamics Model and Simulation of Nanoindentation and Dislocation Nucleation / Dandan Lyu
~~17:00-17:20~~	~~2037~~	~~Perspective Into Model-based Genetic Programming / Pei He (visa problem)~~
17:00-17:20	2222	An integrated phase-field and finite-element model of grain growth: insights into grain structure and texture in additive manufacturing of Ti-6Al-4V / Lei Chen
17:20-17:40	1527	Convergence Analysis of Discontinuous Finite Volume Methods for Second Order Hyperbolic Problems / Sarvesh Kumar
17:40-18:00	1810	A Robust Hybrid Numerical Scheme for a System of Two Singularly Perturbed Convection-diffusion Equations / Kaushik Mukherjee

Day 1: Room C (Sutardja Dai Hall Room 250) Parallel Sessions: Tuesday, 2 August 2016

Session 1C1– Chairs: Richard Hurley and Ismael Herrera,
MS-008 Parallel and other high performance computing in the solution of partial differential equations
MS-021 Computational Methods for Internet, networks and Security

Time	ID	Title / Authors
9:40-10:00	1529	Keynote: The DVS Algorithms: General Description and Evidences That They are Top for Treating PDEs in Highly Parallelized Computers. / Ismael Herrera, Ivan Contreras
10:00-10:20	1642	Keynote: DVS Algebraic Developments and Critical Implementation Routes / Marian Lemus Garcia, Ismael Herrera, Ivan Contreras
10:20-10:40	1531	Invited: The DVS Algorithms: Their Broad Applicability and Required Interfaces / Ivan Contreras, Ismael Herrera, Marian Lemus
10:40-11:00	1693	Invited: Derived Vector Space Method Applied to a Subsurface Flow Simulator / Guillermo Hernandez-Garcia, Marian Lemus-Garcia, Graciela Herrera, Ismael Herrera
11:00-11:20	1699	GPU-based Numerical Solution of Thermal Multiphase Flow in Porous Medi / Victor Leonardo Teja
11:20-11:40	1783	Extending a 3D Parallel Particle-In-Cell Code For Heterogeneous Hardware / Grischa Jacobs
11:40-12:00	1907	Development of Three-Dimensional Anisotropic Shell Analysis Based on Domain Decomposition Method for Space Vehicle Engine Nozzle / HyunShig Joo, SangJoon Shin, HaeSeong Cho, SeIl Kim
12:00-12:20	2074	Parareal Methods for Applications in Finance / Guillaume Sall
12:20-12:40	1391	Effectiveness of load balancing in a distributed web caching system / Richard Hurley

Session 1C2– Chairs: Xiong Zhang, Zhen Chen
MS-010 Particle Based Methods

Time	ID	Title / Authors
13:40-14:00	1408	Keynote: Particle-Based Multiscale Simulation of Fluid-Structure Interactions Under Impact Loading / Zhen Chen
14:00-14:20	1619	Keynote: Projection-based Particle Methods - Latest Achievements and Future Perspectives / Abbas Khayyer, Hitoshi Gotoh
14:20-14:40	2018	Nonlocal Fluid Method for 2D Underwater Explosion / Qingsong Tu, Yumeng Hu, Shaofan Li
~~14:40-15:00~~	~~2024~~	~~Discrete Element Modeling of the Direct Shear Testing on the Granular Sand Considering the Realistic Particle Morphology / Jianfeng Wang, Bo Zhou~~
15:00-15:20	1790	Discrete Element Contact Stiffness of Granules with Rough Surfaces / Nikhil Mishra, Michael Faraone, Jae Chung, Hailong Teng, Dehua Yang, Michael Davidson
15:20-15:40	1513	Invited: Discrete Element Analysis of Macroscopic Granular Behaviors Using Elastic Contact Models of Rough Surfaces / Michael Davidson, Hailong Teng, Nikhil Mishra, Michael Faraone, Jae Chung
15:40-16:00	1824	Invited: Multi-model Finite Element Approach for Stress Analysis of Composite Laminates / Umesh Naresh Band, Yogesh M Desai

Session 1C3– Chairs: Youlin Zhang, Tamon Suwa
MS-001 Theory and Formulation for Novel Computational Methods
MS-022 Software Development and Coding Techniques
MS-057 Advanced modelling and simulation of linear and nonlinear dynamic systems

Time	ID	Title / Authors
16:00-16:20	1493	Keynote: MPS-FEM Coupled Method for Interaction Between Sloshing Flow and Elastic Structure in Rolling Tanks / Youlin Zhang, Decheng Wan
16:20-16:40	1517	An Improved Particle Swarm Optimization to Detect the SNP Barcode for Breast Cancer Prediction / Cheng-Hong Yang, Yu-Da Lin, Li-Yeh Chuang
16:40-17:00	1737	Invited: Transfer and Pouring Processes of Casting by Smoothed Particle Hydrodynamic Method / Tamon Suwa, Masaki Kazama, Keita Ogasawara, Yasuhiro Maeda, Hiroaki Ito
17:00-17:20	1947	Faster and Splitting-free Vorticity Redistribution / Matthias Kirchhart, Shinnosuke Obi
17:20-17:40	1672	A Method to Improve SPH Contact Interfaces for Solid Body Modeling / Ryan Kupchella
17:40-18:00	1875	4-stage Newmark Direct Integration Method / Yufeng Xing, Zhenyu Li, Huimin Zhang

Day 1: Room D (Sutardja Dai Hall Room 630) Parallel Sessions: Tuesday, 2 August 2016

Session 1D1– Chairs: Dia Zeidan, Samet Y. Kadioglu
MS-029 Methods for Multi-Phase Flows

Time	ID	Title / Authors
9:40-10:00	1533	Keynote: A Numerical Study of Compressible Two-Phase Flows Shock and Expansion Tube Problems / Dia Zeidan
10:00-10:20	~~1444~~	~~Runge-Kutta Discontinuous Galerkin Method in Solving Compressible Two-medium Flow / Haitian Lu, Ning Zhao (visa problem)~~
10:20-10:40	1461	Droplet Impact and Evaporation on a Porous Surface / Gihun Son
10:40-11:00	1856	An Interpolative Particle Level Set Method / Lindsay Crowl Erickson
11:00-11:20	1965	Multiphase Flows of N (N>=2) Immiscible Incompressible Fluids: Physical Formulation and Numerical Algorithm / Suchuan Dong
11:20-11:40	1878	A Second Order Self-Consistent IMEX Method for Multi-Phase Flow Problems / Samet Y Kadioglu
11:40-12:00	1848	Euler-Lagrangian Simulation of Multiphase Plumes in Stratified Flows / Ruo-Qian Wang, Rui Sun, Heng Xiao
12:00-12:20	1457	Artificial Viscosity Based on the Subcell-edged Approximate Riemann Solver / Chuanlei Zhai
12:20-12:40	1930	Two-phase Flows of Liquid and Gas in a Vertical Pipe / Katarina Jegdic
12:40-13:00	1606	An Arbitrary Lagrangian Eulerian (ALE) Framework for the Numerical Simulation of Multiphase Flow Problems / Mehmet Sahin, Cagatay Guventurk

Session 1D2– Chairs: Edward Kansa, Leevan Ling, Guangming Yao
MS-018 Application and theory of mesh-free methods engineering and scientific problems

Time	ID	Title / Authors
13:40-14:00	1649	Keynote: A Fast Block-greedy Algorithm for Quasi-optimal Meshless Trial Subspace Selection / Leevan Ling
14:00-14:20	1445	Computation and Use of the Laurent Series of the Inverse in RBF-FD Problems / Manuel Kindelan, Pedro Gonzalez-Rodriguez
14:20-14:40	1443	Development and Application of the 3D-SPH Surface Erosion Model to Simulate Multiple and Overlapping Impacts by Angular Particles / Xiangwei Dong, Zengliang Li
14:40-15:00	1560	Three-dimensional Analysis of Functionally Graded Thermo-piezoelectricity Problems by the Local Radial Basis Function Collocation Method / Hubert Hsueh-Hsien Lu, Der-Liang Young, Jan Sladek, Vladimir Sladek
~~15:00-15:20~~	~~1892~~	~~Approximating Intersection Curves of Two Explicitly Defined Surfaces using Spline Functions / Misbah Irshad~~
15:00-15:20	2118	An Overview of Numerical Methods / Gui-Rong Liu
15:20-15:40	1530	A Localized Kansa's Method for Phonon Boltzmann Transport Equation in Six-Dimensional Space / Guangming Yao, Wen Li, Ming-C Cheng

Session 1D3– Chairs: Edward Kansa, Leevan Ling, Guangming Yao
MS-018 Application and theory of mesh-free methods engineering and scientific problem

Time	ID	Title / Authors
16:00-16:20	2072	Keynote: An Implicit Integrated Polyharmonic Splines Method for PDEs / Guangming Yao
16:20-16:40	1957	A Meshless Numerical Model with Flux Limiter for Two-dimensional Shallow Water Equations / Po-Wei Li
16:40-17:00	2063	Kernel-based Collocation Method for Deformable Image Registration Model / Anita Sze MUi Wong
17:00-17:20	2062	Using the Enriched Radial Basis Function in Solving the Singular Sudden Expansion Incompressible Fluid Flow Problem / Tak Sing Li
17:20-17:40	1456	Study on Post-failure Evolution of Underwater Landslide with SPH Method / Yi An
17:40-18:00	1683	A Reduced Meshless Collocation Method for Partial Differential Equations on Irregular Domains / Alfa Heryudono

Day 1: Room E (Sutardja Dai Hall Room 254) Parallel Sessions: Tuesday, 2 August 2016

Session 1E1– Chairs: Heow-Pueh Lee, Kian Meng Lim, Antonio Papangelo
MS-027 Computational Methods for Sound and Vibration

Time	ID	Title / Authors
9:40-10:00	1535	Keynote: Design of Sonic Crystal Windows for Meeting the Trio Challenges of Providing Natural Ventilation, Daylight and Noise Mitigation / Heow-Pueh Lee
10:00-10:20	1376	Non Linear Strain Integral Damping (S.I.D.) / Ugo Alfredo Tornar
10:20-10:40	1567	Phononic Band Structure Analysis of SH Waves in Nanoscale Multilayered Piezoelectric Structures using Radial Basis Function Method with Imperfect Interface / Zhizhong Yan, Chunqiu Wei, Chuanzeng Zhang
10:40-11:00	1696	Modeling Complex Dynamical Systems in MF Range Combining FEM and Energy Methods / Gerard Borello
11:00-11:20	1622	Numerical Simulation of Sound Attenuation by Sonic Crystals / Kian Meng Lim, Heow Pueh Lee, Boo Cheong Khoo
11:20-11:40	1877	Vibration Localization and Snaking Phenomenon in Friction-excited Cyclic Symmetric Oscillators Chains / Antonio Papangelo
11:40-12:00	1745	Prediction of the Bending Behavior of Natural Fiber Composites Based on Multi-scale FEA Analysis / Yucheng Zhong, Tran Le Quan Ngoc, Umeyr Kureemun, Heow Pueh Lee
12:00-12:20	1845	An Application of the Method of Groebner Bases to a Geometrically Non-linear Free Vibration Analysis of Composite Plates / Aravind Shanmugasundaram, Y. Jane Liu, John Peddieson
12:20-12:40	1807	Fuzzy Condition Monitoring for Dry Coolers using MATLAB / Tawanda Mushiri

Session 1E2– Chairs: Yuki Onishi and Seungmin Jin
MS-046 Smoothed Finite Element Methods: Theory and Applications

Time	ID	Title / Authors
13:40-14:00	1882	Keynote: F-bar Aided Edge-based Smoothed Finite Element Methods with 4-node Tetrahedral Elements for Static Large Deformation Hyperelastic and Elastoplastic Problems / Yuki Onishi, Ryoya Iida, Kenji Amaya
14:00-14:20	2043	Invited: Smoothed Polyhedral Variable-Node Elements And Their Applications / Seyoung Im, Seungmin Jin, Jungdo Kim, Hobeom Kim, Chan Lee
14:20-14:40	2007	Performance Evaluation of Various Smoothed Finite Element Methods with Tetrahedral Elements in Large Deformation Dynamic Analysis / Ryoya Iida, Yuki Onishi, Kenji Amaya
14:40-15:00	2100	An Average Nodal Pressure Face-based Smoothed Finite Element Method (FS-FEM) for 3D Nearly-incompressible Solids / Chen Jiang
15:00-15:20	2104	A Cell-based Smoothed Finite Element Method for Free Vibration Analysis of a Rotating Plate / Chaofan Du
15:20-15:40	1641	Modeling and Simulating Methods for the Desiccation Cracking / Sayako Hirobe, Kenji Oguni

Session 1E3– Chairs: Hiroshi Kanayama, Masao Ogino
MS-011 Large Scale Coupled Problems and Related Topics

Time	ID	Title / Authors
16:00-16:20	1399	Keynote: The BDD-DIAG Preconditioner in Domain Decomposition Analysis for Magnetostatic Problems / Hiroshi Kanayama, Hongjie Zheng, Shin-ichiro Sugimoto, Masao Ogino
16:20-16:40	1455	Keynote: An Efficient Implementation of Parallel Scaled-BDD Method for Large-scale Structural Analysis / Masao Ogino
16:40-17:00	2021	Invited: Efficient Computational Strategy for Finite Element Flow Analysis using Semi-Lagrangian Predictor / Yasushi Nakabayashi
17:00-17:20	1732	Finite Element Approach with Unsteady Bioheat Equation for Human Skin Burn Injury / Abul Mukid Mohammad Mukaddes, Ryuji Shioya, Masao Ogino
17:20-17:40	1634	Performance Evaluation of Data Compression Methods in Linear Static and Dynamic Finite Element Analysis / Lijun Liu, Masao Ogino
17:40-18:00	1585	Large-Scale Fluid-Structure Analysis for Tsunami Inundation Into the Interior of a Building using MPS-FEM Coupling Method / Hongjie Zheng, Ryuji Shioya

Day 1: Room F (Sutardja Dai Hall Room 242) Parallel Sessions: Tuesday, 2 August 2016

Session 1F1– Chairs: Rena C. Yu, Hui Zheng, Yijun Liu,
MS-002 Advanced Computational Modelling of Fracture and Damage

Time	ID	Title / Authors
9:40-10:00	1440	FEM-based Prediction of Fracture During Manufacturing of Thick Wall Tubes from Inconel 718 Alloy in Reverse Flow Forming Process / Andrij Milenin, Piotr Kustra, Maciej Pietrzyk, Nikolay Biba
10:00-10:20	1573	Modeling of Propagation of Multiple Cracks Using Peridynamics / Jiangming Zhao, Yu Sun, Fei Xu, Yijun Liu
10:20-10:40	1608	A Non-ordinary State-based Peridynamics Implementation of Ceramic Material Brittle Fracture / Xin Lai, Lisheng Liu, Qiwen Liu
10:40-11:00	1723	Explicit Modelling of Fracture in Fiber-reinforced Cementitious Composites / Hui Zhang, Zhenjun Yang, Shilang Xu
11:00-11:20	1859	Modelling of Hydrogen Assisted Stress Corrosion Crack Extension Along Centerline of Austenitic Stainless Steel Welds / Ishwar Londhe, Surjya Kumar Maiti
11:20-11:40	1952	Keynote: Explicit Modelling Of Fibre Pullout In Cementitious Composites / Hui Zhang, Rena C. Yu, Shilang Xu
11:40-12:00	1970	Thermomechanical Fracture Dynamics in Heterogeneous Media using Cohesive Zone Models. Application to Ageing of Concrete / Lionel Bichet, Frederic Dubois, Yann Monerie, Frederic Perales
12:00-12:20	1787	Discrete Particle Methods for Simulating High-Velocity Impact Phenomen / Martin Oliver Steinhauser
12:20-12:40	1944	Mesh-Size Sensitivity for Reinforced Concrete: a Case Study / Xiaodan Ren, Chengdong Yang
12:40-13:00	1487	Modeling of a shallow surface crack in a nuclear pressure pipe by a three-term asymptotic solution / Fernando Labbe

Session 1F2– Chairs: Yuan Cheng, H.K. Lee, Demin Zhao
MS- 003 Modelling and Simulation on Nanomechanic

Time	ID	Title / Authors
13:40-14:00	1421	Keynote: Interactions Between Silk Fibroin and Graphene Substrate Based on Molecular Dynamics Simulations / Yuan Cheng, Yong-Wei Zhang
14:00-14:20	1645	Tuning the Wettability of Nanoporous Materials for Active Fluidic Control / Yahui Xue, Xiying Li, Huiling Duan
14:20-14:40	1910	Molecular Dynamics Study on Wetting of Wrinkled Graphene / Chengpeng Huang, Yu Sun, Fei Xu
14:40-15:00	2029	A Micromechanics-based Parametric Study on the Electrical Behavior of Porous Nanocomposites Reinforced with Carbon Nanotubes / B.J. Yang, G.U. Ryu, H.K. Lee
15:00-15:20	1922	Interface Constitutive and Its Impact on Mechanical Properties of Magnesium-matrix Ceramic Particle Reinforced Nanocomposites / Xia Zhou, Shangyu Song, Xiaoxia Liu, Guohui Qu
15:20-15:40	1919	Complex Normal Form Method for Nonlinear Free Vibration of a Cantilever Nano beam with Surface Effects / Demin Zhao

Session 1F3– Chairs: Pedro Vicente Marcal, Siuming Lo
MS-020 Computational Methods for Intelligent Systems
MS-045 Knowledge Based Artificial Intelligence Applied To Computer Aided Engineering

Time	ID	Title / Authors
16:00-16:20	1730	Keynote: Automatic Programming Via Text Mapping To Expert System Rules / Pedro Vicente Marcal
16:20-16:40	1828	A Domain Language for Constructive Block Topology for Hexa Mesh Generation / Robert Rainsberger
16:40-17:00	1604	Simulation of the Interaction Between Transportation Network and Power Grid Mediated by Electric Vehicles / Hideaki Uchida, Hideki Fujii, Shinobu Yoshimura
17:00-17:20	1746	Modeling and Simulation of Honeycomb Composite Sandwich Structure Subjected with GW PZT Excitation for Disbond Detection / Chandrakant B Pol
17:20-17:40	1512	The Traffic Jerk for the Full Velocity Different Car-following Model / Yi Liu, Hongxia Ge, Kl Tsui, Kk Yuen, Siuming Lo
17:40-18:00	1569	Car-following Model with Considering Vehicle's Backward Looking Effect and Its Stability Analysis / Yunong Wang, Hongxia Ge, Siuming Lo, Kwok-Leung Tsui, Kwok-Keung Yuen

Day 2: Room B (Sutardja Dai Hall Room 310) Parallel Sessions: Wednesday, 3 August 2016

Session 2B1– Chairs: Dong Qian, Jianmin Qu

MS-050 Multiphysics Computation and Applications

Time	ID	Title / Authors
8:30-8:50	1471	Keynote: Equilibrium Morphology of Misfit Particles in Elastically Stressed Solids Under Chemo-Mechanical Equilibrium Conditions / Jianmin Qu
8:50-9:10	1700	Keynote: Accelerated Multi-temporal Scale Approach to Fatigue Failure Prediction / Rui Zhang, Lihua Wen, Jinyou Xiao, Dong Qian
9:10-9:30	1505	Compressible multimaterial flows / Florian Bernard, Alexia de Brauer, Angelo Iollo, Thomas Milcent, Haysam Telib
9:30-9:50	1478	An Euler-Lagrange Approach to Model the Dynamics of Particulate Phase Exposed to Hot Gas Injection Into Packed Bed Reactors / Edder Jose Rabadan Santana, Bernhard Peters
9:50-10:10	1577	Modeling of a Blast Furnace with Both CFD and Thermodynamics Principles / Sheldon X. Wang, Tomas Grejtak
~~10:10-10:30~~	~~1413~~	~~Asymmetric Nuclear Matter Within Self-Consistent Green's Functions Method / Hesham Mohamed Mansour (visa problem)~~

Session 2B2– Chairs: Xiong Zhang, Philippe Karamian

MS-050 Multiphysics Computation and Applications; MS-034 Multiscale Modelling of Materials and Structures

Time	ID	Title / Authors
10:40-11:00	1453	Stochastic Homogenization in the Framework of Domain Decomposition to Evaluate Effective Elastic Properties of Random Composite Materials : Application to a 2D Case of Fiber Composites / Philippe Karamian
11:00-11:20	1962	Numerical Instability of Staggered Electromagnetic and Structural Coupled Analysis using Time Integration Method with Numerical Damping / Tomoya Niho, Tomoyoshi Horie, Junpei Uefuji, Daisuke Ishihara
11:20-11:40	1825	Numerical Simulation of Raceway Formation in Blast Furnace / Chenn Zhou
11:40-12:00	1724	Analytical Investigation on Removable Reduced Link Sections for EBFs / Daniel Yeshewawork Abebe, Gyumyong Gwak, Sijeong Jeong, Jaehyouk Choi
12:00-12:20	1992	Analytical Investigation on Hysteretic Characteristics of Buckling Resistance Steel Damper / Si Jeong Jeong, Daniel Y. Abebe, Gyu-myong Gwak, Jaehyouk Choi
12:20-12:40	~~1441~~	~~A Concurrent Multiscale Method Coupling Molecular Dynamics, Smoothed Molecular Dynamics and Material Point Method / Nianfeng He, Yan Liu, Xiong Zhang (visa problem)~~

Session 2B3– Chairs: Willy Leclerc, Coleman Alleman

MS-034, -040 Multiscale Modelling of Advanced Engineering Materials and Structures
MS-009 Computational Modelling of Multi-Uncertainty and Multi-Scale Problems

Time	ID	Title / Authors
13:50-14:10	1949	Multi-scale Modeling using the Dual Domain Material Point Method Combined with Molecular Dynamics / Tilak Raj Dhakal
14:10-14:30	1770	On a Numerical DEM-based Approach for Assessing Thermoelastic Properties of Composite Materials / Willy Leclerc
14:30-14:50	1628	Numerical Analysis on the Reliability of Characterizing Dynamic Mechanical Properties of Metal Foam by SHPB Test / Liqun Tang
14:50-15:10	1971	Concurrent Multiscale Modeling of Microstructural Eects on Localization Behavior in Finite Deformation Solid Mechanics / Coleman Alleman
15:10-15:30	1712	Development of a Cellular Automaton for a Better Consideration of Neighborhood Effect in Polycrystals - Comparison with Finite Element Method / Remy Bretin
15:30-15:50	2090	The Probability Distribution of the Minimum of a Set of Random Variables and the Optimal Lot Size in a Multi-Stage Model with Quality / Noura Yassine

Session 2B4– Chairs: Dingjie Lu, Farzaneh Shayeganfar

MS-003 Modelling and Simulation of Nano-systems; MS-056 Modeling and Characterization of Nanocomposites

Time	ID	Title / Authors
16:00-16:20	1488	The Extended Timoshenko Beam Element in Finite Element Analysis for the Investigation of Size Effects / Dingjie Lu
16:20-16:40	1409	Hydromagnetic Nanofluids Flow Through Porous Media with Thermal Radiation, Chemical Reaction and Viscous Dissipation using Spectral Relaxation Method / Sabyasachi Mondal, Precious Sibanda, Nageeb A.H. Haroun
16:40-17:00	2076	Molecular Communication in Nano Networks Communication / Sidra Zafar
17:00-17:20	1648	Phase Field Simulation of Magnetization Vortex in Ferromagnetic Nanomaterials / Jie Wang, Gui-Ping Li
~~17:20-17:40~~	~~1916~~	~~Junction Configuration-induced Electronic and Pseudomagnetic / Farzaneh Shayeganfar~~
17:40-18:00	1600	Coarse-grained Modeling of Carbon Nanostructures and Their Composites / Qingsheng Yang

Day 2: Room C (Sutardja Dai Hall Room 250) Parallel Sessions: Wednesday, 3 August 2016

Session 2C1– Chairs: Zhao Zhang, Janusz Rebielak
MS-006 Computational Methods in Engineering

Time	ID	Title / Authors
8:30-8:50	1555	Keynote: Numerical Studies of Post Weld Heat Treatment on Residual Stress of Impeller / Zhao Zhang
8:50-9:10	1414	A Unified Computational Method of Differential Analysis for Solving the Navier-Stokes Equations. / Mike Joseph Mikalajunas
9:10-9:30	1562	Predicting Stability of a Prototype Un-bonded Fibre-reinforced Elastomeric Isolator by Finite Element Analysis / Thuyet Van Ngo, Anjan Dutta, Sajal K. Deb
9:30-9:50	1607	A Reliability Optimization Allocation Method Considering Differentiation of Functions Based on Goal Oriented Method / Xiaojian Yi, Huina Mu, Peng Hou, Yuehua Lai
9:50-10:10	1655	Propagation Properties of Elastic Waves in the 3D Nacreous Composite Material / Sheng Zhang
10:10-10:30	1708	Simple Method of Approximate Calculation of Statically Indeterminate Trusses / Janusz Rebielak

Session 2C2– Chairs: Sun Qingchao, Janusz Rebielak
MS-006 Computational Methods in Engineering

Time	ID	Title / Authors
10:40-11:00	1614	Keynote: Stress/Displacement Field Calculation for Bolted Joint Based on State Space Theory / Sun Qingchao
11:00-11:20	1710	A Generalized Interfacial Interaction Model for Prediction of Mechanical Behavior in Bionanocomposite Materials / Liqiang Lin, Xiaowei Zeng, Xiaodu Wang
11:20-11:40	1754	Simulating Surface Tension of Oscillating Droplet with Smoothed Particle Hydrodynamics / Nowoghomwenma Noel Ehgiamusoe, Yeaw Chu Lee
11:40-12:00	1946	Static Calculations and Structural Design with Application of Principle of Superposition / Janusz Rebielak
12:00-12:20	1846	Examples of Non-commutative Groebner Bases to Plate Bending Analysis / Y. Jane Liu, Bruno Buchberger, Markus Rosenkranz, Alexander Maletzky
12:20-12:40	1805	A High Order Finite Volume Solver for Simulation of Heat Transfer in Compressible Flow from Very Low to Intermediate Mach Numbers / Carlos Jesus Romero Casado

Session 2C3– Chairs: Manoj Kumar, Hanyun Zhang
MS-006 Computational Methods in Engineering

Time	ID	Title / Authors
13:50-14:10	1354	Keynote: Numerical Simulation of Singularly Perturbed Boundary Layer Problems / Manoj Kumar
14:10-14:30	1418	Stiffness Based Assessment of Masonry Arch Bridges / Pardeep Kumar
14:30-14:50	1380	Shape Identification of Steady-state Viscous Flow Fields to Prescribe Flow Velocity Distribution / Eiji Katamine
14:50-15:10	1868	Flow-excited Vibration of a Large-scale Axial-flow Pumping Station with Steel Flow Passageways Based on FSI / Hanyun Zhang
15:10-15:30	1402	A Case Study of Time Step Validation Strategy and Convergence Method for Oscillation Numerical Simulation in a Heat Transfer Process / Jia Zhu, Xiaohui Zhang
15:30-15:50	2105	The Application of the GSM-CFD Solver for the Blood Flow in Carotid Bifurcations / Tao Lin, Gui-Rong Liu

Session 2C4– Chairs: Cui Xiangyang, Vijay Shankar Dogra
MS-006 Computational Methods in Engineering

Time	ID	Title / Authors
16:00-16:20	1509	Keynote: Analysis of Time-dependent Problems using a Stable Node-based Smoothed Finite Element Method / Cui Xiangyang, Li Guangyao
16:20-16:40	1420	Computation of Vadoze Zone Moisture Profiles for Successive Irrigation Scheduling / Vijay Shankar Dogra
16:40-17:00	1438	The LARED-Integration Code for the Numerical Simulation of the Whole Implosion Process of Inertial Confined Fusion / Heng Yong, Lei Chuan Zhai, Song Jiang
17:00-17:20	1668	Optimal Sensors/actuators Placement in Smart Structure using Island Model Parallel Genetic Algorithm / Animesh Nandy, Debabrata Chakraborty, Mahesh S Shah
17:20-17:40	1671	An Examination of Multiplicity of Steady States for Two- and Four-sided Lid-driven Cavity Flows Through an HOC Scheme / Chitrarth Prasad, Anoop K Dass
17:40-18:00	1469	Analytical Study of Machining Patterns Effect on Brake Squeal / Taeksu Jung, Chongdu Cho

Day 2: Room D (Sutardja Dai Hall Room 630) Parallel Sessions: Wednesday, 3 August 2016

Session 2D1– Chairs: Yu Huang, Andriy Andreykiv

MS-004 Computational Methods and Applications in Geoscience & Engineering

Time	ID	Title / Authors
8:30-8:50	1665	Keynote: Application of Spatial Database Modeling to Seismic Landslides Hazard Mapping with Logistic Regression Model / Yu Huang, Jiamin Zhou, Miao Yu
8:50-9:10	1477	Simulation and Experimental Validation of Mining Induced Bed Separation of Overlying Strata with Realistic Failure Process Analysis (RFPA) / Guangming Yu
9:10-9:30	1514	Integrated Multiscale Modeling of Fluid Flow in Shale: Molecular-to-core Scales / Farzam Javadpour
9:30-9:50	1540	Parametric Study on the Effects of Catenary Cables and Soil-Structure Interaction On Dynamic Behavior of Pole Structures Using the Finite Elements Method & Experimental Validation / Reza Khosravian Champiri
9:50-10:10	1580	Numerical Study on Effectiveness of Continuum Model Box Used in Shaking Table Test Under Non-uniform Excitation / Zhiyi Chen, Sunbin Liang
10:10-10:30	1588	An Algorithm for Simulation of Large Sliding Contact with Friction Between Domains Modelled with Finite Element and Material Point Methods / Andriy Andreykiv, Liang Jin Lim, Markus Burg, Ronald Bringreve

Session 2D2– Chairs: Author Shouju Li, Hassan Sabetamal

MS-004 Computational Methods and Applications in Geoscience & Engineering

Time	ID	Title / Authors
10:40-11:00	1650	High Performance Computing for Liquefaction Hazard Assessment with Statistical Soil Models / Jian Chen, Tomohide Takeyama, Hideyuki O-tani, Kohei Fujita, Muneo Hori
11:00-11:20	1684	A Fully Coupled Finite Element/Finite Volume Method for the Massively Parallel Simulation of Hydraulically Driven Fractures in 3-Dimensions / Randolph R Settgast, Joshua A White, Chandrasekhar Annavarapu, Pengcheng Fu, Yue Hao, Fredrick J Ryerson, Joseph P Morris
11:20-11:40	1698	Scattered Data Fitting with Fourier Series / Uriel Octavio Moreles
11:40-12:00	1768	Efficient Multi-domain Bivariate Spectral Collocation Solution for MHD Laminar Natural Convection Flow from a Vertical Permeable Flat Plate with Uniform Surface Temperature and Thermal Radiation / Sicelo Praisegod Goqo
12:00-12:20	1840	Numerical Study of the Effects of Strain Rate on the Behaviour of Dynamically Penetrating Anchors in Clay / Hassan Sabetamal, John P Carter, Majidreza Nazem, Scott W Sloan
12:20-12:40	1905	Computational Models for Design of Concrete Segments with Symmetrical Reinforcement Bars Under the Action of Bending Moments and Axial Forces / Shouju Li
12:40-13:00	2110	Novel 6-DoF dexterous parallel manipulator with CRS kinematic chains / MirAmin Hosseini

Session 2D3– Chairs: Vijay Kumar Bansal, Xiaohua Bao

MS-004 Computational Methods and Applications in Geoscience & Engineering

Time	ID	Title / Authors
13:50-14:10	1943	Seismic Behavior of a Caisson Type Breakwater on Non-homogeneous Soil Deposits Composed of Liquefiable Layer Under Earthquake Loading / Xiaohua Bao, Dong Su, Yanbin Fu, Feng Zhang
14:10-14:30	2011	Application of Bayesian Networks for Estimating Water Saturation / Rosa Maria Mariscal-Romero, Hector Benitez-Perez, Ernesto Rubio-Acosta
~~14:30-14:50~~	~~1460~~	~~Suspension Stability Analysis of Soil Along the Metro Lines Impact by Strong Vibrations Traffic Load / Xiangfeng Lv (visa problem)~~
14:50-15:10	1617	Seismic Response of Structure Under Soil-Structure Interaction Effect / Narith Prok
15:10-15:30	1419	Identification and Computation of Space Conflicts Using Geographic Information Systems / Vijay Kumar Bansal
15:30-15:50	1417	Reliability Analysis of Slope Stability using Monte Carlo Simulation and Comparison with Deterministic Analysis / Ravi Kumar Sharma

Session 2D4– Chairs: Majid T Manzari, Dr. Benzhou Lu

MS-012 Multiscale and Multiphisics Modelling for Complex Materials

MS-002 Advanced Computational Modelling of Fracture and Damage

Time	ID	Title / Authors
16:00-16:20	1924	Keynote: Multiscale Constitutive Models for Particle Composites as 'non-simple' Continua / Patrizia Trovalusci
16:20-16:40	1387	A Two-scale Poroplasticity Approach to Soil Liquefaction Analysis / Majid T Manzari
16:40-17:00	1546	A Two-Step Homogenization Method for Elastic Properties of Ultra High Performance Fibre Reinforced Concrete (UHPFRC) / Ansam M Qsymah
17:00-17:20	2013	Continuum Modeling of Biomolecular Electrostatics and Diffusion using FEM/BEM /Benzhuo Lu
17:20-17:40	1872	Multiscale Simulation of Fracture Pattern of Tempered Glass / Shingo Urata, Shaofan Li
17:40-18:00	1782	Numerical Simulation of the Grains Growth on Titanium Alloy Electron Beam Welding Process / Xiaogang Liu

Day 2: Room E (Sutardja Dai Hall Room 254) Parallel Sessions: Wednesday, 3 August 2016

Session 2E1– Chairs: Liguo Zhao, Gianluca Tozzi

MS-017 Modelling and Characterization of Mechanical Behaviour of Advanced Materials

MS-065 Inverse problems in Engineering

Time	ID	Title / Authors
8:30-8:50	1447	Keynote: Oxygen Diffusion and Its Coupling with Crystal Plasticity in a Nickel-Based Superalloy / Liguo Zhao
8:50-9:10	1831	Invited: Strain Uncertainties in Digital Volume Correlation of Bone Via Clinical PedCAT CT: a Feasibility Study / Gianluca Tozzi
9:10-9:30	1765	Numerical Modelling of Mechanical Response of Fibrous Materials Under Out-of-Plane Loading / Emrah Sozumert, Emrah Demirci, Memis Acar, Behnam Pourdeyhimi, Vadim V. Silberschmidt
9:30-9:50	1515	The Effect of Stray Grains on the Mechanical Behavior of Nickel-based Single Crystal Superalloy / Tang HaiBin, Guo HaiDing, Liu XiaoGang, Yang SiHui, Huang Li
9:50-10:10	1539	Hierarchical Structure Observation, Size Effect Characterization and Trans-scale Modeling for Biomaterials / Yueguang Wei
10:10-10:30	1686	Computational inverse method of fatigue dissipated energy parameters under fatigue dynamic damage / Yuan Li

Session 2E2– Chairs: Chad Abunassar, Shyue-yuh Leu

MS-017 Modelling and Characterization of Mechanical Behaviour of Advanced Materials

Time	ID	Title / Authors
10:40-11:00	1564	Keynote: Simulation of Bioresorbable Scaffold and Metallic Stent Deployment in Concentric and Eccentric Coronary Lesion Models / Chad Abunassar
11:00-11:20	1968	Invited: Cyclic Plasticity Simulations with Yield Surface Distortion by ABAQUS / Shyue-yuh Leu, K.C. Liao, C.W. Su
11:20-11:40	1597	Experimental Characterization and Numerical Simulation of Inconel 718 Under Large Plastic Deformation / Srihari Dodla
11:40-12:00	1613	Cutting Force and Friction Characterization of a Valve Seat Cutting Process Involving P-cBN Tools, an Experimental and Numerical Analysis / James Fletcher, Emrah Demirci, Vadim V. Silberschmidt
12:00-12:20	1817	What Matters the Most in 3D Printing is to Be Connected: Proof from the Simulation / Sofiane Guessasma, Sofiane Belhabib, Hedi Nouri
12:20-12:40	1913	Study on Necking Propagation of Double Network Hydrogel / Isamu Riku, Koji Mimura

Session 2E3– Chairs: Alexandre de Macedo Wahrhaftig, Haijun Peng

MS-036 Numerical methods for structural dynamics, control and health monitoring

Time	ID	Title / Authors
13:50-14:10	1538	Keynote: A Novel Fast Model Predictive Control with Actuator Saturation for Large-Scale Structures / Haijun Peng, Fei Li, Sheng Zhang, Biaosong Chen
14:10-14:30	1472	Invited: Damage Location Identification of Simply Supported Steel Truss Bridge Based on Displacement / Shaopu Yang, Jianying Ren, Shaohua Li
14:30-14:50	1378	Analysis of the First Modal Shape using Case Studies / Alexandre de Macedo Wahrhaftig
14:50-15:10	1851	Stability Investigation of Direct Integration Algorithms Using Lyapunov-Based Approaches / Xiao Liang, Khalid M. Mosalam
15:10-15:30	1778	Gust Effect Factors and Natural Sway Frequencies of Trees for Wind Load Estimation / Seung-Hoon Shin, Il-Min Kang, Seong-Geun Park, Yu-Hyun Lee, Kyung-Jae Shin, Whajung Kim, Hongjin Kim
15:30-15:50	1979	Multi-sensor Online Validation for Low-speed Maglev Suspension System / Ying Liu, Xiaolong Li, Shigang Zhang

Session 2E4– Chairs: Peter G. Gruber, Sameer A. Hamoush

MS-014 Computational Modelling in Material Processing

Time	ID	Title / Authors
16:00-16:20	1838	Simulation of Thermoforming Processes with Anisotropic and Visco-hyperelastic Sheets of Laminate / Peter G. Gruber
16:20-16:40	1726	Metallo-thermo-mechanical Modeling of Laser Cladding for Additive Restoration of Die Steels / Wenyi Yan
16:40-17:00	2092	Distortion Analysis for Stamping an Automotive Part with Advanced High Strength Steel Sheet / Fuh-Kuo Chen
17:00-17:20	1874	Prediction of Contact Stress Distribution After Periacetabular Osteotomy by Finite Element Contact Analysis / Xian Chen, Taro Mawatari, Fei Jiang, Junji Ohgi
17:20-17:40	1986	Influence of the Thickness of U-10Mo Coupon on Monolithic Fuel Plate Rolling Simulation Results / Shurong Ding, Xiangzhe Kong
17:40-18:00	1375	Atomization of Metal Droplets in Production of Powder for 3D Printing Application / Taher M. Abu-Lebdeh, Sameer A. Hamoush

Day 2: Room F (Sutardja Dai Hall Room 242) Parallel Sessions: Wednesday, 3 August 2016

Session 2F1– Chairs: Weiqiu Chen, Michael Wünsche, Chunli Zhang

MS-030 Computational Acoustics and Elastodynamics in Solids and Structures

Time	ID	Title / Authors
8:30-8:50	1873	Keynote: An Efficient Method for Simulating Free Waves in Multiferroic Laminates / Weiqiu Chen
8:50-9:10	1727	Design of Porous Phononic Crystals with Combined Band Gaps / Yang Fan Li, Xiaodong Huang, Shiwei Zhou
9:10-9:30	1934	Transition of Buckling Patterns and Its Effects on Elastic Wave Propagation in Lattice Structures / Yilan Huang, Ronghao Bao, Weiqiu Chen
9:30-9:50	2040	Keynote: Dynamic Crack Analysis of Fiber Reinforced Piezoelectric Composites by a Galerkin BEM / Michael Wünsche
9:50-10:10	2035	Invited: Analysis of Magnetoelectric Effect in Mulitferroic Nano-laminate with Flexoelectricity / Chunli Zhang
10:10-10:30	1519	Invited: Acoustic Simulation using a Gradient-weighted Finite Element Method / Gang Wang, Xiangyang Cui, Guangyao Li

Session 2F2– Chairs: Boo-Cheong Khoo, Rajeev Kumar Jaiman

MS-047 Innovative Techniques and their Applications to Fluid-Structure Interaction Problems

Time	ID	Title / Authors
10:40-11:00	1595	Keynote: Study of Airfoil Leading Edge Separation Control Using Pulsed Nanosecond Plasma Actuator / Boo-Cheong Khoo, Jianguo Zheng
11:00-11:20	1552	Keynote: A Variational Positivity Preserving Technique for Detached Eddy Simulation and Fluid-Structure Interaction / Rajeev Kumar Jaiman
11:20-11:40	1656	Modeling of Blood Rheology by Modified Immersed Finite Element Method with an Adhesive Contact Mechanics Formulation / Xiang Liu, Sheng Li Liu, Wen Qi Liu
11:40-12:00	2009	Deformational Analysis Of Hyperelastic Bodies Submerged In Viscous Fluids Using A New Fluid-Structure Interaction Boundary Element Method Formulation / Jairo F. Useche
12:00-12:20	1494	A Novel Immersed Boundary Method for the Strongly Coupled Fluid-structure Interaction / Shang-Gui Cai
12:20-12:40	1764	Finite Element Analysis of Fluid Structure Interaction Problems / Tawanda Mushiri
12:40-13:00	2106	Development of Integrated Fluid-Solid Interaction Models for Parametric Aeroelastic Analysis / Pankaj Kumar, Nishant Mishra, Praveen Laws, Santanu Mitra

Session 2F3– Chairs: Wenhua Wu, Zhiqin Cai, Charles Machado

MS-062 Advanced Modeling and Simulation for Dynamics and Control

Time	ID	Title / Authors
13:50-14:10	1996	Keynote: Numerical Modeling of Non-Fourier Thermal Damage with Time-dependent Laser Heat Source / Wenhua Wu
14:10-14:30	1618	Invited: The Thermal Induced Vibration Analysis of Tethered Solar Power Satellites on the Geo-synchronous Orbit / Zhiqin Cai, Lijun Zhao, Jinying Wu
14:30-14:50	1454	Invited: A New Pattern for Controlling Pressure in Earth Chamber in Shield Tunneling and Its Experimental Investigation / Ying Feng, Shouju Li, Zichang Shangguan
14:50-15:10	1481	An Original DEM Bearing Model with Electromechanical Coupling / Charles Machado, Stephanie Baudon, Mohamed Guessasma, Valery Bourny, Jerome Fortin, Robert Bouzerar, Paul Maier
15:10-15:30	1890	Finite Element Simulation of the Device CAR1 on Braced Frames / Magdalini Titirla
~~15:30-15:50~~	~~1993~~	~~Study on the Numerical Simulation of LPFG / Xiaona Wang, Shide Song, Yanxia Wang, Liang Chang (visa problem)~~

Session 2F4– Chairs: Shide Song, Seunghee Park

MS-036 Numerical methods for structural dynamics, control and health monitoring

MS-062 Advanced Modeling and Simulation for Dynamics and Control

Time	ID	Title / Authors
~~16:00-16:20~~	~~1994~~	~~Numerical Simulation of HVDC-flexible Induced Corrosion on Offshore Platform / Shide Song, et al. (visa problem)~~
16:00-16:20	1598	A numerical solution on inverse fuzzy convection-diffusion heat transfer problem / Ruifei Peng, Haitian Yang
16:20-16:40	2066	Study on Collapse Mechanism and Stability Technology / Ying Qin
16:40-17:00	2086	Simulation and Experimental Study on MFL-based Steel Cable Damage / Seunghee Park
17:00-17:20	1984	Bayesian Networks Construction Based on Testability Model for Multimode Systems and Its Inference Algorithm / Shigang Zhang, Yongmin Yang, Ying Liu, Zheng Hu
17:20-17:40	2107	Design of a Speed Adaptive Controller for DC Shunt Connected Motors using Neural Networks / Zeferino Damian Noriega, Ruben Tapia-Olvera
17:40-18:00	2108	Active Vibration Control of a Vehicle Suspension System Based on Signal Differentiation / Zeferino Damian Noriega

Day 3: Room B (Sutardja Dai Hall Room 310) Parallel Sessions: Thursday, 4 August 2016

Session 3B1– Chairs: Hongling Ye, Pawel Packo
MS-061 Structural optimization methods and applications

Time	ID	Title / Authors
~~8:30-8:50~~	~~1762~~	~~Keynote: An Improved Method of Continuum Topology Optimization Subjected to Frequency Constraints Based on Independent Continuous Topological Variables / Hongling Ye, W. W. Wang, Y.K. Sui (visa problem)~~
8:30-8:50	2117	Topology Optimization of the Interior Structure of Blades with Optimized Outer Surface by External Flows / Gui-Rong Liu, Dustin McClanahan, and Dr. Mark Turner
8:50-9:10	1501	CFD-Based Multi-Objective Optimization Design for a High-speed Ship / Aiqing Miao, Decheng Wan
9:10-9:30	1653	Designing Photonic Crystals with Complete Band Gaps / Fei Meng, Shuo Li, Baohua Jia, Xiaodong Huang
9:30-9:50	1695	Optimal Design of a Fiber Reinforced Membrane / Mirza Cenanovic, David Samvin, Kaveh Amouzgar, Anders Klarbring
9:50-10:10	1797	A Model-based Optimization Approach for Ultrasonic Transducers for Selective Guided Wave Generation in Complex Medi / Pawel Packo, Mateusz Miszczynski, Paulina Zbyrad, Tadeusz Stepinski, Tadeusz Uhl, Jerzy Lis
10:10-10:30	1951	Application of a Grey-based Taguchi Method for Optimizing Calendering Process / Sang Hoon Lee, Sangyoon Lee

Session 3B2– Chairs: Zhan Kang, Juan Antonio Lopez Martin, Takuya Uehara
MS-061 Structural optimization methods and applications, and other optimization techniques
MS-048 Advances in Numerical Methods for Multiple Inclusion Problems

Time	ID	Title / Authors
10:40-11:00	1755	Keynote: Topology Optimization of Multi-material Structures with Interface Strength Constraints / Zhan Kang, Pai Liu
11:00-11:20	1977	Numerical Analysis of Optimum Packing Structure of Particles on a Spherical Surface / Takuya Uehara
11:20-11:40	2041	Design of Acoustic Metamaterial using Level Set-based Topology Optimization / Yuki Noguchi, Takayuki Yamada, Takashi Yamamoto, Kazuhiro Izui, Shinji Nishiwaki
11:40-12:00	2058	Topology Optimization of Nanoscale Heat Conduction with the Boltzmann Transport Equation / Kozo Furuta, Kazuhiro Izui, Mitsuhiro Matsumoto, Takayuki Yamada, Shinji Nishiwaki
12:00-12:20	2073	Optimization of Stiffened Composite Plate using Adjusted Different Evolution Algorithm / Thuan Lam-Phat, Son Nguyen-Hoai, Vinh Ho-Huu, Trung Nguyen-Thoi
12:20-12:40	1516	Keynote: Interaction of SH Waves with Various Types of Multiple Multilayered Anisotropic Inclusions using Parallel Volume Integral Equation Method / Jungki Lee

Session 3B3– Chairs: Lei Chen, Kojiro Suzuki, Arundhuti Banerjee
MS-028 Phase-field Method: Theory, Algorithm and Application
MS-041 Advances in Simulation for Marine and Offshore Applications

Time	ID	Title / Authors
13:50-14:10	1633	Keynote: Phase-Field Method of Li Dendrite Formation During Electrodeposition / Lei Chen
14:10-14:30	1384	Modeling and Simulation of Three-component Flows on Solid Surface / Yi Shi
14:30-14:50	1623	Keying Process of OMNI-Max Anchor in Undrained NC Clay / Jun Liu
14:50-15:10	1864	Particle Simulation Considering the Sand-Scale-Effect for Scour Behind the Breakwater Due to Tsunami with Hydraulic Experiment / Kojiro Suzuki
15:10-15:30	1973	Flow Simulation Around a Rotating Propeller with Dynamic Overset Grid Approach / Hiroshi Kobayashi, Kunihide Ohashi
15:30-15:50	1999	Dynamic Analysis of Heat Exchanger Piles for Offshore Wind Turbines / Arundhuti Banerjee

Session 3B4– Chairs: Kenichi Tsubota, Hiromi Miyoshi
MS-043 Modeling and Simulation of Cellular Migration: from Molecules to Multiple Cells

Time	ID	Title / Authors
16:00-16:20	1583	Keynote: Computer Simulation of Cellular Shape Based on Elastic Deformation / Ken-ichi Tsubota
16:20-16:40	1927	Keynote: The Effects of Microgrooved Structures on Cell Shape and Actomyosin Organization / Hiromi Miyoshi, Miki Nishimura, Yutaka Yamagata, Hao Liu, Yasuyoshi Watanabe, Michiko Sugawara
16:40-17:00	1431	Invited: Rheotaxis of a Sperm Cell in Shear Flow Near an Infinite Plane Wall / Toshihiro Omori
17:00-17:20	1697	Anomalous Diffusion and FRAP Dynamics in the Random Comb Model / Santos B. Yuste, Enrique Abad, Artur Baumgaertner
17:20-17:40	2067	Modeling and Simulation of AcrB Multi Drug Efflux Pump's Functional Dynamics / Shirin Jamshidi, J. Mark Sutton, Khondaker Miraz Rahman
17:40-18:00	2052	Cell Responses to Actively Rotational Nanoparticles: A Coarse-Grained Study / Xianqiao Wang, Liuyang Zhang

Day 3: Room C (Sutardja Dai Hall Room 250) Parallel Sessions: Thursday, 4 August 2016

Session 3C1– Chairs: Jianyao Yao, Jianhua Wang
MS-060 CFD of turbulence for applied, industrial, or environmental flows

Time	ID	Title / Authors
8:30-8:50	1660	Keynote: Application of Agglomeration Multigrid Method in GSM-CFD Solver / Jianyao Yao
8:50-9:10	1499	Invited: Self-propulsive Simulation of ONR Tumblehome using Dynamic Overset Grid Method in OpenFOAM / Jianhua Wang, Decheng Wan
9:10-9:30	1502	Numerical Simulations of Motion Performance of Semi-submersible Platform Near the Island / Ke Xia, Decheng Wan
9:30-9:50	1503	Numerical Simulations of LNG FPSO Motion Response Coupled with Sloshing in Beam Waves / Yuan Zhuang, Decheng Wan
9:50-10:10	1563	Vortex Interaction of Classical and Synthetic Jets Under Various Strouhal Numbers / Jianlong Chang
10:10-10:30	1688	Research on Complex Hydrodynamic Interaction When UUV Recovered by Submarine / Luo Yang

Session 3C2– Chairs: Andres Tejada-Martinez, Lian Shen, Bhaskar Kalita
MS-060 CFD of turbulence for applied, industrial, environmental, and other complex flows
MS-058 Computational Methods for Model Reduction and its Engineering Applications

Time	ID	Title / Authors
10:40-11:00	1705	Keynote: Simulation of Wave Effects on Turbulence / Lian Shen, Anqing Elliott Xuan, Tao Cao
11:00-11:20	2017	Keynote: LES of oscillating boundary layers under surface cooling / Andres Tejada-Martinez
11:20-11:40	1703	Numerical Investigation of Different Tip Clearances Effect on the Performance of Pumpjet Propulsor / Qin Denghui
11:40-12:00	1561	A Hybrid POD-CFD Approach for Gust Computations / Michel Bergmann, Andrea Ferrero, Angelo Iollo
12:00-12:20	1956	The Transient of Visco-elastic MHD Fluid Through Stokes Oscillating Porous Plate: an Exact Solution / Bhaskar Kalita
12:20-12:40	1784	Modified Power-law Viscosity Model for SRT and MRT Lattice Boltzmann Simulation of Pseudoplastic Fluid Flows / Mamun Molla

Session 3C3– Chairs: Xiao-Wei Gao, Yani Deng
MS-044 Advances in the BEM and Other Related Mesh-Reduction Methods

Time	ID	Title / Authors
13:50-14:10	1404	Keynote: The Integrated Unit Method in BEM Analysis of Spatially Periodical Structures / Xiao-Wei Gao
14:10-14:30	1536	Keynote: An Accelerated Grid-based BEM for Geometrically Nonlinear Elastic Problems / Yani Deng, Wenjing Ye, Leonard Gray
14:30-14:50	1720	Invited: Three-dimensional Meso-scale Modelling of Concrete using a Finite Element-scaled Boundary Finite Coupled Method / Yujie Huang, Zhenjun Yang, Guohua Liu
14:50-15:10	1629	Estimates of the Coefficients in the BEM Matrices for 3-D Potential Problems / Yijun Liu
15:10-15:30	1858	A New BEM for Solving Multi-medium Transient Heat Conduction / Weizhe Feng, Kai Yang, Haifeng Peng, Xiaowei Gao
15:30-15:50	2118	An Overview of Numerical Methods / Gui-Rong Liu

Session 3C4– Chairs: Zhao Zhang, Weiqiang Wang, Feng Chang
MS-006 Computational Methods in Engineering

Time	ID	Title / Authors
16:00-16:20	1485	The Implementation of Multi-block Lattice Boltzmann Method on GPU / Ya Zhang, Guang Pan, Qiaogao Huang
~~16:20-16:40~~	~~1591~~	~~The Implementation and Research of NURBS-Based Isogeometric Analysis Using Fortran Programming / Weiqiang Wang~~
~~16:40-17:00~~	~~1592~~	~~Study on a Combined Method to Derive the Constitutive Relationship of Metals / Tairui Zhang, Weiqiang Wang~~
16:20-16:40	1593	NURBS-Based Isogeometric Analysis for Thin Shell Problems Using Fortran Implementation with the Penalty Method / Feng Chang, Weiqiang Wang, Yan Liu, Yanpeng Qu
16:40-17:00	1658	Explicit Methods in Quasi-Static Analyses of Rubber-Like Materials / Sebnem Ozupek, Volkan Yurdabak
17:00-17:20	2003	Optimization design of a fly wing UAV based on CFD simulation / Lizheng Yuan
17:20-17:40	1594	Numerical Investigation of Turbulent Flows by SST Model with An Algebraic Distance / Hongwei Zheng

Day 3: Room D (Sutardja Dai Hall Room 630) Parallel Sessions: Thursday, 4 August 2016

Session 3D1– Chairs: Pieter Coulier and Eric Darve
MS-037 Multilevel direct and iterative solvers for linear systems: theory and applications

Time	ID	Title / Authors
8:30-8:50	1833	Keynote: Multigrid Reduction in Time: A Flexible and Scalable Approach to Parallel-in-time / Jacob B Schroder
8:50-9:10	1823	A Fast Approximate Hierarchical Solver for Dense Linear Systems / Pieter Coulier, Hadi Pouransari, Eric Darve
9:10-9:30	1463	Multilevel Variable-Block Schur-Complement Based Preconditioning on Accelerators / Bruno Carpentieri, Masha Sosonkina, Jia Liao
9:30-9:50	1558	HiCMA: Hierarchical Computations on Manycore Architectures Library / Hatem Ltaief
9:50-10:10	1574	Application of Task Parallel Direct Solvers in Domain Decomposition Preconditioners / Clark Dohrmann
10:10-10:30	1704	Multilevel Hierarchical Solvers for Sparse Linear Systems / Kai Yang, Eric Darve, Hadi Pouransari

Session 3D2– Chairs: Canh Le, Francois-Henry Rouet
MS-037 Multilevel direct and iterative solvers for linear systems: theory and applications
MS-051 Direct Methods: Computations and Applications

Time	ID	Title / Authors
10:40-11:00	1900	Keynote: The Equilibrium Cell-based Smooth Finite Element Method for Shakedown Analysis of Structures / Canh Le
11:00-11:20	1473	An Assessment of the Lanczos-based Algorithm to Improve the Determination of Distance Distributions by Pulsed Dipolar ESR Spectroscopy / Yun-Wei Chiang
11:20-11:40	1450	A Comprehensive Numerical Simulation of Steel-concrete Composite Beam Incorporating Compression Failure of Concrete / Mahendra Kumar Pal, Takuzo Yamashita, Tomoshi Miyamura, Makoto Ohsaki
11:40-12:00	1428	Using Low-rank Approximation Techniques for Engineering Problems / Julie Anton, Cleve Ashcraft, Pierre L'Eplattenier, Roger Grimes, Francois-Henry Rouet, Clement Weisbecker
12:00-12:20	1702	Efficient Computation of the Tangency Portfolio by Linear Programming / Wlodzimierz Ogryczak
~~12:20-12:40~~	~~2079~~	~~Enhancing Quality of Service of Video Streaming Applications Over Vehicular Adhoc Networks / Pooja Sharma, Ajay Kaul, Madan Garg~~

Session 3D3– Chairs: Francesco Noto, Francesco Mammoliti, Carmine Putignano
MS-019 New Horizons in FEM Analysis for Mechatronics in the Medical Applications
MS-005, 013, 038, 039, Approaches for Mechano-Biology, Bio-Tissue, Soft Tissue and other Applications

Time	ID	Title / Authors
13:50-14:10	1433	Keynote: Electrical and Dimensional Tests for Aisha Containment Chamber / Francesco Noto
14:10-14:30	1786	Keynote: Test of the GEM Front Tracker for the Super BigBite Spectrometer (SBS) at JLab Hall A / Francesco Mammoliti
~~14:30-14:50~~	~~1861~~	~~A Homogenization Approach for In-vivo Scaffolding in Bone Tissue Engineering / Ali Entezari~~
14:50-15:10	1862	Stochastic Safety Assessment of Human Femur / Suhail Ahmad
15:10-15:30	1631	Investigating the Mechanical Behavior of the Human Oocyte: A Computational Study Conducted in a Clinical Setting / Elad Priel, Tsvia Priel, Iris Har-Vardi
15:30-15:50	2002	A Parametrically Time-dependent Boundary Element Approach for Reciprocating Contact Mechanics Between Viscoelastic Solids / Carmine Putignano
15:50-16:10	2096	Using the Basic Math and the Drawing Software for Calculating the Length of Tube for a Cane of Personalized Dimensions / Zeferino Damian Noriega

Session 3D4– Chairs: Abdul-Nasser El-Kassar, Gbolasere Amidu A.
MS-024, 025, Computational Methods for Images, Graphics, Business and 4D-Data

Time	ID	Title / Authors
16:20-16:40	1496	3D Cloud Data and Triangle Faces Compressed by Novel Geometry Minimization Algorithm and Compared with Other 3D Formats / Mohammed M. Siddeq, Marcos A. Rodrigues
16:40-17:00	1983	Position Recognition of Rocker Switches in the Aircraft Cockpit Based on Image Processing / Li Yang Yang, Zheng Hu, Shigang Zhang
17:00-17:20	1758	Newtonian Gravitational Force for Predicting Distribution Centre Location of a Supply Chain Network / Gbolasere Amidu A. Akanmu, Frank Z Wang
17:20-17:40	2091	The Effects of Quality and Shortages on the Economic Production Quantity Model in a Two-Layer Supply Chain / Abdul-Nasser El-Kassar
17:40-18:00		

Day 3: Room E (Sutardja Dai Hall Room 254) Parallel Sessions: Thursday, 4 August 2016

Session 3E1– Chairs: Seiichi Koshizuka, Seiya Hagihara

MS-042 Recent Advances In Meshfree and Particle Methods

Time	ID	Title / Authors
8:30-8:50	1511	Keynote: Numerical Analysis of Flooding using Explicit Moving Particle Simulation / Seiichi Koshizuka
8:50-9:10	1972	Keynote: Smoothed Particle Hydrodynamics Method for Elastic-plastic Analysis -Application of Multi-linear Constitutive Equation- / Seiya Hagihara
9:10-9:30	1358	An ALE Particle Method using WENO Interpolation / Fangyuan Hu, Seiichi Koshizuka
9:30-9:50	1879	A 3-D Meshfree Numerical Model to Analyze Cellular Scale Shrinkage of Different Categories of Fruits and Vegetables During Drying / Charith Malinga Rathnayaka Mudiyanselage, Helambage Chaminda Prasad Karunasena, Yuan Tong Gu, Lisa Guan, Jasmine Banks, Wijitha Senadeera
9:50-10:10	1896	Particle Method Simulation of Wave Impact on Structures / Min Luo, Chan Ghee Koh
10:10-10:30	2115	An approach to study hydraulic fracturing using a fully coupled SPH framework / Kai Pan, Ranjan Pramanik, Bruce Jones, Thomas Douillet-Grellier, Abdulaziz Albaiz, John Williams

Session 3E2– Chairs: Adrian Wing-Keung Law, Bo Liu

MS-063 Computational modelling for environmental and water resources engineering applications

MS-045 Knowledge Based Artificial Intelligence Applied To Computer Aided Engineering

Time	ID	Title / Authors
10:40-11:00	2078	Keynote: Large Eddy Simulations of Stratified Engineering Turbulence / Adrian Wing-Keung Law
11:00-11:20	1991	Keynote: Tuning Water Transport in Graphene Layers Via Channel Morphology Modification / Bo Liu, Renbing Wu, Adrian Wing-Keung Law, Xi-Qiao Feng, Kun Zhou
11:20-11:40	1586	Computational Hydraulic Modeling with UPC Architecture / Tung T. Vu, Adrian Wing-Keung Law
11:40-12:00	1843	Pore-scale Simulation of Granular Filtration Flows / Adrian Wing-Keung Law, Alvin Chew
12:00-12:20	1967	Keynote: Implementation of the Parareal Algorithm to Optimize Nanoparticle Transport in Porous Media Simulation / Padmanabhan Seshaiyer, Akhil Waghmare
12:20-12:40	2004	Model Free Deep Learning With Deferred Rewards For Maintenance Of Complex Systems / Alan DeRossett, Pedro V Marcal

Session 3E3– Chairs: Sau Cheong Fan, Paolo Del Linz, Aurelian Vadean

MS-064 Structural damage by internal/external explosion

MS-026 Numerical Modelling of Composite Structures Subjected to Extreme Loading Conditions

Time	ID	Title / Authors
13:50-14:10	1988	Keynote: A Simulation Strategy for Prediction of Debris Due to Internal Explosion of an Earth-covered Magazine / Sau Cheong Fan
14:10-14:30	1553	Keynote: Modelling of Residual Capacity of Slabs Damaged by Combined Impact and Blast Loading / Paolo Del Linz
14:30-14:50	1948	Numerical Simulation for Combined Blast and Fragment Effects on RC Slabs / Shengrui Lan
14:50-15:10	1748	Concepts of Coupled FEA-CFD Analyses for Vehicle Structures Under High-Pressure Shock Compression / Arash Ramezani
15:10-15:30	1734	Simplified Nonlinear Progressive Collapse Analysis of Steel Moment Frames Considering Floor Slab Effects / Seonwoong Kim
15:30-15:50	1932	Damage and Failure Prediction in Alumina Tri-Hydrate/Epoxy Core Composite Sandwich Panels Subjected to Impact Loads / Morada Ghodratollah, Aymen Marouene, Rim Ouadday, Aurelian Vadean, Rachid Boukhili
15:50-16:10	1960	Multi-scale Computational Method of the Thermo-mechanical Coupling Behavior in CERCER Composites / Yumei Zhao, Shurong Ding

Session 3E4– Chairs: Juan Carlos Cisneros Ortega, Frederic Joly

MS-065 Inverse problems in Engineering; MS-066 Uncertainty management approaches

Time	ID	Title / Authors
16:20-16:40	2049	Application of Inverse Engineering to an Undercarriage for Modelling and Analysis by FEM / Juan Carlos Cisneros Ortega
16:40-17:00	1793	Heat Flux Identification using Reduced Model and the Adjoint Method. Application to a Brake Disk Rotating at Variable Velocity / Sylvain Carmona, Yassine Rouizi, Olivier Quemener, Frederic Joly
17:00-17:20	1954	Minimum Volume of the Longitudinal Fin with Rectangular and Triangular Profile by a Modified Newton-Raphson Method / Quan Nguyen, Son Hoai Nguyen, Tuan Quoc Nguyen
17:20-17:40	2000	Study on Material Parameter Identification Method for Brain Tissue Considering Uncertainty of Experimental Boundary Conditions / Fengjiao Guan, Guanjun Zhang, Yongmin Yang, Feng Zhu
17:40-18:00	1541	Preserving Hyperbolicity in Stochastic Galerkin Method for Uncertainty Quantification / Zhenning Cai, Ruo Li, Yanli Wang

Day 3: Room F (Sutardja Dai Hall Room 242) Parallel Sessions: Thursday, 4 August 2016

Session 3F1– Chairs: Wei Li, Chao Jiang

MS-015 Advanced Computational Methods in Underwater Acoustics

MS-055 Structural uncertainty analysis and design

Time	ID	Title / Authors
8:30-8:50	1637	Keynote: Forward Scattering of an Acoustical Bessel Beam by Rigid Structures using T-matrix Method / Zhixiong Gong, Wei Li, Yingbin Chai, Yao Zhao
8:50-9:10	1640	Invited: An Edge-based Smoothed Finite Element Method for the Active Vibration Control of Piezoelectric Structures / Qifan Zhang, Wei Li, Xiangyu You
9:10-9:30	1639	Underwater Free Vibration and Sound Radiation of the Cylindrical-conical Shell Based on Edge-/face-based Smoothed Finite Element Method / Xiangyu You, Wei Li, Yingbin Chai, Qifan Zhang
9:30-9:50	1936	Keynote: An Outcrossing Rate Model and Its Efficient Calculation for Time-dependent System Reliability Problems / Chao Jiang
9:50-10:10	1652	Sequential Stochastic Response Surface Method using Moving Least Square Based Sparse Grid for Efficient Reliability Analysis / Amit Kumar Rathi, Sudhi P V Sharma, Arunasis Chakraborty
10:10-10:30	1776	Reliability-based Design Optimization using Step Length Adjustment Algorithm / Ping Yi
10:30-10:50	1780	Effect of Considering Staircases on Special Steel Moment Resisting Frames / Mohammad Ghasem Vetr, Bahram Kordbagh, Pouya Nouraee Danesh

Session 3F2– Chairs: Luiz Carlos Gadelha Souza, Jatindra Lahkar

MS-033 Fluid-Structure Interaction and Multiphysics Problems in Aerospace Engineering, and Complex Flows

Time	ID	Title / Authors
11:00-11:20	1374	Investigation of the Satellite Attitude Control System Performance Using as Actuator Reaction Wheels / Luiz Carlos Gadelha Souza
11:20-11:40	2075	Seismic Resistance for High-rise Buildings using Water Tanks Considering the Liquid - Tank Wall Interaction / Bui Tuong
11:40-12:00	1711	Chemical Reaction, Heat and Mass Transfer on Unsteady MHD Flow Along a Vertical Stretching Sheet with Heat Generation/Absorption and Variable Viscosity / Jatindra Lahkar
12:00-12:20	1818	Reduction of Shock Capturing Error in Discontinuous Galerkin Schemes for Hypersonic Flow Simulations / Eric Jishuan Ching, Yu Lv, Matthias Ihme
12:20-12:40	2048	Development of Total Integrated Analysis Technology for High-Pressure Automotive Fuel Pump / Norihiko Nonaka

Session 3F3– Chairs: Layla Amaireh, Stephane Andrieux

MS-067 Methods for complex material and structural systems

Time	ID	Title / Authors
13:50-14:10	1820	A Computational Method for the Identification of Plastic Zones and Residual Stress in Elastoplastic Structures. / Thouraya Nouri Baranger, Stephane Andrieux
14:10-14:30	1942	Numerical Study on Tool Design for Free Forming of Large and Thick Plate with Unstable Blank Support / Byeong-Kwon Kang, Mahn-Jung Yoon, Beom-Soo Kang, Taewan Ku
14:30-14:50	2047	Recursive Formulas, Fast Algorithm and Its Implementation of Partial Derivatives of the Beta Function / Huizeng Qin, Youmin Lu, Nina Shang
14:50-15:10	1657	Capacity of Rectangular Steel Beams and Their Connections to Carry Loads Through Catenary Action / Kyung-Jae Shin, Hee-Du Lee, Swoo-Heon Lee, So-Yeong Kim, Young-Joo Lee
15:10-15:30	1906	Frictional Contact Formulation with Geometric and Materials Nonlinearities / Layla Amaireh
15:30-15:50	1589	Design and Development of a Multifunctional Structural Battery UAV Spar using Composites / Siddharth Sriram, Sreehari Veditherakal Shreedhara

Session 3F4– Chairs: Jungki Lee, Misbah Irshad

MS-049 Computational errors and their evaluation, from theory to engineering practice

MS-067 Methods for complex material, structural and other systems

Time	ID	Title / Authors
	~~1415~~	~~Keynote: A general rule for the effect of arbitrary damping on the numerical stability of time integration analyses / Aram Soroushian (visa problem)~~
16:00-16:20	2033	Interval-based Analysis and Word-length Optimization of Non-linear Systems with Control-flow Structures / Juan Antonio Lopez Martin
16:20-16:40	2030	Computational errors and their evaluation, from theory to engineering practice / Karan - Khanlari, Mahmood Hosseini, Seyed Sasan - Alavi Shirkhorshidi
16:40-17:00	1866	On the Efficiency of Newmark and Hilbert-Hughes-Taylor Time Integration Methods in Nonlinear Seismic Response Analysis of Mid- to Relatively High-Rise Buildings / Mahmood Hosseini, Aram Soroushain, Hamidreza Ebrahimi
17:00-17:20	2109	Closed Loop Algebraic Parametric Identification of a DC Shunt Motor / Zeferino Damian-Noriega
~~17:20-17:40~~	~~1666~~	~~The influence of expanded portion's geometry configurations on droplets coalescence process / Zhaomiao Liu, Yang Yang (visa problem)~~

NOTES

NOTES

NOTES

ICCM2015 Young Researcher Best Paper Award Winners

Conference Chair: Professor Raj Das (University of Auckland, New Zealand)

Selection-Panel Chair: Professor Zhongwei Guan (University of Liverpool, United Kingdom)

Conference Venue: Auckland, New Zealand

Conference Date: 14th - 17th July 2015

ID	Name	Title	Affiliation	Country
768	Arnab Banerjee	Towards wideband mechanical metamaterials: comparing nonlinear oscillator mechanisms	University of Auckland	New Zealand
822	Quan Bing Eric Li	Mass-redistributed method in the evaluation of eigenfrequency of solid systems	Jilin university	China
908	Anish Roychowdhury	Development of microsystems analysis (usys) software using hybrid finite elements and direct solution of coupled equations	Indian Institute of Science	India
952	Guangtao Duan	Numerical Investigation of Oil Spill from a Tanker by Multiphase MPS Method	Xi'an Jiaotong University	China
1038	Long Zhao	Topology optimization of anisotropic constrained damping structures based on ESO method	Northwestern Polytechnical University	China
1135	Kai Yang	New approach for computing hyper-singular interface stresses in IIBEM for solving multi-medium elasticity problems	Dalian University of Technology	CHINA
1193	Maedeh Amirpour	Stress analysis of functionally graded plates under different gradient distribution	University of Auckland	New Zealand
1198	Luis Fernando Garcia Rodriguez	Aerodynamic analysis of the airfoil of a vawt by using 2D CFD modelling	Universidad Industrial de Santander	Colombia
1214	Mohammad Saidul Islam	Numerical Investigation of Aerosol Particle Transport and Deposition in Realistic Lung Airway	Queensland University of Technology	Australia
1028	Haijun Peng	A Novel Fast Model Predictive Control for Large-Scale Structures	Dalian University of Technology	China

- ICCM2016 Young Researcher Best Paper Award Winners will be announced and awarded at ICCM2017.
- Other ICCM2016 **ICCM Award**s will be announced at the ICCM2016 Banquet.

Bay Area

City of Berkeley

Berkeley city is on the east shore of San Francisco Bay. It is named after the 18th-century Anglo-Irish bishop and philosopher George Berkeley. To the east, the city faces the ridge of the Berkeley Hills. Berkeley houses the oldest campus in the University of California system, the University of California, Berkeley, the Lawrence Berkeley National Laboratory (managed and operated by the university) and the Graduate Theological Union, one of the largest religious studies institutions in the world. Berkeley's 116,768 residents make up one of the most politically liberal cities in the United States.

Climate

Berkeley has a Mediterranean climate with dry summers and wet winters. Summers are typically cool, and have often cool and foggy in nights and mornings.

Public Transport

Transportation in Berkeley is convenient in general. Options include Amtrak, AC Transit, BART (Ashby, Downtown Berkeley Station and North Berkeley) and shuttles run by UC Berkeley and Lawrence Berkeley National Laboratory.

The East shore Freeway (Interstate 80 and Interstate 580) runs along the bay shoreline. Parking is generally expensive and hence alternative transportation is more favorable. Some Berkeley residents and visitors turn to car sharing networks: City Car Share, Uhaul Car Share, and Zipcar, in which members share a group of cars, and track hours and charges on the telephone and web. Several "pods" (parking spaces) are scattered throughout the city, downtown, at the Ashby and North Berkeley BART stations, and at various other locations.