The Conference Program for ISCM II & EPMESC XII, 29 November – 3 December 2009

Date	Sunday, 29 November 2009
14:00 – 17:30	Registration, Venue: Crystal Room, Level B3, Holiday Inn Golden Mile Hotel, 50 Nathan Road, Tsimshatsui, Kowloon
18:00 – 21:00	Venue: Hung Tao Restraunt, Shop 201, 2/F, Toyo Mall, 94 Granville Road, Tsimshatsui, Kowloon Opening Speech: AYT Leung, VP Iu, MY Yuan, Arantes e Oliveira, etc. Plenary Session I Keynote Speech 1: 2.5D Finite/infinite element approach for simulating train-induced ground vibrations Y.B. Yang, Nat. Taiwan University & YunTech University Chair: A.Y.T. Leung Keynote Speech 2: Multiscale Analysis and Nutrient Transport in Carbon Nanotube Reinforced Nanofiber Bioreactor J.N. Reddy, Texas A&M University Chair: V. P. Iu Welcome dinner

Time	30 Nov. (Monday) Holiday Inn Golden Mile Hotel, HK Venue: Crystal Room 3, LB3	30 Nov. (Monday) Holiday Inn Golden Mile Hotel, HK Venue: Jade Room, LB1	30 Nov. (Monday) Holiday Inn Golden Mile Hotel, HK Venue: Crystal Room 2, LB3	30 Nov. (Monday) Holiday Inn Golden Mile Hotel, HK Venue: Crystal Room 1, LB3	30 Nov. (Monday) Holiday Inn Golden Mile Hotel, HK Venue: Grand Ballroom, LB3
8:30-9:50	**Plenary Session II, Venue: Grand Ballroom, Holiday Inn Gold Mile Hotel** **Keynote Speech 3: Kinetic Studies of Gas Flows** **Jing Fan, IMECH, Chinese Academy of Sciences** **Chair: J.N. Reddy** **Keynote Speech 4: Size-dependent probabilistic damage micromechanics for particle-reinforced metal matrix composite** **Woody JW Ju, UCLA** **Chair: W.K. Liu**				
9:50-10:20	**Coffee**				
10:20-12:30	**MS-1:** Fractal FEM, Bridge Dynamics Session Chairs: AYT Leung, Shuhui Chen Session Keynote: **Yushu Chen**	**MS-2:** Nonlinear dynamics, damage Mechanics Session Chairs: Vai Pan Iu, Peter Rosko Session keynote: **Junzhi Cui**	**MS-3-1:** Model-based simulation with applications to nano and bio systems Session Chairs: Hongwu Zhang, Zhen Chen Session Keynote: **Zhen Chen**	**MS-8-1:** 3rd International workshop on non-equilibrium flows Session Chairs: Jing Fan, Kun Xu Session Keynote: **Jiang Zonglin**	**MS-16-1:** Meshfree and innovative numerical methods Session Chairs: Yuantong Gu, S. Rajendran Session Keynote: **J.S. Chen**
12:30-14:00	**Lunch (Bistro on the Mile, 1st Floor)**				
14:00-15:40	**MS-4:** Bridge aerodynamics Session Chairs: Gao Liu, Moshe Eisenberger	**MS-5:** Computational fracture mechanics for quasi-brittle materials Session Chairs: Chengxiang Yu, Zhengjun Yang	**MS-3-2:** Model-based simulation with applications to nano and bio systems Session Chairs: Zhen Chen, Zhuo Zhuang	**MS-8-2:** 3rd International workshop on non-equilibrium flows Session Chairs: Kun Xu, Wenjing Ye	**MS-7-1:** Advances in multiscale methods and applications of nano- and bio-mechanics Session Chairs: Dong Qian, Moon Kim
15:40-15:55	**Coffee**				
15:55-17:15	**MS-7-2:** Advances in multiscale methods and applications of nano- and bio-mechanics Session Chairs: Young-Jin Kim, Dong Qian	**SS-2:** Computational infection risk assessments in building environments Session Chairs: Jianlei Niu, Man Pun Wan	**PS-1-1:** Artificial intelligence, expert systems & applications; CAD, CAM and CAE Session Chairs: I-Tung Yang, Ivan Jordanov	**MS-18-1:** Recent advances in BEM and other related meshless methods Session Chairs: Ch.Z. Zhang, Jan Sludak	**PS-2:** NDE and Wave Propagation, Polymers and Polymer Composites Session Chairs: Jiayong Tian, B. Tie
	End of Day 1				

Time	1 Dec. (Tuesday) Holiday Inn Golden Mile Hotel, HK Venue: Crystal Room 3, LB3	1 Dec. (Tuesday) Holiday Inn Golden Mile Hotel, HK Venue: Jade Room, LB1	1 Dec. (Tuesday) Holiday Inn Golden Mile Hotel, HK Venue: Crystal Room 2, LB3	1 Dec. (Tuesday) Holiday Inn Golden Mile Hotel, HK Venue: Crystal Room 1, LB3	1 Dec. (Tuesday) Holiday Inn Golden Mile Hotel, HK Venue: Grand Ballroom, LB3
8:30-9:50	**Plenary Session II, Venue: Grand Ball Room, Holiday Inn Gold Mile Hotel** **Keynote Speech 5: Adaptive FEM for Crack Propagation** **G. Yagawa, Toyo University** **Chair: J.S. Chen** **Keynote Speech 6: Cyber-enabled predictive science-based continuum mechanics for multiscale fracture process discovery** **W.K. Liu, Sungkyunkwan University (SKKU), Korea; Northwestern Univ.** **Chair: S. Valliappan**				
9:50-10:20	**Coffee**				
10:20-12:30	**MS-23-1:** Nonlinear dynamics Session Chairs: RYY Lee, Minghui Yao Session Keynote: **Albert KH Kwan**	**SS-1:** Mathematical models and numerical methods for complex fluid flows Session Chairs: Keh-Ming Shyue, Yang-Yao Niu Session Keynote: **Yih-Chin Tai**	**PS-6-1:** Fluid Mechanics and Heat Transfer Session Chairs: Zhigang Li, Leonardo Traversoni	**MS-16-2:** Meshfree and innovative numerical methods Session Chairs: J.S. Chen, Yuantong Gu Session Keynote: **D.D. Wang**	**MS-8-3:** 3rd International workshop on non-equilibrium flows Session Chairs: Quanhua Sun, Chih-Jen Sung Session Keynote: **Yiguang Ju**
12:30-14:00	**Lunch** **(Bistro on the Mile, 1st Floor)**				
14:00-15:40	**MS-23-2:** Nonlinear dynamics Session Chairs: Wei Zhang, Jorge Ambrosio	**PS-6-2:** Fluid Mechanics and Heat Transfer Session Chairs: R.K.K. Yuen, Carolin Birk	**PS-11-1:** Solid and Structural Mechanics Session Chairs: Jian Lü, Yang Xiang	**PS-5-1:** Environmental Science and Engineering Session Chairs: John C.C. Lu, Dong-Sheng Jeng	**MS-24:** Recent developments in anisotropic continuum analysis, including composites and biomechanics Session Chairs: David C. Kellermann, Hou Man
15:40-15:55	**Coffee**				
15:55-17:15	**MS-12:** Random vibration and control of nonlinear structural systems Session Chairs: Cho Wing To, X. Sheldon Wang	**PS-6-3:** Fluid Mechanics and Heat Transfer Session Chairs: Jintu Fan, Decheng Wan	**PS-8-1:** Geomechanics, Geographic Information Systems Session Chairs: X.K. Li, Thirapong Pipatpongsa	**PS-7:** Polymers and Polymer Composites, Computer Simulation of Processes and Manufacturing Session Chair: Petr Procházka, Klemens G. Schulmeister	**MS-20-1:** Micro- and nano-mechanics Session Chairs: David CS Chen, J.S. Chen
18:00 - 19:30	**Take Ferry to Macau** **(Ticket purchase at reception counter with PC Tours & Travel)**				

Time	2 Dec. (Wednesday) MGM Grand Macau, Macau Venue: Grand Ballroom I	2 Dec. (Wednesday) MGM Grand Macau, Macau Venue: Grand Ballroom II	2 Dec. (Wednesday) MGM Grand Macau, Macau Venue:Grand Ballroom III	2 Dec. (Wednesday) MGM Grand Macau, Macau Venue: Salon III	2 Dec. (Wednesday) MGM Grand Macau, Macau Venue: Salon II
8:30 - 9:50	**Plenary Session III, Venue: Grand Ballroom, MGM Grand Macau** **Keynote Speech 7: Coupled Flow Deformation Analysis Using Meshfree Method** **S. Valliappan, University of New South Wales** **Chair: Arantes e Oliveira** **Keynote Speech 8: RESAMPLING STATISTICAL METHODS IN ECONOMICS AND MANAGEMENT** **José AF Machado, Lisbon MBA** **Chair: Kun Xu**				
9:50 - 10:20	**Coffee**				
10:20 - 12:40	**MS-16-3:** Meshfree and innovative numerical methods Session Chairs: Yuantong Gu, D.D. Wang Session Keynote: **S. Rajendran**	**PS-6-4:** Fluid Mechanics and Heat Transfer Session Chairs: Liang Cheng, Y.H. Yau	**MS-22-1:** Structural damage detection utilizing measured dynamic response Session Chairs: Paul Lam, Ryan W M Yan	**MS-23-3:** Nonlinear dynamics Session Chairs: Qi-chang Zhang, Xuegang Yuan	**PS-11-2:** Solid and Structural Mechanics Session Chairs: J.L. Yu, Masanori Kikuchi
12:40 - 14: 00	**Lunch** **(Aux Beaux Arts at Grande Praca & The Vista on 3rd floor)**				
14:00 - 15 :40	**PS-12-1:** Solid Mechanics Session Chairs: K. Y. Sze, Liqun Tang	**PS-3:** Damage Mechanics, Nonlinear Dynamics Session Chairs: José MA César de Sá, Narayan Chandak	**MS-8-4:** 3rd International workshop on non-equilibrium flows Session Chairs: Chunpei Cai, Zonglin Jiang	**PS-5-2:** Environmental Science and Engineering Session Chairs: K.V. Yuen, Zhu Tingyu	**MS-20-2:** Micro- and nano-mechanics Session Chairs: David CS Chen, Yunche Wang
15:40 - 16:00	**Coffee**				
16:00 – 17:40	**PS-1-2:** Artificial intelligence, expert systems & applications; CAD, CAM and CAE Session Chairs: HsienHua Lee, Cheng-Hung Huang	**PS-4:** Biomechanics, Electromagnetism, MEMS and Bio-MEMS, Microtribology and Micromechanics Session Chairs: Chui-Jie Wu, Moon-Chul Yoon	**PS-6-5:** Fluid Mechanics and Heat Transfer Session Chairs: Patrick Vasseur, Kazuya Nojima	**PS-14-1:** Materials Science, Infrastructures and Aging Structures Session Chairs: Y.C. Lin, Zhan-Qi Guo	**PS-11-3:** Solid and Structural Mechanics Session Chairs: Danh Tran, Guo-Kang Er
19:30 – 22:00	**Conference Banquet (Shuttle Bus Transfer at Foyer)** **Venue: Macau Tower**				

Time	3 Dec. (Wednesday) MGM Grand Macau, Macau Venue: Grand Ballroom I	3 Dec. (Wednesday) MGM Grand Macau, Macau Venue: Grand Ballroom II	3 Dec. (Wednesday) MGM Grand Macau, Macau Venue:Grand Ballroom III	3 Dec. (Wednesday) MGM Grand Macau, Macau Venue: Salon III	3 Dec. (Wednesday) MGM Grand Macau, Macau Venue: Salon II
8:30 - 9:50	**Plenary Session IV, Venue: Grand Ballroom, MGM Grand Macau** **Keynote Speech 9: Fracture Analysis of Functionally Graded Materials** **Ch.Z. Zhang, University of Seigen** **Chair: K.M. Mok** **Keynote Speech 10: A weakened weak (w2) formulation of numerical methods for solid mechanics problems** **G.R. Liu, National University of Singapore** **Chair: C.M. Mota Soares**				
9:50 - 10:20	**Coffee**				
10:20 - 12:30	**PS-12-2:** Solid Mechanics Session Chairs: P. Schiavone, H.B. Chen	**PS-1-3:** Artificial intelligence, expert systems & applications; CAD, CAM and CAE Session Chairs: Mingwu Yuan, Shuxiang Xu	**MS-22-2:** Structural damage detection utilizing measured dynamic response Session Chairs: Chern-Hwa Chen, C.M. Mota Soares	**PS-14-2:** Materials Science, Infrastructures and Aging Structures Session Chairs: Han Dajian, Michael A.B. Promentilla	**PS-9:** Engineering Sciences and Physics Session Chairs: Sun, Limin, Zheng Xiaojing
12:30 - 14: 00	**Lunch** **(Aux Beaux Arts at Grande Praca & The Vista on 3rd floor)**				
14:00 - 15 :40	**PS-1-4:** Artificial intelligence, expert systems & applications; CAD, CAM and CAE Session Chairs: Zuomin Dong, R.C. Barros	**PS-8-2:** Geomechanics, Geographic Information Systems; Solid and Structural Mechanics Session Chairs: S.C. Wong, Stanislav Potapenko	**PS-15:** Uncertainty and Stochastic Analysis Session Chairs: Gang Li, Zhixin Yang	**PS-10:** Parallel Computing, Problem Solving Environment, Robust Engineering Systems Session Chairs: Zheng Yao, Ka-Veng Yuen	**PS-13-1:** Inverse Problems and Optimization Session Chairs: D. Kashyap, Ke-min Zhou
15:40 - 16:00	**Coffee**				
16:00 – 17:00			**MS-18-2:** Recent advances in BEM and other related meshless methods Session Chairs: Ch.Z. Zhang, Zhenhan Yao	**PS-13-2:** Inverse problems and optimization, Dynamic failure and fracture Session Chairs: Z.W. Guan, Xu Han	**PS-16:** Dynamic failure, Solid mechanics, Fluid Mechanics Session Chairs: Ryan WM Yan, Dexun Fu
18:00 – 20:00	**Farewell Dinner (Award presentations)** **Venue: MGM Grand Macau**				
	Closing				

PARALLEL SESSIONS

Monday, 30 November:

Title / Time 30 Nov.	**MS-1: Fractal finite element method** **Chairs: Andrew YT Leung, Shuhui Chen**	Venue
10:20 –10:50	**Session Keynote:** [Paper No. 547] The method for solving homoclinic/hereoclinic orbits- The undetermined coefficient method and its applications for a new chaotic system Yushu Chen*, Liangqiang Zhou, Fangqi Chen	Crystal Room 3, LB3
10:50 –11:10	[Paper No. 48] Wave scattering by many small particles and creating materials with a desired refraction coefficient A.G. Ramm, Andrew YT Leung*	
11:10 –11:30	[Paper No. 368] Analysis of mode III elastodynamic cracked plane using fractal two-level finite element method J. Fan*, R.Y.Y Lee, A.Y.T. Leung	
11:30 –11:50	[Paper No. 569] Finite element vibration analysis of rectangular membrane S. H. Chen*, W. J. Lin, A.Y.T. Leung	
11:50 –12:10	[Paper No. 291] Free vibration characteristics of hybrid SPR beams Xiaocong He*, Biao Dong, Xunzhi Zhu	
12:10–12:30	[Paper No. 367] Nonlinear analysis of forced responses of an axially moving beam by incremental harmonic balance method J.L. Huang, S.H. Chen, R.K.L. Su*, R.Y.Y. Lee	

Title / Time 30 Nov.	**MS-2: Nonlinear dynamics, damage mechanics, dynamic failure and fracture** **Chairs: Vai Pan Iu, Peter Rosko**	Venue
10:20–10:50	**Session Keynote:** [Paper No. 419] Second-order two-scale method for bending behaviors of composite plate with 3-d periodic configuration Guoqing Zhu and Junzhi Cui	Jade Room, LB1
10:50–11:10	[Paper No. 23] Numerical modelling of fibre metal laminates subjected to blast loading Z.W. Guan*, W. J. Cantwell	
11:10–11:30	[Paper No. 59] Periodicity and stability of tethered satellite systems - part i: circular orbit case F. B. Gao*, W. Zhang, and M.H. Yao	
11:30–11:50	[Paper No. 237] Effects of a device on mitigation of rain/wind-induced vibration Jihong Bi*, Yuanbiao Yin, and Jizhong Li	
11:50–12:10	[Paper No. 421] Setting up an arc code to predict cracking deficit with enthalpy method in upwind scheme Je-Ee.Ho*	
12:10–12:30	[Paper No. 560] Seismic response analysis and design of structure with base isolation Peter Rosko*	

Title / Time 30 Nov.	**MS-3-1: Model-based simulation with applications to nano and bio systems** **Chairs: Zhuo Zhuang, Zhen Chen**	Venue
10:20 –10:50	**Session Keynote:** [Paper No. 22] Recent advances in modeling and simulation of the nano-structural responses to extreme loading conditions Zhen Chen*	Crystal Room 2, LB3
10:50 –11:10	[Paper No. 16] Structural transformation of clay minerals by a new molecular dyanmics simulation method Jianfeng Wang*, Marte Gutierrez	
11:10 –11:30	[Paper No. 318] Gas separation by kinked single-walled carbon nanotubes Z. Q. Zhang, Hongwu Zhang*	
11:30 –11:50	[Paper No. 321] Mechanics and geometry for carbon nanotube networks and biomembrane nanotube networks YaJun YIN*	
11:50 –12:10	[Paper No. 336] Role of crystalline defects in the deformation of bi-crystal grain boundary interfaces at nano-scale L. Wang*, Hongwu Zhang, X. M. Deng	
12:10 –12:30	[Paper No. 424] Competitive mechanisms between cell-cell and cell-matrix adhesions: monte carlo simulation Guang-Kui Xu, Xi-Qiao Feng, Yue Li*	

Title / Time 30 Nov.	**MS-8-1: 3RD INTERNATIONAL WORKSHOP ON NON-EQUILIBRIUM FLOWS** **Chairs: Jing Fan, Kun Xu**	Venue
10:20 –10:50	**Session Keynote:** [Paper No. 384] Heat transfer problems induced by multi-shocks interaction Zonglin Jiang*, Jingping Li	Crystal Room 1, LB3
10:50 –11:10	[Paper No. 64] Numerical modeling of heat transfer and flow in low power arcjet thruster Hai-Xing Wang*, Shao-Xia Jia , Xi Chen, Wenxia Pan	
11:10 –11:30	[Paper No. 68] A macro model of squeeze-film air damping in the free-molecule regime Gang Hong, Wenjing Ye*	
11:30 –11:50	[Paper No. 72] Experimental and theoretical studies on pyrolysis of aviation kerosene alternative fuel Jing Wang*, Xuejun Fan, Fengquan Zhong, Jiuzhong Yang, Lidong Zhang, Qi Fei	
11:50 –12:10	[Paper No. 391] A gas-kinetic scheme for generalized fluid dynamic equations Xiaomei Yu, Kun Xu*	
12:10 –12:30	[Paper No. 102] Recent progress in the information preservation method Quanhua Sun*, Jing Fan, Chunpei Cai	

Title / Time 30 Nov.	**MS-16-1: MESHFREE AND INNOVATIVE NUMERICAL METHODS** **Chairs: Yuantong Gu, S. Rajendran**	Venue
10:20 –10:50	**Session Keynote:** [Paper No. 239] Adaptively coupled fem-rkpm approach for fragment-impact modeling: consistency and stability J. S. Chen*	Grand Ballroom
10:50 –11:10	[Paper No. 114] A mixed FE-meshfree method for gradient plasticity continuum with linear complementary model Junbo Zhang*, Xikui Li	
11:10 –11:30	[Paper No. 127] An enriched radial point interpolation method for the analysis of crack tip Qiang Fu*, Yuantong Gu	
11:30 –11:50	[Paper No. 128] A coupled meshless technique/molecular dynamics approach for deformation characterization of mono-crystalline metal Yuantong Gu*, Prasad K.D.V. Yarlagadda	
11:50 –12:10	[Paper No. 352] A meshfree cell-based smoothed point interpolation method for solid mechanics problems Guiyong Zhang*, Gui-Rong Liu	
12:10 –12:30	[Paper No. 377] Adaptive moving least square approximation and its application Zhan Bin Yuan*, Nie Yufeng, Ouyang Jie	

Title / Time 30 Nov.	**MS-4: BRIDGE AERODYNAMICS** **Chairs: Gao LIU, Moshe Eisenberger**	Venue
14:00 –14:20	[Paper No. 30] Study on structural internal force response of xihoumen bridge pylon under wind loads Gao Liu*, Liu Tian-cheng, Feng Qing-hai, Cheng Shang-you, Li Yi	Crystal Room 3, LB3
14:20 –14:40	[Paper No. 84] Mechanism and damage modes of collision between over-high trucks and bridge superstructures Yan-sheng Zhang*, Xin-zheng Lu, Shui-tao He, and Xiao Lu	
14:40 –15:00	[Paper No. 103] Dynamic stiffness analysis of axially loaded Timoshenko beam with cracks Moshe Eisenberger*	
15:00 –15:20	[Paper No. 422] Extended lattice Boltzmann method with application to predict aerodynamic loads of long span bridge Tiancheng Liu	
15:20 –15:40	[Paper No. 431] A new method for modeling spatial prestressing bars Yi Li*	

Title / Time / 30 Nov.	**MS-5: COMPUTATIONAL FRACTURE MECHANICS FOR QUASI-BRITTLE MATERIALS** **Chairs: Rena C. Yu, Zhenjun Yang**	Venue
14:00 –14:20	[Paper No. 35] Numerical study of mixed-mode fracture in reinforced concrete Rena C. Yu*, Luis Saucedo, Gonzalo Ruiz	Jade Room, LB1
14:20 –14:40	[Paper No. 270] Progress in complex 2d and 3d cohesive fracture modelling considering random heterogeneity Zhenjun Yang*, Xiangting Su, Jianfei Chen, Guohua Liu	
14:40 –15:00	[Paper No. 310] Evaluation of an updated continuum damage model in ductile to brittle transition region Zhao-Xi WANG*, Fei XUE, Hui-Ji SHI, Guo-Gang SHU, Jian LU	
15:00 –15:20	[Paper No. 314] Combined finite- and boundary-element analysis of SCC crack growth Gennadiy Nikishkov*	
15:20 –15:40	[Paper No. 118] A computational study of plastic deformation in aisi 304 induced by surface mechanical attrition treatment Xiaochun Zhang*, Jian Lü and SQ Shi	

Title / Time / 30 Nov.	**MS-3-2: Model-based simulation with applications to nano and bio systems** **Chairs: Zhen Chen, Hongwu Zhang**	Venue
14:00 –14:20	[Paper No. 161] The investigation of size effect for dislocation starvation mechanism under cu single-crystal micro-pillar compression Y. Gao, Z.L. Liu and Zhuo Zhuang*	Crystal Room 2, LB3
14:20 –14:40	[Paper No. 344] A numerical investigation of cfrp-steel interfacial failure with material point method Luming Shen*, Haydar Faleh, Riadh Al-Mahaidi	
14:40 –15:00	[Paper No. 358] Mechanical properties of monolayer graphene under tensile and compressive loading Yuanwen Gao, Peng Hao*	
15:00 –15:20	[Paper No. 369] Simulation of an asymmetrical nano ring by mapping of the realistic electronic confinement potential L. M. Thu, O. Voskoboynikov*	
15:20 –15:40	[Paper No. 423] Monte carlo form-finding method for tensegrity structures Yue Li*, Xi-Qiao Feng and Yan-Ping Cao	

Title / Time / 30 Nov.	**MS-8-2: 3RD INTERNATIONAL WORKSHOP ON NON-EQUILIBRIUM FLOWS** **Chairs: Kun Xu, Wenjing Ye**	Venue
14:00 –14:20	[Paper No. 116] Direct numerical simulations of compressible homogeneous turbulence Li-Shi Luo*, Wei Liao, Yan Peng	Crystal Room 1, LB3
14:20 –14:40	[Paper No. 125] Plume parameters and thruster properties of a low power arcjet W X Pan*, X Meng, H J Huang, C K Wu	
14:40 –15:00	[Paper No. 135] On the internal energy relaxation model for nonequilibrium flow Qibing Li*, Song Fu	
15:00 –15:20	[Paper No. 169] Direct numerical simulation of turbulent thermal and flow field with multi-hole cooling Fengquan Zhong*, Xuejun Fan, Jing Wang, Yun Huang, Gong Yu	
15:20 –15:40	[Paper No. 170] Study on the mechanism of detonation to quasi- detonation transition Yun-Feng Liu*, Zong-Lin Jiang	

Title / Time / 30 Nov.	**MS-7-1: ADVANCES IN MULTISCALE METHODS AND APPLICATIONS OF NANO- AND BIO-MECHANICS** **Chairs: Dong Qian, Moon K. Kim**	Venue
14:00 –14:20	[Paper No. 92] Concurrent quantum-mechanical coupling in low-dimensional carbon nanostructures Dong Qian*	Grand Ballroom, LB3
14:20 –14:40	[Paper No. 324] Elastic network model of a nuclear transport complex Patrick Ryan, W. K. Liu, Dockjin Lee, Sangjae Seo, Young-Jin Kim, Moon K. Kim*	
14:40 –15:00	[Paper No. 328] Stochastic framework for an advanced material design based on multiresolution continuum theory W.K. Liu, Rong Tian, Sanghoon Lee, Yoon-Suk Chang, Moon-ki Kim, Jae- Boong Choi, Larbi Siad, Dockjin Lee*, Young-Jin Kim, Lars-Erik Lindgen	
15:00 –15:20	[Paper No. 330] Nanostructure effects on thermal conductivity in sige nanowires Xueming Yang, Albert C. To*	
15:20 –15:40	[Paper No. 481] Atomistic simulations on polycrystalline Cu nanowires under tension, bending and torsion loadings X. Tian*, J.Z. Cui, M.Z. Xiang	

Title / Time / 30 Nov.	**MS-7-2: ADVANCES IN MULTISCALE METHODS AND APPLICATIONS OF NANO- AND BIO-MECHANICS** **Chairs: Young-Jin Kim, Dong Qian**	Venue
15:55–16:15	[Paper No. 11] Damage Analysis of Tensile Deformation of Co-rolled SMATed 304SS X. Guo, A.Y.T. Leung*, A. Chen, H. Ruan and J. Lu	Crystal Room 3, LB3
16:15–16:35	[Paper No. 370] Atomistic simulation of tensile deformation behavior in magnesium single crystal Qi, Honggang, Guo, Yafang*	
16:35–16:55	[Paper No. 241] An evolvement-based genetic algorithm for computer-aided molecuar docking Kang Ling, Zhao Xiaoyu, Chen Xi, and Wang Xicheng*	
16:55–17:15	[Paper No. 303] Unstable surface modes in finite chain computations: deficiency of reflection coefficient approach Shaoqiang Tang*	

Title / Time / 30 Nov.	**SS-2: COMPUTATIONAL INFECTION RISK ASSESSMENTS IN BUILDING ENVIRONMENT** **Chairs: Jianlei Niu, Man Pun Wan**	Venue
15:55–16:15	[Paper No. 50] CFD Simulation of spread risks of infectious disease due to interactive wind and ventilation airflows via window openings in high-rise buildings Jianlei Niu*, N.P. Gao	Jade Room, LB1
16:15–16:35	[Paper No. 93] A semi-empirical box approach for modeling the particulate matter concentration at an urban traffic intersection He, Hong-di*, Jane Wei-Zhen Lu	
16:35–16:55	[Paper No. 355] Experimental investigation on effect of smoke management system in a high-large atrium B. Chen, S.X. Lu, C.H. Li, Y. Huang*, J. Hu, Y.Q. Zheng, S. Chen	
16:55–17:15	[Paper No. 561] Modeling the pathogen exposure and infection risk associated with fomite transmission in an aircraft cabin mock-up Man Pun Wan*	

Title / Time / 30 Nov.	**PS-1-1: Artificial intelligence, expert systems & applications, CAD, CAM and CAE** **Chairs: I-Tung Yang, Ivan Jordanov**	Venue
15:55–16:15	[Paper No. 176] Risk-based multiobjective optimization model for bridge maintenance planning I-Tung Yang* and Yen-Shun Hsu	Crystal Room 2, LB3
16:15–16:35	[Paper No. 253] Implementation of building information modeling (BIM) in construction: a comparative case study Steve Rowlinson*, Ronan Collins, Martin M. Tuuli , and Yunyan Jia	
16:35–16:55	[Paper No. 498] Decision support system for concrete bridge maintenance Maria Rashidi*, Brett Lemass, Peter Gibson	
16:55–17:15	[Paper No. 564] Prediction of scour below flip bucket using soft computing techniques H.M. Azamathulla*, Aminuddin A Ghani, Nor Azazi Zakaria	

Title / Time / 30 Nov.	**MS-18-1: RECENT ADVANCES IN BEM AND OTHER RELATED MESHLESS METHODS** **Chairs: Ch.Z Zhang, Jan Sladek**	Venue
15:55–16:15	[Paper No. 261] A chain approach of be row-subdomains for simulating the failure processes in heterogeneous brittle materials Zhenhan Yao*, Lingfei Gao	Crystal Room 1, LB3
16:15–16:35	[Paper No. 366] Thermomechanical analysis of functionally graded materials Ch.Z Zhang*, A. Ekhlakov, O. Khay, X.W. Gao, J. Sladek and V. Sladek	
16:35–16:55	[Paper No. 448] Large-scale multiple scattering analysis using fast multipole BEM in time-domain Takahiro Saitoh*, Ch.Z Zhang and S. Hirose	
16:55–17:15	[Paper No. 437] Fast BEM analysis of porous solids Zai You Yan*, Jun Zhang, Wenjing Ye and T.X. Yu	

Title / Time / 30 Nov.	**PS-2: NDE AND WAVE PROPAGATION** **Chairs: Jiayong Tian, B. Tie**	Venue
15:55–16:15	[Paper No. 32] Finite element method for analysis of band structures of 2d phononic crystals with archimedean-like tilings Jianbao Li*, Yue-Sheng Wang, Chuanzeng Zhang	Grand Ballroom, LB3
16:15–16:35	[Paper No. 61] A hybrid method for transient wave propagation in a multilayered solid Jiayong Tian* and Zhoumin Xie	
16:35–16:55	[Paper No. 108] High frequency elastic wave propagation in media with a microstructure. B. Tie*, D. Aubry, A.S. Mouronval, D. Solas, J. Thébault, and B.Y. Tian	
16:55–17:15	[Paper No. 408] Numerical simulations of one-dimensional microstructure dynamics M. Berezovski*, A. Berezovski, J. Engelbrecht	

Tuesday, 1 December:

Title / Time / 1 Dec.	**MS-23-1: NONLINEAR DYNAMICS** **Chairs: RYY Lee, Minghui Yao**	Venue
10:20–10:50	**Session Keynote:** [Paper No. 297] Modelling dowel action of discrete reinforcing bars in cracked concrete structures A.K.H. Kwan*, P.L. Ng, and J.Y.K. Lam	Crystal Room 3, LB3
10:50–11:10	[Paper No. 28] Theoretical and Experimental Investigations of Nonlinear Vibrations for a Cantilever Beam Dongxing Cao*, Wei Zhang and Minghui Yao	
11:10–11:30	[Paper No. 66] Dynamics of the high-speed train pantograph-catenary interaction by using co-simulation of finite element and multibody codes Jorge Ambrosio*, Frederico Rauter, João Pombo and Manuel Pereira	
11:30–11:50	[Paper No. 153] Analysis and research on elasto-plastic response spectra Jianguo Ding and Wei Chen*	
11:50–12:10	[Paper No. 198] Nonlinear characteristics of coupling faults rotor-bearing system with slowly varying mass Yuegang Luo*, Songhe Zhang and Bangchun Wen	
12:10 12:30	[Paper No. 240] A numerical investigation into equilibria of axially moving beams Hu Ding*, Li-Qun Chen	

Title / Time / 1 Dec.	**SS-1: MATHEMATICAL MODELS AND NUMERICAL METHODS for COMPLEX FLUID FLOWS** **Chairs: Keh-Ming Shyue, Yang-Yao Niu**	Venue
10:20–10:50	**Session Keynote:** [Paper No. 342] Collapse of granular column with time varying topography Yih-Chin Tai*, Chih-Yu Kuo	Jade Room, LB1
10:50–11:10	[Paper No. 256] Multi-scale finite element approach for Lagrangian hydrodynamics B. Nkonga*, P.H. Maire, Keh-Ming Shyue,	
11:10–11:30	[Paper No. 257] A positive well-balanced vfroe-ncv scheme for non-homogeneous shallow-water equations Christophe Berthon*, Fabien Marche	
11:30–11:50	[Paper No. 266] A wave propagation method for compressible multiphase flow on logically rectangular quadrilateral and hexahedral grids Keh-Ming Shyue*	
11:50–12:10	[Paper No. 274] Development of the patient-specific cardiovascular modeling system using immersed boundary technique Wee-Beng Tay, Liang-Yu Lin, Wen-Yih Tseng, Yu-heng Tseng*	
12:10 12:30	[Paper No. 543] Calculations of two-phase interface capturing flow models based on artificial compressibility Yang-Yao Niu*	

Title / Time / 1 Dec.	**PS-6-1: FLUID MECHANICS AND HEAT TRANSFER** **Chairs: Zhigang Li, Leonardo Traversoni**	Venue
10:20–10:40	[Paper No. 17] Numerical analysis of vortex-like structure induced mechanism in gaseous detonation phenomena C J Wang* and C M Guo	Crystal Room 2, LB3
10:40–11:00	[Paper No. 38] Moving grids and ale-fem for incompressible viscous flows around fixed and moving cylinders Decheng Wan*	
11:00–11:20	[Paper No. 51] Modelling cavitation using vorticity Leonardo Traversoni* and Yi Xu	
11:20–11:40	[Paper No. 131] Nanoscale poiseuille flows of liquid argon Chong Liu* and Zhigang Li	
11:40–12:00	[Paper No. 173] A numerical study of the vertical round jets in cross- flows Xiaoyuan Zhang* and Changcheng Li	
12:00 12:20	[Paper No. 474] 3D Numerical simulation of flow structure in confluence river Yang Qing-yuan*, Sun Yi, Wang Xian-ye, Lu Wei-Zhen, Wang Xiekang	

Title / Time / 1 Dec.	**MS-16-2: MESHFREE AND INNOVATIVE NUMERICAL METHODS** **Chairs: J. S. Chen, Yuantong Gu**	Venue
10:20–10:50	**Session Keynote:** [Paper No. 282] Efficient meshfree simulation of rainfall-induced soil slope failure D.D. Wang*, Ling Li	Crystal Room 1, LB3
10:50–11:10	[Paper No. 415] A novel polygonal finite element method: virtual node method Tang Xuhai*, C. Zheng, J.H. Zhang	
11:10–11:30	[Paper No. 441] Solving Reynolds equation in the head-disk interface of hard disk drives by using a meshless method Bao-Jun Shi*, Yang Ting-Yi, Zhang Jian, Du Yun-Dong	
11:30–11:50	[Paper No. 479] The forming simulation by using the rigid-plastic hybrid pcm/fem Yong-Ming Guo*	
11:50–12:10	[Paper No. 489] Introduction to the third form of the quadrilateral area coordinate method (QACM-III) Song Cen*, Zhi-Fei Long, Li Wang and Yu-Qiu Long	
12:10 12:30	[Paper No. 260] Calculation of water entry problem for free-falling bodies using a developed Cartesian cut cell method Wang Wen Hua*, Wang Yanying	

Title / Tim / 1 Dec.	**MS-8-3: 3RD INTERNATIONAL WORKSHOP ON NON-EQUILIBRIUM FLOWS** **Chairs: Quanhua Sun, Chih-Jen Sung**	Venue
10:20–10:50	**Session Keynote:** [Paper No. 567] Kinetic Effects of Non-Equilibrium Plasma Assisted Combustion Timothy Ombrello, Sang Hee Won, and Yiguang Ju*	Grand Ballroom, LB3
10:50–11:10	[Paper No. 279] Catalytic cracking of aviation kerosene under supercritical conditions Xuejun Fan*, Fengquan Zhong, Gong Yu , Jianguo Li, Chih-Jen Sung	
11:10–11:30	[Paper No. 405] Exact solutions to collisionless external gas flows Chunpei Cai*, Quanhua Sun	
11:30–11:50	[Paper No. 497] Plasma and electrode emissions from a 1 kw hydrogen- nitrogen arcjet thruster Heji Huang*, Wenxia Pan, Xian Meng, Chengkang Wu	
11:50–12:10	[Paper No. 502] Diffusive transport in two-dimensional Rayleigh- Benard convection Jun Zhang*, Jing Fan	
12:10–12:30	[Paper No. 574] Wall boundary condition for FDLBM direct aeroacoustic simulation S. F. Yu*, R. C. K. Leung	

Title / Time / 1 Dec.	**MS-23-2: NONLINEAR DYNAMICS** **Chairs: Wei Zhang, Jorge Ambrosio**	Venue
14:00–14:20	[Paper No. 252] Seismic responses of shot span bridge under three different patterns of earthquake excitations Daochuan Zhou*, Chen GuoRong, Lu Yan	Crystal Room 3, LB3
14:20–14:40	[Paper No. 296] Computation of normal forms of Bogdanov-Tankens singularities for high dimensional non-linear systems Shu Ping Chen*, Wei Zhang, Youhua Qian	
14:40–15:00	[Paper No. 307] Parameter estimation for phenomenological model of hysteresis using efficient genetic algorithm Xiaomin Xue*, Zhang Ling and Sun Qing	
15:00–15:20	[Paper No. 340] Multi-pulse homoclinic orbits and chaotic dynamics of the cantilevered pipe conveying pulsating fluid Minghui Yao*, W. Zhang and D.X. Cao	
15:20–15:40	[Paper No. 231] Nonlinear vibration of the cantilever fgm rectangular plate based on the first-order shear deformation plate theory YX Hao, W. Zhang*	

Title / Time / 1 Dec.	**PS-6-2: FLUID MECHANICS AND HEAT TRANSFER** **Chairs: R.K.K. Yuen, Carolin Birk**	Venue
14:00–14:20	[Paper No. 70] An upwind nonlinear galerkin finite element method for the incompressible navier-stokes equations Juan Wen*	Jade Room, LB1
14:20–14:40	[Paper No. 121] Experimental and numerical investigation of flow controls for closed-type cavity flow Zhang Qunfeng* and Li Jun	
14:40–15:00	[Paper No. 132] Friction-induced fluid heating in nanoscale helium flows Zhigang Li*	
15:00–15:20	[Paper No. 251] A temporally local absorbing boundary for diffusion in 3d unbounded medium Carolin Birk* and Chongmin Song	
15:20–15:40	[Paper No. 316] The ghost cell method and its applications for inviscid compressible flow on adaptive tree cartesian grids Jianming Liu, Ning Zhao, and Ou Hu*	

Title / Time / 1 Dec.	**PS-11-1: SOLID AND STRUCTURAL MECHANICS** **Chairs: Jian Lü, Yang Xiang**	Venue
14:00–14:20	[Paper No. 24] Parametric instability of functionally graded timoshenko beams with an open edge crack Jie Yang, Sritawat Kitipornchai, and Yang Xiang*	Crystal Room 2, LB3
14:20–14:40	[Paper No. 45] A generalized component modal analysis for space mega frames of super tall buildings Yaoqing Gong*, Liping Liu	
14:40–15:00	[Paper No. 69] Vibration analysis of plates by MLS-element method L. Zhou* and Yang Xiang	
15:00–15:20	[Paper No. 95] Parametric shape and topology optimization with radial basis functions and partition of unity method Hon Shan Ho*, Bonnie Lui, XH Xing, and Michael Yu Wang	
15:20–15:40	[Paper No. 436] Scaling relationships in spherical indentation of metallic foams Wenyi Yan*	

Title / Time / 1 Dec.	**PS-5-1: Environmental Science and Engineering** **Chairs: John C.C. Lu, Dong-Sheng Jeng**	Venue
14:00–14:20	[Paper No. 141] Transient ground surface displacements of a poroelastic half space subjected to an impulsive point sink Feng-Tsai Lin and John C.C. Lu*	Crystal Room 1, LB3
14:20–14:40	[Paper No. 315] On controllability of structures with closely spaced natural frequencies based on perturbation analysis Xie Faxiang* and Sun Limin	
14:40–15:00	[Paper No. 443] The effects of wind turbulent on the structure of streamwise sand flux Hu Wenwen, Wang Ping*, Zheng Xiaojing	
15:00–15:20	[Paper No. 356] Design of field experiments for adaptive sampling of the ocean with autonomous vehicles H Zheng, BH Ooi, W Cho, MH Dao, P Tkalich, and NM Patrikalakis*	
15:20–15:40	[Paper No. 511] Effects of soil behavior on solute transport in groundwater Dong-Sheng Jeng*, Huijie Zhang	

Title / Time / 1 Dec.	**MS-24: RECENT DEVELOPMENTS IN ANISOTROPIC CONTINUUM ANALYSIS, INCLUDING COMPOSITES AND BIOMECHANICS** **Chairs: David C. Kellermann, Hou Man**	Venue
14:00–14:20	[Paper No. 150] A continuum approach for neural network modelling of anisotropic materials Hou Man*, Tomonari Furukawa	Grand Ballroom, LB3
14:20–14:40	[Paper No. 205] On inclusion-matrix interfacial stresses in composites containing phase-transforming phases Yunche Wang*, Chi-Ching Ko	
14:40–15:00	[Paper No. 255] Intrinsic decomposition of the stretch tensor for fibrous media David C. Kellermann*	
15:00–15:20	[Paper No. 420] Two-scale finite element computation for piezoelectric problem in periodic perforated domain Yongping Feng*, Yao Zhengan and Deng Mingxiang	
15:20–15:40	[Paper No. 462] Biomechanical properties of peripheral layer in articular cartilage Miroslav Petrtyl, J. Danesova, J. Lisal*, J. Sejkotova	

Title / Time / 1 Dec.	**MS-12: RANDOM VIBRATION AND CONTROL OF NONLINEAR STRUCTURAL SYSTEMS** **Chairs: Cho Wing To, X. Sheldon Wang**	Venue
15:55–16:15	[Paper No. 18] An hierarchical coarse grain modeling of hemoglobin Tao Wu, Ye Yang, X. Sheldon Wang*, Barry Cohen, Hongya Ge	Crystal Room 3, LB3
16:15–16:35	[Paper No. 120] Symplectic algorithms in computational stochastic nonlinear structural dynamics Cho Wing To*	
16:35–16:55	[Paper No. 83] Non-zero mean PDF solution of nonlinear oscillators due to Poisson white noise G.K. Er*, V. P. Iu, H. T. Zhu and K. P. Kou,	
16:55–17:15	[Paper No. 478] Reduced order models for acoustoelastic fluid-structure interaction systems Ye Yang, Tao Wu and X. Sheldon Wang*	

Title / Time / 1 Dec.	**PS-6-3: FLUID MECHANICS AND HEAT TRANSFER** **Chairs: Jintu Fan, Decheng Wan**	Venue
15:55–16:15	[Paper No. 34] Three-dimensional numerical simulation of turbulent flow in a rectangular u-bending pipe Xianye Wang*, Jane Wei-Zhen Lu and Sun Yi	Jade Room, LB1
16:15–16:35	[Paper No. 134] Numerical simulation of particle flow for high velocity compaction based on discrete element method Wang Shuang*, Zheng Zhoushun, and Zheng Shan	
16:35–16:55	[Paper No. 331] Optimization on emergency longitudinal ventilation design Camby M.K. Se, R.K.K. Yuen*, Sherman C.P. Cheung, and Jiyuan Tu	
16:55–17:15	[Paper No. 454] Numerical study of waterjet guided laser drilling of silicon based on FVM Cai-Juan Zhan*, Chang-Feng Li, YuLi Wang, Tao Liu, Yong-Chen Pan	

Title / Time / 1 Dec.	**PS-8-1: GEOMECHANICS, GEOGRAPHIC INFORMATION SYSTEMS** **Chairs: X.K. Li, Thirapong Pipatpongsa**	Venue
15:55–16:15	[Paper No. 101] An updated constitutive model of eps geofoam Chin J. Leo*, Henry K. Wong, and Samanthika Liyanapathirana	Crystal Room 2, LB3
16:15–16:35	[Paper No. 142] Thermal consolidation of a poroelastic full space subjected to a decaying point heat source John C.-C. Lu*, Feng-Tsai Lin	
16:35–16:55	[Paper No. 174] Particular stress distributions in granular wedges under coulomb friction inequality Thirapong Pipatpongsa*	
16:55–17:15	[Paper No. 295] The numerical simulation of coupling behavior of soil with chemical pollutant effects Z.J. Liu*, X.K. Li, and L.Q. Tang	

Title / Time / 1 Dec.	**PS-7: POLYMERS AND POLYMER COMPOSITES, COMPUTER SIMULATION OF PROCESSES AND MANUFACTURING** **Chairs: Petr Procházka, Klemens G. Schulmeister**	Venue
15:55–16:15	[Paper No. 243] Tools and equipments modeling for automobile interactive assembling operating simulation and process planning Dianliang Wu* and Hongmin Zhu	Crystal Room 1, LB3
16:15–16:35	[Paper No. 402] Variational bounds for creeping composites Petr Procházka*	
16:35–16:55	[Paper No. 404] Overall properties of debonding composites using BEM Petr Procházka*, Sarka Peskova, and Alexander Kravtsov	
16:55–17:15	[Paper No. 553] Modeling of lateral dynamics for an endless steel belt Klemens G. Schulmeister*	

Title / Time / 1 Dec.	**MS-20-1: MICRO- AND NANO-MECHANICS** **Chairs: David CS Chen, J. S. Chen**	Venue
15:55–16:15	[Paper No. 109] Nano-size effect of interface energy and its effect on interface fracture Li-Hong Liang*, X.M. You, H.S. Ma, Y.G. Wei	Grand Ballroom, LB3
16:15–16:35	[Paper No. 148] Simulation of nanoscale phenomena using extended space/time finite element method and bridging scale boundary condition Dong Qian*, Shardool Chirputkar	
16:35–16:55	[Paper No. 196] The prediction and simulation for the mechanical properties of ceramic-based composites reinforced with nano-micro particles Dongmei Luo*, Yinglong Zhou, Jinshan Hu, Hong Yang	
16:55–17:15	[Paper No. 380] Multiscale Method for Quantum Mechanics J. S. Chen*, W. Hu	

Wednesday, 2 December:

Title / Time / 2 Dec.	**MS-16-3: MESHFREE AND INNOVATIVE NUMERICAL METHODS** **Chairs: Yuantong Gu, D.D. Wang**	Venue
10:20–10:50	**Session Keynote:** [Paper No. 536] Sufficient conditions for mesh- distortion immune finite elements S. Rajendran*	Grand Ballroom I
10:50–11:10	[Paper No. 509] An element nodal force-based large increment method for elastoplasticity Zaoyang Guo*, Danbin Long, Xila Liu, Stéphane Bordas and Leiming Zhang	
11:10–11:30	[Paper No. 568] Point-wise integrated-rbf-based discretisation of differential equations Mai-Duy Nam*, Thanh Tran-Cong	
11:30–11:50	[Paper No. 193] On the structure of a new superhard hexagonal carbon phase Bin Zhang*, Yongcheng Liang, Zaoyang Guo, and Stéphane Bordas	
11:50–12:10	[Paper No. 202] Dynamic end-milling force filtering using wavelet filter bank Moon Chul Yoon*	
12:10–12:30	[Paper No. 269] Multi-objective shape design of crane-hook taking account of practical requirement T. Muromaki*, K. Hanahara, T. Nishimura, Y. Tada, S. Kuroda, T. Fukui	

Title / Time / 2 Dec.	**PS-6-4: FLUID MECHANICS AND HEAT TRANSFER** **Chairs: Liang Cheng, Y.H. Yau**	Venue
10:20–10:40	[Paper No. 264] Development of a unified flow regime map for a horizontal pipe with the support vector machines H.K. Tam*, L.M. Tam, A.J. Ghajar, and C.W. Cheong	Grand Ballroom II
10:40–11:00	[Paper No. 265] Comparison of different correlating methods for the single-phase heat transfer data in laminar and turbulent flow regions H.K. Tam*, L.M. Tam, A.J. Ghajar and C.U. Lei	
11:00–11:20	[Paper No. 483] Nonlinear analysis of two-phase circumferential motion in the ablation circumstance Xu Xiaoliang*, Huang Hai-ming, Zhang Zi-mao	
11:20–11:40	[Paper No. 349] Numerical study on the turbulent flow structures of a buoyant pool fire Sherman C.P. Cheung*, Camby M.K. Se, G.H. Yeoh, and Jiyuan Tu	
11:40–12:00	[Paper No. 389] A 2-d model to predict time development of scour below pipelines with spoiler M. S. Alam* and Liang Cheng	
12:00–12:20	[Paper No. 444] Heat and mass transport through porous fibrous insulation: modelling and optimization Jintu Fan*, Ning Du, Huijun Wu, and Weiwei Sun	

Title / Time / 2 Dec.	**MS-22-1: STRUCTURAL DAMAGE DETECTION UTILIZING MEASURED DYNAMIC RESPONSE** **Chairs: Paul Lam, Ryan W.M. Yan**	Venue
10:20–10:40	[Paper No. 9] Detection of multiple cracks on a partially obstructed plate structure following the probabilistic approach. T. Yin*, Paul H.F. LAM, H.M. Chow	Grand Ballroom III
10:40–11:00	[Paper No. 25] An experimental study of dlv method in damage detection of frame structures Yen-Po Wang*, Yi-Hsuan Chen and Chien-Liang Lee	
11:00–11:20	[Paper No. 233] Intelligent-based structural damage detection by measured vibration information Eric W.M. Lee*, Kin Fung Yu	
11:20–11:40	[Paper No. 412] Experimental Study on a general data-based nonlinear identification approach for a frame model structure Bin Xu*, Jia He, Ren Zhou, Sami F. Masri	
11:40–12:00	[Paper No. 430] Effect of β on seismic vulnerability curve for rc bridge based on double damage criterion Feng Qing Hai*, Yuan Wan-cheng	
12:00–12:20	[Paper No. 578] Detection of ballast damage by in-situ vibration measurement of sleepers Paul H. F. LAM, M. T. Wong*, R. M. Keefe	

Title / Time / 2 Dec.	**MS-23-3: NONLINEAR DYNAMICS** **Chairs: Qi-chang Zhang, Xuegang Yuan**	Venue
10:20–10:40	[Paper No. 346] Symplectic method based on dual variable principle Qiang Gao*, H.W. Zhang and W.X. Zhong	Salon III
10:40–11:00	[Paper No. 350] Nonlinear seismic analysis of girder bridge using POA Zhenxin Li*, Shizhong Qiang	
11:00–11:20	[Paper No. 390] Nonlinear vibration of a rotor/stator system with axial contact/rubs Q Ding*, K. P. Zhang	
11:20–11:40	[Paper No. 439] Dynamic bifurcation in composite incompressible hyperelastic cylindrical tubes Xuegang Yuan*, Hong-wu Zhang and Jiu-sheng Ren	
11:40–12:00	[Paper No. 522] Numerical modeling for impact-resistant pipes buried at shallow depth Ching-Jong Wang*, Jung-Fu Hsu	
12:00–12:20	[Paper No. 531] Silnikov sense chaos in a simple three dimensional system Qi-chang Zhang*, Wang Wei, Hao Shu-ying	

Title / Time / 2 Dec.	**PS-11-2: SOLID AND STRUCTURAL MECHANICS** **Chairs: J. L. Yu, Masanori Kikuchi**	Venue
10:20–10:40	[Paper No. 86] Thermal analysis of thin plates using the finite element method G. K. Er*, V. P. Iu, and X. L. Liu	Salon II
10:40–11:00	[Paper No. 262] Bending response of sandwiched double tube structures with aluminum foam core L.W. Guo* and J.L. Yu	
11:00–11:20	[Paper No. 275] Interaction effect analysis of two surface cracks using s-version fem Masanori Kikuchi*, Yoshitaka Wada, and Yulong Li	
11:20–11:40	[Paper No. 285] Three-dimensional free vibration of functionally graded material plates on different boundary conditions Qian Li* and Vai Pan Iu	
11:40–12:00	[Paper No. 286] Three-dimensional buckling analysis of rectangular plates with in-plane compressive loads Qian Li* and Vai Pan Iu	
12:00–12:20	[Paper No. 359] Settlement analysis of pile groups in layered elastic half space Baiyong Fu*, Guoping Xu, and Heng Gao	

Title / Time / 2 Dec.	**PS-12-1: SOLID MECHANICS** **Chairs: K. Y. Sze, Liqun Tang**	Venue
14:00–14:20	[Paper No. 111] A bridging scale method for multi-scale analysis of granular materials Xikui Li* and Ke Wan	Grand Ballroom I
14:20–14:40	[Paper No. 137] Hybrid-trefftz finite elements for helmholtz problem K. Y. Sze* and G. H. Liu	
14:40–15:00	[Paper No. 249] Constitutive relation of aluminium foam based on multiple statistical parameters Liqun Tang*	
15:00–15:20	[Paper No. 311] Life prediction for low cycle fatigue in PWR primary pipe material Xue Fei, Yu Wei-wei*, Wang Zhao-xi, Ti Wen-xin, Lin Lei, and Men Xin-ming	
15:20–15:40	[Paper No. 378] Study on thermal fatigue life of glidcop Al-15 J.F. Jin, W.L. Xiao, H.B. Chen*	

Title / Time / 2 Dec.	**PS-3: DAMAGE MECHANICS, NONLINEAR DYNAMICS** **Chairs: José M.A. César de Sá, Narayan Chandak**	Venue
14:00–14:20	[Paper No. 280] Numerical modelling of glass fibre reinforced laminates subjected to a low velocity impact J Y Fan*, Z.W. Guan, and W. J. Cantwell	Grand Ballroom II
14:20–14:40	[Paper No. 427] Thermodynamical framework for ductile damage and plasticity José M.A. César de Sá*, Filipe X.C. Andrade, Francisco M. Andrade Pires	
14:40–15:00	[Paper No. 433] Evaluation of bogie frame safety of shanghai metro line 1 by 3d fem analysis Xie Xiongyao*, JIN Guolong, WANG Rulu	
15:00–15:20	[Paper No. 538] Structural response of triangular tension leg platform using dynamic morison equation Narayan Chandak* and S. Chandrasekaran	
15:20–15:40	[Paper No. 576] Seismic assessment of buildings: proposal of a new modified uncoupled modal response history analysis Sandra Jerez* and Ahmed Mebarki	

Title / Time / 2 Dec.	**MS-8-4: 3RD INTERNATIONAL WORKSHOP ON NON-EQUILIBRIUM FLOWS** **Chairs: Chunpei Cai, Zonglin Jiang**	Venue
14:00–14:20	[Paper No. 513] Skeletal mechanism generation of surrogate jet fuels for aeropropulsion modeling Chih-Jen Sung*, Kyle E. Niemeyer	Grand Ballroom III
14:20–14:40	[Paper No. 556] Parallel fully-implicit computation of magneto- hydrodynamics acceleration experiments Tian Wan*, Graham Candler	
14:40–15:00	[Paper No. 164] An efficient immersed boundary-lattice boltzmann method for simulation of three-dimensional flows Chang Shu*, J. Wu	
15:00–15:20	[Paper No. 99] Fully kinetic simulations of ion beam neutralization Joseph Wang*	
15:20–15:40	[Paper No. 183] A semiclassical Lattice Boltzmann method for quantum hydrodynamcs Jaw-Yen Yang*, Li-Hsin Hung, Sheng-Hsin Hu	

Title / Time / 2 Dec.	**PS-5-2: ENVIRONMENTAL SCIENCE AND ENGINEERING** **Chairs: K.V. Yuen, Zhu Tingyu**	Venue
14:00–14:20	[Paper No. 191] Particle trace in vortex merging process Huang Hai-ming and Xu Xiao-liang*	Salon III
14:20–14:40	[Paper No. 317] Is a complex neural network based air quality model better than a simple one? A bayesian point of view K.I. Hoi, K.V. Yuen, and K.M. Mok*	
14:40–15:00	[Paper No. 438] Rainstorm simulation in Macao with WRF M. M. Lou*, K. M. Mok	
15:00–15:20	[Paper No. 550] Computational fluid dynamics (CFD) simulation of drag reduction by riblets on automobile N.N.N. Ghazali*, Y. H. Yau, A. Badarudin, Y.C. Lim	
15:20–15:40	[Paper No. 558] A novel sintering gas desulphurization technology applied in the sintering plants in china Jin Ting, Zhu Tingyu*, Jing Pengfei, Ye Meng	

Title / Time / 2 Dec.	**MS-20-2: MICRO- AND NANO-MECHANICS** **Chairs: David CS Chen, Yunche Wang**	Venue
14:00–14:20	[Paper No. 197] Multiscale analysis of adsorption-induced deformation of cantilever-based biosensor David Chuin-Shan Chen*, Chia-Ching Chou and Shu-Wei Chang	Salon II
14:20–14:40	[Paper No. 284] Molecular dynamics simulation of the tension properties on the single-crystalline nano-Cu films Shuang Xu*, Ya-Fang Guo	
14:40–15:00	[Paper No. 323] Interactions between a buckled carbon nanotube and fullerene via molecular-dynamics simulations Yunche Wang*, Qu-Yuan Kuo and Chuan Chen	
15:00–15:20	[Paper No. 493] Eshelby tensor for a penny-shaped inclusion with limited thickness in transversely isotropic elastic medium Zhu Fuwei*, Dui Guansuo	
15:20–15:40	[Paper No. 294] Nanomechanics of Biomolecular Motor Proteins in Micromachined Structures Tzu-Chen Ma, C-H Lin, Chih-Ting Lin*, Chuin-Shan Chen	

Title / Time / 2 Dec.	**PS-1-2: ARTIFICIAL INTELLIGENCE, EXPERT SYSTEMS & APPLICATIONS; CAD, CAM AND CAE** **Chairs: HsienHua Lee, Cheng-Hung Huang**	Venue
16:00–16:20	[Paper No. 55] Modelling and prediction of spark-ignition engine power performance using incremental least squares support vector machines Pak-kin Wong, Chi-man Vong, Hang-cheong Wong, Ke Li*	Grand Ballroom I
16:20–16:40	[Paper No. 57] Case-based reasoning for automotive engine performance tune-up C.M. Vong, H. Huang*, and P.K. Wong	
16:40–17:00	[Paper No. 467] Numerical ergonomics analysis in operation environment of CNC machine S. F. Wong*, Z. X. Yang	
17:00–17:20	[Paper No. 172] Case-based reasoning with clustering for automotive engine spark ignition system H. Huang*, C.M. Vong and P.K. Wong	
17:20–17:40	[Paper No. 232] An inverse problem in estimating the volumetric heat generation for a three-dimensional encasulated chip Cheng-Hung Huang* and Wei-Lun Chang	
17:40–18:00	[Paper No. 407] An efficient implementation scheme for the moving grid method based on delaunay graph mapping Shuli Sun, Bin Chen, Jianfei Liu and Mingwu Yuan*	

Title / Time / 2 Dec.	**PS-4: BIOMECHANICS, ELECTROMAGNETISM, MEMS AND BIO-MEMS, MICROTRIBOLOGY AND MICROMECHANICS** **Chairs: Chui-Jie Wu, Moon-Chul Yoon**	Venue
16:00–16:20	[Paper No. 43] Vortex dynamics principles of direction control, speed control and energy-saving mechanism of self-propelled swimming of fish school Chui-Jie Wu*	Grand Ballroom II
16:20–16:40	[Paper No. 464] Fibre-matrix interaction in soft tissue Zaoyang Guo*	
16:40–17:00	[Paper No. 347] Electromagnetic elasto-platic dynamic response of conductive plate Yuanwen Gao*	
17:00–17:20	[Paper No. 372] Characterization of elastic-plastic material properties for imc layer of enepig by using reverse algorithm Jong-Min Kim, Hyun-Boo Lee, Yoon-Suk Chang, Jae-Boong Choi*, Young-Jin Kim, and Kum-Young Ji	
17:20–17:40	[Paper No. 204] Tilting compensation technique of micro machined surface Moon-Chul Yoon and Jae-Yong Yang*	
17:40–18:00	[Paper No. 151] A prediction method of binding free energy of protein and ligand Kun Yang* and Xicheng Wang	

Title / Time / 2 Dec.	**PS-6-5: FLUID MECHANICS AND HEAT TRANSFER** **Chairs: Patrick Vasseur, Kazuya Nojima**	Venue
16:00–16:20	[Paper No. 482] The critical heat transfer characteristics of an insulated sphere considering heat radiation King Leung Wong, and José Luis León Salazar*	Grand Ballroom III
16:20–16:40	[Paper No. 528] Soret and thermosolutal effects on convection within a horizontal fluid layer Imene Alloui, Hocine Benmoussa, and Patrick Vasseur*	
16:40–17:00	[Paper No. 530] Blockage ratio and mesh dependency study for lattice boltzmann flow around cylinder M. S. Alam, Liang Cheng*	
17:00–17:20	[Paper No. 549] CFD Simulation on thermal comfort in a library building in the tropics Y.H. Yau*, N.N.N. Ghazali, A. Badarudin and F.C. Goh	
17:20–17:40	[Paper No. 554] Three-dimensional shape identification of a BOD located in fluid flow Kazuya Nojima*, Mutsuto Kawahara	
17:40–18:00	[Paper No. 572] A new mathematical methods for pressure transient analysis of naturally-fractured VUGGY reservoirs Lijun Zhang*, Shiqing Cheng, Junling Wang	

Title / Time / 2 Dec.	**PS-14-1: MATERIALS SCIENCE, INFRASTRUCTURES AND AGING STRUCTURES** **Chairs: Y.C. Lin, Zhan-Qi Guo**	Venue
16:00–16:20	[Paper No. 13] Simulation of the optical parameters and study of the physical properties of the ito films prepared by ion beam assisted deposition technique Lijian Meng*	Salon III
16:20–16:40	[Paper No. 85] Mechanical behavior of nanometer ni by md simulation Qiheng Tang* and Nan Ding	
16:40–17:00	[Paper No. 106] First principle study on novel gas sensor based on al-doped grapheme Mei Chi* and Ya-Pu Zhao	
17:00–17:20	[Paper No. 156] Discrete element method simulating workability of fresh concrete Zhan-Qi Guo*, Quan Yuan, P. Stroeven, and A.L.A. Fraaij	
17:20–17:40	[Paper No. 206] Mathematical models for predicting the flow stress of typical alloy steel at elevated high temperatures Y.C. Lin* and Ge Liu	
17:40–18:00	[Paper No. 338] Analysis of interface properties of hybrid pre-stressed strengthening rc beams with crack Xie Zhihong*, Huang Peiyan, Guo Yongchang, Deng Jun, and Zhong Genquan	

Title / Time / 2 Dec.	**PS-11-3: SOLID AND STRUCTURAL MECHANICS** **Chairs: Danh Tran, Guo-Kang Er**	Venue
16:00–16:20	[Paper No. 365] The failure analysis of the axis of planet gearbox Gwo-Chung Tsai*, B.-S. Leu	Salon II
16:20–16:40	[Paper No. 398] Theoretical study on the geometric and dynamic performance of ring spinning triangle with finite element method Sheng Yan Li, Bin Gang Xu*, and Xiao Ming Tao	
16:40–17:00	[Paper No. 406] New formulation of the governing equations for analyzing outrigger structures Guo-Kang Er*	
17:00–17:20	[Paper No. 451] Analysis of factors affecting stress solution at concrete gravity dam heel Vu Hoang Hung*, Trinh Quoc Cong, Li Tongchun	
17:20–17:40	[Paper No. 470] Generating frequency response functions of a structure from time domain response signals Danh Tran*, Mohammad Saraireh	
17:40–18:00	[Paper No. 491] Control of prestressing force in rod for reducing bending in beams M B Wong*	

Thursday, 3 December:

Title / Time / 3 Dec.	**PS-12-2: SOLID MECHANICS** **Chairs: P. Schiavone, H.B. Chen**	Venue
10:20–10:50	[Paper No. 432] An assumed stress field method with orthogonal basic deformation modes for zero-energy mode free hybrid element construction Canhui Zhang*, Dongdong Wang	Grand Ballroom I
10:50–11:10	[Paper No. 520] Surface effects on an elastic solid with mode-III crack C.I. Kim, P. Schiavone*, C-Q Ru	
11:10–11:30	[Paper No. 524] Boundary element method for analysis of transverse wave resonances in phononic crystals Feng-Lian Li* and Yue-Sheng Wang	
11:30–11:50	[Paper No. 548] Calculation of two-dimensional phononic energy bands by using FDTD and high-resolution spectral estimation Xiao-Xing Su* and Yue-Sheng Wang	
11:50–12:10	[Paper No. 516] A decagonal quasicrysalline half-space weakened by a crack Les Sudak*	
12:10–12:30	[Paper No. 533] Numerical simulation on dynamic indentation behavior of sandwich plates with aluminum foam cores H. Zhang*, X.Q. Huang, L.Q. Tang	

Title / Time 3 Dec.	**PS-1-3: ARTIFICIAL INTELLIGENCE, EXPERT SYSTEMS & APPLICATIONS; CAD, CAM AND CAE** **Chairs: Mingwu Yuan, Shuxiang Xu**	Venue
10:20–10:50	[Paper No. 449] An experimental comparison of similarity assessment measures for 3d models on constrained surface deformation Lulin Quan*, Zhixin Yang	Grand Ballroom II
10:50–11:10	[Paper No. 472] Development of web-based virtual training environment for machining Zhixin Yang* and S. F. Wong	
11:10–11:30	[Paper No. 521] Intelligent computer vision system for automated classification Ivan Jordanov*, Antoniya Georgieva	
11:30–11:50	[Paper No. 544] A novel higher order artificial neural networks Shuxiang Xu*	
11:50–12:10	[Paper No. 546] Development on a new plate element of vector form intrinsic finite element HsienHua Lee*	
12:10–12:30	[Paper No. 566] Global optimization using mixed surrogate models for computation intensive designs Adel Younis, Zuomin Dong*	

Title / Time 3 Dec.	**MS-22-2: STRUCTURAL DAMAGE DETECTION, INVERSE PROBLEMS AND OPTIMIZATION** **Chairs: Chern-Hwa Chen, C.M. Mota Soares**	Venue
10:20–10:50	[Paper No. 376] An extended nonlinear-based method for optimum cutting pattern generation of membrane structures W. Punurai*, W.Tongpool, and W. Saardwong	Grand Ballroom III
10:50–11:10	[Paper No. 10] Enhancing the performance of structural health monitoring by optimal sensor placement and model class selection Paul H.F. LAM*, H.M. Chow and T. Yin	
11:10–11:30	[Paper No. 459] Structural monitoring and field test for Kao Ping hsi cable-stayed bridge in taiwan Chern-Hwa Chen*	
11:30–11:50	[Paper No. 396] Parameter estimation in hybrid active-passive laminated sandwich composite structures A.L. Araújo, C.M. Mota Soares*, C.A. Mota Soares, and J. Herskovits	
11:50–12:10	[Paper No. 463] A nested genetic algorithm for the numerical solution of non-linear coupled equations in water quality modeling Hermes A. García, Francisco J. Guerrero-Bolaño, Nelson Obregón-Neira*	
12:10–12:30	[Paper No. 537] Ann-assisted planning of conjunctive use of canal and ground water in canal commands Deepak Kashyap*, Susmita Ghosh	

Title / Time 3 Dec.	**PS-14-2: MATERIALS SCIENCE, INFRASTRUCTURES AND AGING STRUCTURES** **Chairs: Han Dajian, Michael A. B. Promentilla**	Venue
10:20–10:50	[Paper No. 364] The influence of hollow imperfections of epoxy resin on performances of interface of strengthened rc beams with HFRP Guo Yongchang, Li Lijuan, Deng Jun and Zhong Genquan*	Salon III
10:50–11:10	[Paper No. 445] Optimization of ferroelectric ceramics by design at the microstructure level K. P. Jayachandran*, J. M. Guedes and H. C. Rodrigues	
11:10–11:30	[Paper No. 458] A study on assessment method of traffic load effect of bridge in service Pan Ling, Han Dajian*	
11:30–11:50	[Paper No. 469] Crack detection in metallic and reinforced concrete strutures using frequency response functions Danh Tran*	
11:50–12:10	[Paper No. 487] Airfield rigid pavement structural design-a review of main aspects and methods of analysis Pereira, Tiago Bonucci*	
12:10–12:30	[Paper No. 499] Computation of crack tortuosity from microtomographic images of cement-based materials Michael Angelo B. Promentilla*, Takafumi Sugiyama	

Title / Time 3 Dec.	**PS-9: ENGINEERING SCIENCES AND PHYSICS** **Chairs: Sun, Limin, Zheng, Xiaojing**	Venue
10:20–10:50	[Paper No. 58] An occupant behavior model for building energy efficiency and safety L.L. Pan*, T. Chen, Q.S. Jia, R.X. Yuan, H.T. Wang, and R. Ding	Salon II
10:50–11:10	[Paper No. 129] Judging criterion of structures with closely spaced natural frequencies and its effect on control results Xie Faxiang* and Sun Limin	
11:10–11:30	[Paper No. 455] The research on the shedding vortex of barchan dune by LES Ma Gaosheng*, Zheng Xiaojing	
11:30–11:50	[Paper No. 466] Non-isothermal stagnation-point flow with convective boundary condition Vai Kuong Sin, Man Cheng Chen*	
11:50–12:10	[Paper No. 575] The determination of formation number for starting buoyant jets Ruo-qian Wang, Adrian Wing-Keung Law*, E.E. Adams, and O.B. Fringer	
12:10–12:30	[Paper No. 577] Prediction of noise propagation in city street cayons using computational environmental acoustics method E.X.J. Li, K.H. Seid, and R.C.K. Leung*	

Title / Time / 3 Dec.	**PS-1-4: ARTIFICIAL INTELLIGENCE, EXPERT SYSTEMS & APPLICATIONS; CAD, CAM & CAE** **Chairs: Zuomin Dong, R.C. Barros**	Venue
14:00–14:20	[Paper No. 411] Hysteretic performance identification for a frame structure with MR damper under limited excitations Bin Xu, Jia He, Ren Zhou*, S. F. Masri	Grand Ballroom I
14:20–14:40	[Paper No. 414] Simulation of cable-stayed bridge pretension forces by complete function collocation method with cell partition W. S. Shum and Z. Lin*	
14:40–15:00	[Paper No. 570] A parametric study on a rc frame based on pushover analysis V.G. Pereira, R.C. Barros*, M.B. Cesar	
15:00–15:20	[Paper No. 571] On the use of tmds for regular buildings and bridges under dynamic actions Miguel Moura Paredes*, Rui Carneiro de Barros	
15:20–15:40	[Paper No. 484] Average temperature model of double-row-pipe frozen soil wall by equivalent trapezoid method Xiang-dong Hu*	

Title / Time / 3 Dec.	**PS-8-2: GEOMECHANICS, GEOGRAPHIC INFORMATION SYSTEMS; SOLID AND STRUCTURAL MECHANICS** **Chairs: S. C. Wong, Stanislav Potapenko**	Venue
14:00–14:20	[Paper No. 518] Numerical simulation of earth pressure on head chamber of shield machine with FEM Shouju Li*, Chengang Kang, Wei Sun, Zichang Shangguan	Grand Ballroom II
14:20–14:40	[Paper No. 542] Axially loaded behavior of driven pc piles Shih-Tsung Hsu*	
14:40–15:00	[Paper No. 565] Development of neutral plane on a pile in a consolidating ground Sun, Tek Kei, Ryan W.M. Yan*	
15:00–15:20	[Paper No. 519] Weak solutions of the problem of torsion of micropolar elastic beams Stanislav Potapenko*, Elena Shmoylova	
15:20–15:40	[Paper No. 178] FE Eigenanalysis of singular states in metallic-piezoelectric materials Chen Mengcheng*	

Title / Time / 3 Dec.	**PS-15: UNCERTAINTY AND STOCHASTIC ANALYSIS** **Chairs: Gang Li, Zhixin Yang**	Venue
14:00–14:20	[Paper No. 81] Analysis of stochastic space frames with elementary stiffness matrix decomposition method G. K. Er, S. W. Lan*, and V. P. Iu	Grand Ballroom III
14:20–14:40	[Paper No. 210] Stochastic seismic response of an algiers site with random depth to bedrock M. Badaoui, M.K. Berrah, and A. Mébarki*	
14:40–15:00	[Paper No. 313] An accurate and stable FFT-based method for pricing options under exp-lévy processes Deng Ding and Sio Chong U*	
15:00–15:20	[Paper No. 325] An efficient and fast algorithm for simulations of mean-reverting square-root diffusions Deng Ding and Chon Ip Chao*	
15:20–15:40	[Paper No. 353] Surrogate-based reliability analysis using support vector machine Gang Li* and Zhiqiang Liu	

Title / Time / 3 Dec.	**PS-10: PARALLEL COMPUTING, PROBLEM SOLVING ENVIRONMENT, ROBUST ENGINEERING SYSTEMS** **Chairs: Yao Zheng, Ka-Veng Yuen**	Venue
14:00–14:20	[Paper No. 140] A parallel implementation of a smoothed particle hydrodynamics method on graphics hardware using the compute unified device architecture Un-Hong Wong, Hon-Cheng Wong*, and Zesheng Tang	Salon III
14:20–14:40	[Paper No. 268] Bayesian analysis of peak ground acceleration attenuation relationship He-Qing Mu* and Ka-Veng Yuen	
14:40–15:00	[Paper No. 517] Computer simulation of chemical processes and fluid flows in chemical reactors I.G. Chernykh*, T.I. Mischenko, V.N. Snytnikov, Vl.N. Snytnikov	
15:00–15:20	[Paper No. 557] Aerospace numerical simulation and digital prototyping technologies Yao Zheng*, Lijun Xie, Jianfeng Zou, Jianjun Chen, Jifa Zhang	
15:20–15:40	[Paper No. 337] A new approach for numerical evaluation of high order singular boundary integrals Xiao-Wei Gao*	

Title / Time 3 Dec.	**PS-13-1: INVERSE PROBLEMS AND OPTIMIZATION** **Chairs: Deepak Kashyap, Ke-min Zhou**	Venue
14:00–14:20	[Paper No. 71] Topological optimization of grillages by finite element method Ke-min Zhou*, and Xia Li	Salon II
14:20–14:40	[Paper No. 304] Research on topology optimization of truss structure based on the improved group search optimizer Xie Haobin*, Liu Feng, Li Lijuan, and Wang Chun	
14:40–15:00	[Paper No. 309] A quick group search optimizer and its application to the double layer spherical shell's optimal design Qin Guang*, Liu Feng, and Li Lijuan	
15:00–15:20	[Paper No. 345] Use of algorithm of change for optimal design of heat exchanger S. C. Tam*, H. K. Tam, C. H. Chio, and L. M. Tam	
15:20–15:40	[Paper No. 375] Topological optimization of beam cross section by employing extrusion constraint Rehan H. Zuberi*, Zuo Zhengxing, and Long Kai	

Title / Time 3 Dec.	**MS-18-2: RECENT ADVANCES IN BEM AND OTHER RELATED MESHLESS METHODS** **Chairs: Ch.Z Zhang, Zhenhan Yao**	Venue
16:00–16:20	[Paper No. 468] Inverse crack problems in piezoelectric solids Jan Sladek*, Vladimir Sladek and Chuanzeng Zhang	Grand Ballroom I
16:20–16:40	[Paper No. 507] CPIM-Improved meshless method for engineering application Min-Chou Tsai*, Lee, H.H. and Chang, P.-Y.	
16:40–17:00	[Paper No. 403] BEM simulation for steady-state temperature distributions of particulate composites with imperfect interfaces Mei Zhang*, Jiangtao Zhang and Pengcheng Zhai	

Title / Time 3 Dec.	**PS-13-2: INVERSE PROBLEMS AND OPTIMIZATION, DYNAMIC FAILURE AND FRACTURE** **Chairs: Z. W. Guan, Xu Han**	Venue
16:00–16:20	[Paper No. 503] Shape functions method for dynamic force reconstruction in the time domain J. Liu, Xu Han*	Salon III
16:20–16:40	[Paper No. 504] Optimization under interval uncertainty with local-densifying approximation technique Ziheng Zhao*, Xu Han, Chao Jiang	
16:40–17:00	[Paper No. 194] A computational study of the cerebral aneurysm response through a membrane anisotropic remodeling model P. Vena, G. Pennati, D. Gastaldi, R. Contro*	

Title / Time 3 Dec.	**PS-16: DYNAMIC FAILURE, SOLID MECHANICS, FLUID MECHANICS** **Chairs: Ryan WM Yan, Dexun Fu**	Venue
16:00–16:20	[Paper No. 259] Finite element analysis on application of dynamic vibration absorbers on floating raft system Kun Zhang*, Haibo Chen and Xinglong Gong	Salon II
16:20–16:40	[Paper No. 272] The crack tip field of mode i interface crack of film-substrate system in the nuclear equipment Zhiwei Liu*, Liqiang Tang, Yong Zhang, XiHhua Li	
16:40–17:00	[Paper No. 495] A new high order accurate shock capture method with wave booster Yanwen Ma*, Dexun Fu and Xinliang Li	

All participants (Full participants and Student participants) must wear the conference badge issued by The Organizing Committee to enter the conference area.

Emergency Contact for the conference: 9236 2464
Operation: 28 November – 4 December 2009

Dr. Jane WZ Lu, Prof. K.M. Mok
Secretary General
On and behalf of ISCM II – EPMESC XII Organizing Committee
2 November 2009