

ICCM2023 Handbook



The 14th International Conference on Computational Methods

August 6th-10th 2023

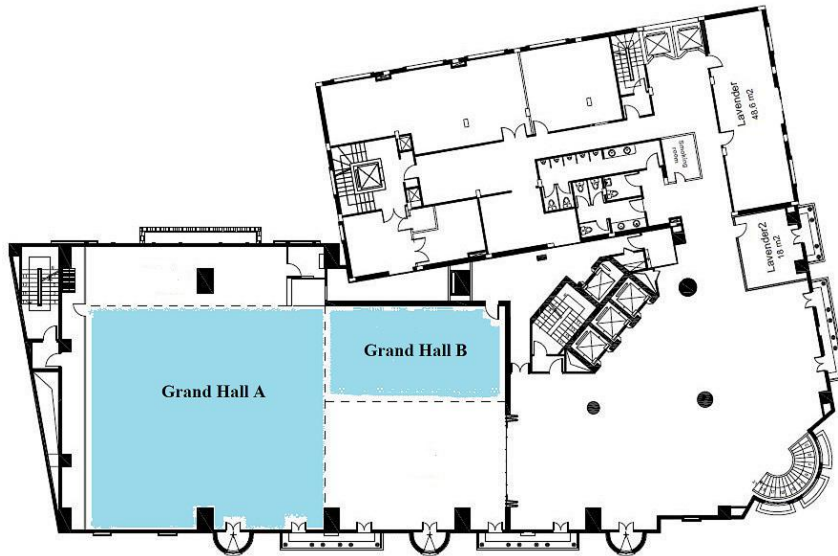
Ho Chi Minh City, Vietnam

Chairman: Nguyen-Xuan Hung, HUTECH University, Vietnam
Co-Conference Chairman: Guirong Liu, University of Cincinnati, USA

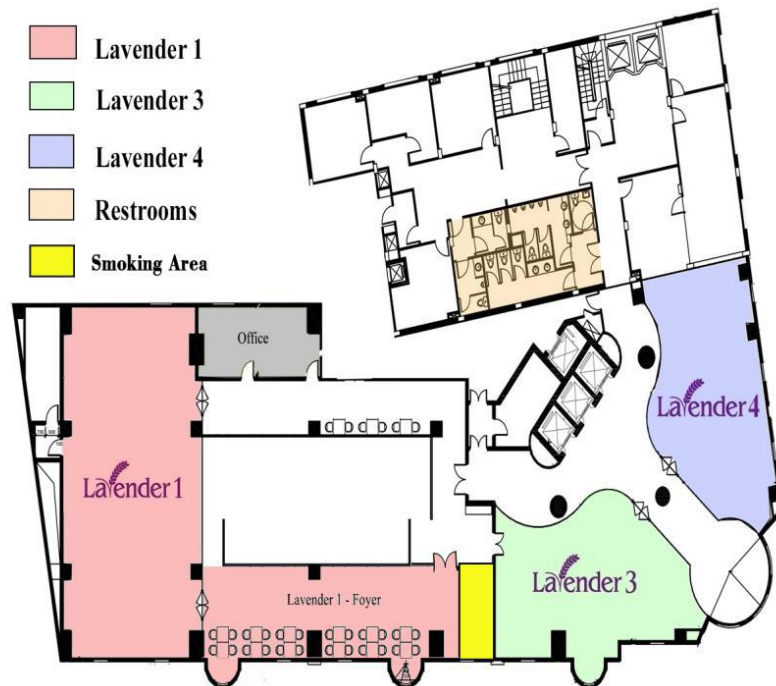
Floor maps of Hotel Grand Saigon

Meeting Room: Grand Hall A -- 4th Floor

Meeting Room: Grand Hall B -- 4th Floor



Meeting Room: Lavender 1 and Lavender 3 -- 3rd Floor



Reception Room: Chavigny Hall -- 12th Floor

Lunch Room & Conference Banquet Room: Saigon Palace -- 2nd Floor

Morning Tea Break and Afternoon Tea Break: Foyer Grand Hall -- 4th floor

Registration Desk: at Chavigny Hall -- 12th floor on August 6th, &

In front of Grand Hall -- 4th floor during August 7th-9th

1. WELCOME MESSAGE

Dear Colleagues and Friends,

We are delighted to extend our heartfelt welcome to you for the 14th International Conference on Computational Methods (ICCM2023), which is hosted by Ho Chi Minh City University of Technology (HUTECH University) in Ho Chi Minh City, Vietnam from August 6 to 10, 2023. The ICCM conference was founded by Professor Guirong Liu in 2004 and organized for the first time in Singapore. Since then, the conference has evolved into a series of global discussions conducted in numerous nations. Due to the Covid-19 pandemic, the ICCMs 2020, 2021, and 2022 were organized virtually. Fortunately, we have the chance to resume our regular organization this year to ensure the continuity of important top-notch research and to foster academic discussion within our community.

The ICCMs are now widely recognized as an international venue for academic and industrial researchers to share knowledge, gain new perspectives, and push the limits of computational methodologies. The conference's subjects reflect multidisciplinary studies on contemporary approaches as well as the application of artificial intelligence in a variety of technological fields. Throughout the conference days, international specialists will present captivating keynote addresses, panel discussions, and technical sessions.

Authors at the conference have presented extremely meaningful discoveries covering both theoretical and practical aspects, highlighting emerging trends. All submissions have undergone a rigorous peer-review process, and accepted papers will be presented orally during the event, while exceptional contributions will be considered for publication in a special issue of prestigious journals.

In addition to educational presentations, this conference provides an excellent opportunity for crucial conversations, networking, and connections. The sharing of perspectives and ideas is essential for excellent future research and ground-breaking developments. We encourage you to engage with other participants, cultivate profound friendships, and create incredible possibilities for future collaborations.

We would like to express our sincere thanks to each member of the Organizing Committee, the International Scientific Committee, and all other supporters who have worked tirelessly to make this conference a reality. We would also like to express our deepest gratitude to the international reviewers for their diligent work in examining submitted manuscripts and abstracts.

Furthermore, we want to express our acknowledgment of your valuable contributions to the ICCM2023 conference. We are delighted with your participation in this event and eagerly looking forward to your continued involvement in future ICCM conferences.

Finally, we have confidence that this conference will be a promising platform for learning, sharing, inspiration, and growth in the limitless potential of computational methods.

I appreciate your time, and now let's start the 14th International Conference on Computational Methods!

Professor Hung Nguyen-Xuan
Conference Chairman
CIRTECH Institute, HUTECH University, Vietnam

Professor Guirong Liu
Honorary Conference Chairman
University of Cincinnati, USA

2. CONFERENCE DETAILS

Conference Venue

ICCM2023 will be held at Hotel Grand Saigon, located at 8 Dong Khoi Street, District 1, Ho Chi Minh City, 70000 Vietnam.

The meeting rooms are **Grand Hall A** in 4th floor, **Grand Hall B** in 4th floor, and **Lavender 1** and **Lavender 3** both in 3rd Floor.

- Plenary Lectures (PL) will be held in Grand Hall A in 4th floor.
- Semi Plenary Lectures (SPL) will be given at Grand Hall A, Grand Hall B, and Lavender 3.
- Parallel sessions will be in Grand Hall A, Lavender 1, Grand Hall B and Lavender 3.

Please refer to the second cover page for the meeting room location.

Instructions for chairs and presenters

Presentation Time: Plenary Lecture 40 minutes; Semi Plenary Lecture 30 minutes; All other presentations 20 minutes. The presentation time includes presentation and Q&A. It is advisable to leave 5 minutes for Q&A. The conference program is fully packed. Please stick to the program schedule so as to facilitate the smooth transition between sessions.

Instruction for oral presenters

Only an overhead 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. A volunteer in the room will help you to load your presentation file.

Name Tag

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

Registration/Information Desk:

The Registration Desk will be opening at 16:00-18:00 on August 6th at 12th floor, and 9:00-12:00 and 13:00-15:00 on August 7th-9th, on the 4th floor.

Catering

Morning and afternoon tea breaks and buffet lunches are included in the conference registration during August 7th-9th.

Welcome Reception and Conference Banquet

All attendees are cordially invited to the Welcome Reception, in Chavigny Hall at 12th floor, at 18:00 on August 6th, and the Conference Banquet in Saigon Palace at 2nd Floor, at 18:30 on August 8th.

Wifi Service

Connection: Hotel Grand Saigon

Password: grand1930

Conference website

<https://sci-en-tech.com/ICCM/>



Contact us

Email: iccmdesk@gmail.com

3. ORGANIZATION COMMITTEES

Conference Chairman

Nguyen-Xuan Hung, HUTECH University, Vietnam

Honorary Chairman

Guirong Liu, University of Cincinnati, United States

International Co-Chairs

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Vu-Hieu Nguyen, Paris-East Créteil University, France
Jaehong Lee, Sejong University, South Korea
Hua Li, Nanyang Technological University, Singapore
Tuan Ngo, University of Melbourne, Australia
Hiroshi Okada, Tokyo University of Science, Japan
Timon Rabczuk, Bauhaus University Weimar, Germany
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Hung Quoc Nguyen, Vietnam-German University, Vietnam
Kien Trung Nguyen, HUTECH University, Vietnam

Hutech Secretary General

Viet Van Pham, HUTECH University
Yen Hai Dinh, HUTECH University

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International Scientific Advisory Committee

(sorting by last name)

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Li Wei (China)	Shen Luming (Australia)	Yang Qingsheng (China)
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Ogino Masao (Japan)	Wang Wenquan (China)	Zhou Kun (Singapore)
Orlande Helcio (Brazil)	Wang Yue-Sheng (China)	Zhuang Zhuo (China)

4. PROGRAM OVERVIEW

Date	Time	Conference Program
Day 0 August 6th, 2023 (Sunday)	16:00-18:00	Onsite Registration (at Chavigny Hall -- 12th floor)
	18:00-20:00	Welcome reception (at Grand Hall -- 12th floor)
Day 1 August 7th, 2023 (Monday)	8:30-10:40	Plenary Lectures (at Grand Hall A -- 4th floor)
	11:00-12:00	Parallel Sessions (at Grand Hall A -- 4th floor, Lavender 1 -- 3rd floor, Lavender 3 -- 3rd floor)
	12:00-13:00	Lunch
	13:00-18:00	Parallel Sessions (at Grand Hall A -- 4th floor, Grand Hall B -- 4th floor, Lavender 3 -- 3rd floor)
Day 2 August 8th, 2023 (Tuesday) & Day 3 August 9th, 2023 (Wednesday)	08:30-09:00	Semi Plenary Lectures (at Grand Hall A -- 4th floor, Grand Hall B -- 4th floor, Lavender 3 -- 3rd floor)
	09:00-12:00	Parallel Sessions (at Grand Hall A -- 4th floor, Grand Hall B -- 4th floor, Lavender 3 -- 3rd floor)
	12:00-13:00	Lunch
	13:00-18:00	Parallel Sessions (at Grand Hall A -- 4th floor, Grand Hall B -- 4th floor, Lavender 3 -- 3rd floor)
Day 4 August 10th, 2023 (Thursday)	8:30-12:00	Free Discussion

Conference Banquet: 18:30-20:30 at Saigon Palace on 2nd floor on August 8th

5. MINI-SYMPOSIA AND ORGANIZERS

MS	Mini Symposium Title	Organizers (sorting by last name)
MS-001	Theory and Formulation for Novel Computational Methods	GR Liu, University of Cincinnati
MS-002	Particle Based Methods	Zhen Chen, University of Missouri Yan Liu, Tsinghua University Xiong Zhang, Tsinghua University
MS-003	Mechanics of Surface/Interface and Bionics	Shaohua Chen, Beijing Institute of Technology
MS-004	Boundary Element Methods and Mesh Reduction Methods	Xiaowei Gao, Dalian University of Technology
MS-005	Reduced Order Models for Structures and Fluids	Ke Liang, Northwestern Polytechnical University Jianyao Yao, Chongqing University
MS-006	Crash Safety and Structural Optimization	Xu Han, Hebei University of Technology Shujuan Hou, Hunan University
MS-007	Fire Simulation	Xiao Chen, Sotera Fire Engineering Zhao-Feng Tian, Adelaide University
MS-008	Modeling and Simulation of Complex Flow and Transport Phenomena	Jingfa Li, Beijing Institute of Petrochemical Technology Shuyu Sun, King Abdullah University of Science and Technology Bo Yu, Beijing Institute of Petrochemical Technology
MS-009	Computational Methods in Fluid Engineering	Songying Chen, Shandong University Deyu Luan, Qingdao University of Science and Technology
MS-010	Data-driven Surrogate Modeling Techniques for Inverse and Other Related Problems	Guangyao Li, Shenzhen Automotive Research Institute, Beijing Institute of Technology Teng Long, Beijing Institute of Technology Xueguan Song, Dalian University of Technology Hu Wang, Hunan University Jian Zhang, Jiangsu University
MS-011	Damage and Failure Modelling in Composite Materials	Raj Das, RMIT University
MS-012	Deformation, Fatigue and Fracture of Advanced Materials	Rong Jiang, Nanjing University of Aeronautics and Astronautics Liguo Zhao, Loughborough University
MS-013	Large Scale Coupled Problems and Related Topics	Hiroshi Kanayama, Japan Women's University Lijun Liu, Osaka University Masao Ogino, Daido University Ryuji Shioya, Toyo University
MS-014	Progresses of Computational Marine Hydrodynamics	Decheng Wan, Shanghai Jiaotong University Aman Zhang, Harbin Engineering University Guiyong Zhang, Dalian University of Technology
MS-015	Smoothed Finite Element Methods and Related Techniques	Yuki Onishi, Tokyo Institute of Technology Liming Zhou, Jilin University
MS-016	Computational Mechanics for Composite Plates and Shells	GR Liu, University of Cincinnati
MS-017	Computational methods in Hydraulic engineering	Nguyen The Hung, The University of Danang

MS-018	Data, Uncertainty, Machine Learning and Digital Twin	Chenfeng Li, Swansea University
MS-019	Methods for Multi-Phase Flows	Dia Zeidan, German Jordanian University
MS-020	Concurrent Multiscale Modeling from Electrons to Finite Elements	Qiang Cao, Wuhan University Qing Peng, King Fahd University of Petroleum and Minerals
MS-021	Multiscale Modelling of Engineering Materials	Qingsheng Yang, Beijing University of Technology Sarah Zhang, Western Sydney University
MS-022	Advances in Computational Methods for Large Deformation Problems in Geo-mechanic	Domenico Lombardi, The University of Manchester Wei Wu, University of Natural Resources and Life Sciences
MS-023	Recent Advances In Meshfree and Particle Methods	Bin Chen, Xi'an Jiaotong University
MS-024	Meshfree and Other Advanced Numerical Methods for Engineering and Applied Mathematical Problems	Lihua Wang, Tongji University Chuanzeng Zhang, University of Siegen Zheng Zhong, Harbin Institute of Technology
MS-025	Limit State Analysis of Structures and Materials	Canh Van Le, International University
MS-026	Modeling and Simulation for Additive Manufacturing	Van-Nam Hoang, Vietnam Maritime University Nguyen-Xuan Hung, HUTECH University Jonathan Tran, RMIT University
MS-027	Computational Acoustics and Elastodynamics in Materials and Structures	Weiqiu Chen, Zhejiang University Yuesheng Wang, Tianjin University/Beijing Jiaotong University Bin Wu, Politecnico di Torino Chuanzeng Zhang, Universitat Siegen
MS-028	Kernel and Machine Learning Based Solutions of PDEs	Elena Atroshchenko, The University of New South Wales Zhuojia Fu, Hohai University Timon Rabczuk, Bauhaus University Weimar
MS-029	Stochastic BEM in Fracture Mechanics	Su Cheng, South China University of Technology Zhongwei Guan, University of Liverpool
MS-030	Acoustic Metamaterials and Phononic Crystals: from Fundamental Theory to Potential Applications	Feng Jin, Xi'an Jiaotong University
MS-031	Design Optimization of Structures and Metamaterials	Zhan Kang, Dalian University of Technology
MS-032	Local and Nonlocal Modeling Approaches in Dynamics	Ugo Galvanetto, University of Padova Pawel Packo, AGH - University of Science and Technology Mirco Zaccariotto, University of Padova
MS-033	Computational Biomechanics	Ken-ichi Tsubota, Chiba University Xiaobo Gong, Shanghai Jiao Tong University
MS-034	Recent Advances and Developments for Damage and Failure of Engineering Materials and Structures	Tinh Q. Bui, Tokyo Institute of Technology Shunhua Chen, Sun-Yat-sen University

MS-035	Modelling Heterogeneous Media: Fracture, Localisation and Multiphase Flow	Daniel Dias-da-Costa, The University of Sydney Yixiang Gan, The University of Sydney Leong Hien Poh, National University of Singapore Luming Shen, The University of Sydney
MS-036	Mechanics of Soft Materials	Zishun Liu, Xi'an Jiaotong University
MS-037	Computational Biomechanics	Xi-Qiao Feng, Tsinghua University
MS-038	Computational Methods for Advanced Soft Matter and Soft Robotics	Hua Li, Nanyang Technological University
MS-039	Computational Particle Dynamics	Dianlei Feng, Tongji University Moubin Liu, Peking University Christian Weißenfels, Technische Universität Braunschweig
MS-040	Energy Systems for Electric mobility	Ratna Kumar Annabattula, Indian Institute of Technology Madras Pattabhi Ramaiah Budarapu, Indian Institute of Technology Bhubaneswar
MS-041	Multiscale Multiphysical Damage and Fracture Simulation of Cementitious Composites	Jiaying Wu, South China University of Technology Zhenjun Yang, Wuhan University
MS-042	Structural Reliability Analysis and Design Optimization	Xiangyun Long, Hunan University Bingyu Ni, Hunan University Zhe Zhang, Hunan University
MS-043	Data-driven Modeling and Design Approaches	Wenjing Ye, Hong Kong University of Science and Technology
MS-044	Micro-/Nano-mechanics for Novel Materials	Yuantong Gu, Queensland University of Technology Haifei Zhan, Zhejiang University
MS-045	Computational Design, Optimization and Manufacturing Advanced Materials and Structures	Eric Li, Teesside University Bing Li, Northwestern Polytechnical University
MS-046	Seismic Performance and Resilience Analysis of Underground Space and Tunnelling	Zhiyi Chen, Tongji University Yu Huang, Tongji University Zhiqian Liu, Tongji University
MS-047	Computational Modeling of Geological Hazards and Related Cascading Processes	Yu Huang, Tongji University Xingyue Li, Tongji University Ping Shen, University of Macau

6. SUMMARY OF PLENARY LECTURE, SEMI PLENARY LECTURE

Plenary Lecture (PL)

- PL-1: Wavelet-based unified method for solving nonlinear problems and its progress in applications
Youhe Zhou, Lanzhou University, China
- PL-2: Auxetic structures for lightweight high-performance protective solutions
Tuan Ngo, University of Melbourne, Australia
- PL-3: An immersed multi-material finite volume-material point method for structural damage under blast loading
Xiong Zhang, Tsinghua University, China

Semi Plenary Lecture (SPL) (sorting by last name)

- SPL-1: Waves and vibrations in dielectric elastomer plates and shells
Weiqiu Chen, Zhejiang University, China
- SPL-2: High performance computing based on HDDM and AI applications
Ryuji Shioya, Toyo University, Japan
- SPL-3: Computational biomechanics of red blood cells: From a cell membrane deformation to blood flow with multiple cells
Ken-Ichi Tsubota, Chiba University, Japan
- SPL-4: Efficient CFD solver for coupled aero-hydro dynamic flows around floating offshore wind turbine
Decheng Wan, Shanghai Jiao Tong University, China
- SPL-5: Superconvergent recursive gradient meshfree collocation methods with particular Reference to Accuracy Measuring
Dongdong Wang, Xiamen University, China
- SPL-6: CFD modeling of wind driven rain impacts in Singapore
George Xu, Institute of High Performance Computing, Singapore

7. DETAILED PROGRAM – CONFERENCE SESSIONS

Overview of Scheduled Presentation Sessions

Day	Meeting Time	Session Type	Grand Hall A		
Day 1 August 7th (Monday)	08:15-08:30	Music Performance	Hutech performance		
	08:30-08:40	Opening Ceremony	Chairman speeches		
	08:40-10:40	Plenary Lecture	PL		
	10:40-11:00	Tea Break			
	Meeting Time	Session Type	Grand Hall A	Lavender 1	Lavender 3
	11:00-12:00	Presentations	PS (1A-1)	PS (1B-1)	PS (1C-1)
	12:00-13:00	Lunch			
	Meeting Time	Session Type	Grand Hall A	Grand Hall B	Lavender 3
	13:00-15:20	Presentations	PS (1A-2)	PS (1B-2)	PS (1C-2)
	15:20-15:40	Tea Break			
15:40-17:40	Presentations	PS (1A-3)	PS (1B-3)	PS (1C-3)	
Day	Meeting Time	Session Type	Grand Hall A	Grand Hall B	Lavender 3
Day 2 August 8th (Tuesday)	08:30-09:00	Semi Plenary Lecture	SPL-1	SPL-2	SPL-3
	09:00-10:20	Presentations	PS (2A-1)	PS (2B-1)	PS (2C-1)
	10:20-10:40	Tea Break			
	10:40-12:00	Presentations	PS (2A-2)	PS (2B-2)	PS (2C-2)
	12:00-13:00	Lunch			
	13:00-15:20	Presentations	PS (2A-3)	PS (2B-3)	PS (2C-3)
	15:20-15:40	Tea Break			
	15:40-17:40	Presentations	PS (2A-4)	PS (2B-4)	PS (2C-4)
Day 3 August 9th (Wednesday)	08:30-09:00	Semi Plenary Lecture	SPL-4	SPL-5	SPL-6
	09:00-10:20	Presentations	PS (3A-1)	PS (3B-1)	PS (3C-1)
	10:20-10:40	Tea Break			
	10:40-12:00	Presentations	PS (3A-2)	PS (3B-2)	PS (3C-2)
	12:00-13:00	Lunch			
	13:00-15:20	Presentations	PS (3A-3)		
	15:20-15:40	Tea Break			

PL -- Plenary Lecture

SPL --- Semi Plenary Lecture

PS -- Parallel Sessions

Plenary Lectures (PL) and Semi Plenary Lectures (SPL)

August 7th, 2023, Monday

Day 1: Grand Hall A, Opening Ceremony

8:15-08:30	Hutech	Music Performance
08:30-08:35	Chairman	Welcome Speech / Nguyen-Xuan Hung
08:35-08:40	Chairman	Welcome Speech / Guirong Liu

Day 1: Grand Hall A

Plenary Lecture (PL), Chair: Nguyen-Xuan Hung and Guirong Liu

Time	ID	Title / Presenter
08:40-09:20	5195	PL-1: Wavelet-Based Unified Method for Solving Nonlinear Problems and its Progress in Applications / Youhe Zhou
09:20-10:00	5197	PL-2: Auxetic structures for lightweight high-performance protective solutions / Tuan Ngo
10:00-10:40	5165	PL-3: An immersed multi-material finite volume-material point method for structural damage under blast loading / Xiong Zhang

August 8th, 2023, Tuesday

Day 2: Semi Plenary Lecture (SPL)

Time	ID	Title / Presenter
Grand Hall A, Chair: Xiong Zhang		
8:30-9:00	4934	SPL-1: Waves and vibrations in dielectric elastomer plates and shells / Weiqiu Chen
Grand Hall B, Chair: Tuan Ngo		
8:30-9:00	5202	SPL-2: High performance computing based on HDDM and AI applications / Ryuji Shioya
Lavender 3, Chair: Yuantong Gu		
8:30-9:00	5201	SPL-3: Computational biomechanics of red blood cells: From a cell membrane deformation to blood flow with multiple cells / Ken-Ichi Tsubota

August 9th, 2023, Wednesday

Day 3: Semi Plenary Lecture (SPL)

Time	ID	Title / Authors
Grand Hall A, Chair: Moubin Liu		
8:30-9:00	5200	SPL-4: Efficient CFD Solver for Coupled Aero-Hydro Dynamic Flows around Floating Offshore Wind Turbine / Decheng Wan
Grand Hall B, Chair: Dianlei Feng		
8:30-9:00	4975	SPL-5: Superconvergent Recursive Gradient Meshfree Collocation Methods with Particular Reference to Accuracy Measuring / Dongdong Wang
Lavender 3, Chair: Yuki Onishi		
8:30-9:00	5063	SPL-6: CFD Modeling of Wind Driven Rain Impacts in Singapore / George Xu

(Presenters' names are in boldface.)

Parallel Sessions:

August 7th, 2023, Monday

Day 1: Grand Hall A, Chair: Jizeng Wang, Jingkui Zhang

Session 1A-1: Computational Methods for Complex Engineering Systems

Time	ID	Title / Authors
11:00-11:20	5031	Keynote: Highly accurate wavelet solution for nonlinear bending of irregular plates / Jizeng Wang , Yonggu Feng, Xiaojing Liu, Youhe Zhou
11:20-11:40	4952	Numerical Calculation of Three Dimensional MHD Natural Convection Based on Spectral Collocation Method and Artificial Compressibility Method / Jingkui Zhang , Jia Peng Chang, Qifen Li, Yi Fan, Jiakai Zhang
11:40-12:00	4922	Study of Drawing Process of Hexagonal Stainless Steel Bars / Yeong-Maw Hwang , Yang-Ching Hung

Day 1: Grand Hall A, Chair: Zhiyi Chen, Zhiqian Liu

Session 1A-2: Seismic performance and resilience analysis of underground space and tunneling

13:00-13:20	4981	Keynote: Coupling Simulation of Rupture and Seismic Analysis in Cross-Fault Mountain Tunnel / Liqun Li, Zhiyi Chen
13:20-13:40	4968	Non-linear Stochastic Seismic Analyses of an Underground Structure Under Multi-source Uncertainty Conditions Based on PDEM / Zhiqian Liu , Zhiyi Chen, Yu Huang, Yifan Fan
13:40-14:00	5097	From Seismic Resilience of Underground Structures to Resilience of Regional Subway Networks / Min Xiong
14:00-14:20	4976	Construction and verification of composite intensity measures for multi-storey subway station structures based on partial least squares regression / Zhiyi Chen, Wei Yu
14:20-14:40	4996	Research on seismic performance indicator of coupled vehicle-track-tunnel system / Shengqi Xia , Zhiyi Chen, Liqun Li
14:40-15:00	4950	Stochastic Seismic Response Analysis of Subway Station Structure Based on Optimization Point Selection Strategy / Yifan Fan , Zhiyi Chen, Zhiqian Liu
15:00-15:20	4980	Integrated Evaluation of Urban Underground Space Resource Capacity Based on 3D Geological Model and Satellite Images / Tianxiao Cheng , Fei Deng, Qingding Han, Yu Huang

Day 1: Grand Hall A, Chair: Xingyue Li, Ping Shen, Yuantong Gu

Session 1A-3: Computational modeling of geological hazards and related cascading processes

15:40-16:00	4954	Keynote: Estimating Elastic Constants of Orthotropic Laminates using Guided Waves Actuated and Sensed from Only One Side of Sample / Fangsen Cui , Faez Masurkar, Saurabh Agarwal
16:00-16:20	5099	Seismic Resilience Evaluation of Mountain Roadbed Systems Considering Spatial Effects of Ground Motion / Cuizhu Zhao , Yu Huang, Min Xiong
16:20-16:40	5090	Resilience Assessment of Impact Effect of Flow-like Landslide / Xiaoyan Jin
16:40-17:00	4984	Smoothed finite element method for multibody contact dynamics with large deformation / Yan Li
17:00-17:20	5067	On Two-dimensional Linear Elastic Fracture Mechanics Analysis using S-version Isogeometric Analysis with Singular Patch Method / Yusuke Sunaoka
17:20-17:40	4993	Breathing Vibration of Double-Walled Nanoshell Via a Mesh-free Moving Kriging Interpolation Method / Lifeng Wang, Dongchang Hou
17:40-18:00	5115	Multi-field Evolution and Slope Failure Mechanism during Rainfall Infiltration / Taosheng Huang, Ping Shen

Day 1: Lavender 1, Chair: Zhilong Peng, Bin Liu
Session 1B-1: Mechanics of surface/interface and bionics

Time	ID	Title / Authors
11:00-11:20	5013	Keynote: A Perturbation Force Based Approach to Creasing Instability in Soft Materials Under General Loading Conditions / Bin Liu
11:20-11:40	5007	Invited: How to Achieve Robust Adhesion of Micro-pillar Arrayed Surfaces: A Theoretical Model / Zhilong Peng
11:40-12:00	5188	Invited: Strengthening and Strain Delocalization Mechanism of Nanolayered Metallic Composites with Interfacial Composition Gradient / Jianjun Li , Yaodong Wang, Shaohua Chen

Day 1: Grand Hall B, Chair: Shaohua Chen, Zhong Zhang
Session 1B-2: Mechanics of surface/interface and bionics

13:00-13:20	5014	Keynote: Directional Transport and Fixed-point Transfer of Droplets on Functionalized Surfaces / Shaohua Chen , Ming Liu, Yazheng Yang
13:20-13:40	5051	Keynote: Material Design and Applications of Nano-Carbon Based Composites / Zhong Zhang
13:40-14:00	4938	Invited: Temperature-dependent Interface Properties of Polypropylene/silicon Oxide / Lihong Liang , Linhui Hu
14:00-14:20	5023	Invited: Interfacial Behavior of Functional Films Bonded to Inhomogeneous Substrates / Peijian Chen
14:20-14:40	5048	The Microcosmic Interfacial Interactions of Rock/brine/oil and Its Effects on the Transport of Unconventional Oil and Gas / XiangYu Hong , Qiaoyu Guo, HengAn Wu, FengChao Wang
14:40-15:00	5047	Beyond Knudsen Theory: Atomic-scale Insights Into Gas-wall Interactions and an Improved Model for the Free Molecular Flow / Jianhao Qian , Hengan Wu, Fengchao Wang
15:00-15:20	5070	New Insights Into Methane Gas Flow Behavior in Moist Shale Nanopores from Molecular Simulations / Hengyu Xu , HengAn Wu

Day 1: Grand Hall B, Chair: Zhen Chen, Khiem Nguyen
Session 1B-3: Particle Based Methods

Time	ID	Title / Authors
15:40-16:00	4937	Keynote: Studying Transient Responses of Metamaterials with Both MPM and MD / Zhen Chen
16:00-16:20	5028	Quantitative Assessment of Disaster Risk for the Whole Process of Soil Landslide Based on Stochastic Material Point Method / Zheng Sun , Rui Wu, Xiaomin Zhou
16:20-16:40	5132	An Algorithm to Integrate MPM and SPH with Nonlocal Constitutive Modeling for Softening Problem / Zhen Chen, Lisha He , Zhicheng Lan
16:40-17:00	5186	A novel strategy to impose nonconforming Neumann boundary condition in the material point method / Yong Liang
17:00-17:20	5050	Accelerating the Distance-minimizing Method for Data-driven Elasticity with Adaptive Hyperparameters / Khiem Nguyen , Roland Aydin, Christian Cyron
17:20-17:40	5018	Non-iterative Topology Optimization by using Generative and Adversarial Neural Network / Hongling Ye, Jicheng Li

Day 1: Lavender 3, Chair: Feng Wei, Puneet Mahajan**Session 1C-1: Modeling Techniques for Failure and Inverse Problems**

Time	ID	Title / Authors
11:00-11:20	5074	Failure Prediction of Adhesively Repaired Composite Laminates After Hygrothermal Aging / Feng Wei , Xu Fei
11:20-11:40	5087	Computational Modelling of Repetitive Rain Drop Impact and Resulting Fatigue Damage in Wind Turbine Blades / Puneet Mahajan , Nikesh Girdhari Kuthe
11:40-12:00	4963	Inverse Scattering Technique using Deep Learning for 3-D Scalar Wave Propagation / Takahiro Saitoh , Sohichi Hirose

Day 1: Lavender 1, Chair: Masao Ogino, Ryuji Shioya**Session 1C-2: Large Scale and Multi-Scale Techniques for Coupled and Complex Problems**

13:00-13:20	5024	Keynote: Large-scale Magnetostatic Field Analysis using Physics-informed Neural Networks / Masao Ogino
13:20-13:40	5088	Keynote: Multistep Prediction for Dissolved Gas Analysis Under Imbalanced Dataset / Hongjie Zheng, Ryuji Shioya , Yasushi Nakabayashi, Masato Masuda, Hiroshi Matoba, Keiichi Nakajima, Hideyuki Okakura, Hiroki Nakamura
13:40-14:00	5104	Large-scale Deep Learning Molecular Dynamics Simulations with Ab Initio Accuracy on Supercomputer Fugaku / Lijun Liu , Zhouqiang Guo, Weile Jia
14:00-14:20	5199	Large Scale Vibration Analysis of Stradivari's Violin / Misora Kojima , Ryuji Shioya, Masao Yokoyama, Amane Takei, Genki Yagawa
14:20-14:40	5019	Extracting Accurate Human Body Structures from Anime Characters with Deep Learning and DiscoGAN / Sihan Liu , Ryuji Shioya, Yasushi Nakabayashi
14:40-15:00	5079	Development of Automatic Generating System of Motion-Pictograms from Still-Pictograms / Ryuji Shioya, Natsumi Okatani , Yasushi Nakabayashi, Terutoshi Tada
15:00-15:20	4966	An Application of Inset Grid Technique in Salinity Transport Modeling The Little Dauphin Island Study / Phu Vinh Luong , Yan Ding, Sung-Chan Kim, Elizabeth Godsey

Day 1: Lavender 1, Chair: Lihua Wang, Xiaojing Liu**Session 1C-3: Advanced Numerical Methods for Complex Problems**

15:40-16:00	4946	Keynote: Improved Artificial Neural Network Algorithms and Its Applications for Solving the Mechanical Problems / Lihua Wang
16:00-16:20	5058	Keynote: Wavelet Multiresolution Solution for Bending with Extreme Large Deflection of Circular Plates Subjected to Concentrated Loads / Xiaojing Liu , Jizeng Wang, Youhe Zhou
16:20-16:40	5073	A Bubble-enriched Smoothed Finite Element Method for Shakedown Analysis of Structures / Phuc L.H. Ho , Changkye Lee, Canh V. Le, Phuong H. Nguyen, Jurng-Jae Yee
16:40-17:00	5025	A Physics-Informed Neural Network Framework for Computational Structural Dynamics / Shusheng Xiao , Jinshuai Bai, Laith Alzubaidi, Yuantong Gu
17:00-17:20	5122	Dynamic Analysis of 2D Linear Elastic Solids with the Overlapping Finite Element Method / Wei Li, Zhilong Jiang , Qiang Gui, Yingbin Chai
17:20-17:40	5022	A Coupled Overlapping Finite Element Method for Computing Underwater Acoustic Scattering / Wei Li, Bin Jiang , Qiang Gui

August 8th, 2023, Tuesday

Day 2: Grand Hall A, Chair: Xiao-Wei Gao, Xiaoyan Liu

Session 2A-1: Theory and Formulation for Novel Computational Methods

Time	ID	Title / Authors
09:00-09:20	5129	Keynote: High-order Line, Triangular and Tetrahedral Elements for Zonal Free Element Method / Xiao-Wei Gao
09:20-09:40	5177	The C3 Parametric Eighth-degree Interpolation Spline Function / Xiaoyan Liu , Jin Xie, Lei Zhu, Yuqing Ma, Ke Zhang
09:40-10:00	5117	Physics-informed Neural Networks for Inverse Wave Scattering in Rods / Cuong Nguyen , Anh Nguyen
10:00-10:20	5143	Smoothed Finite Element Method for Contact Elastoplastic Analysis using Area Regularization Technique / Chao Sun , Zirui Li

Day 2: Grand Hall A, Chair: Decheng Wan, Liushuai Cao

Session 2A-2: Progresses of Computational Marine Hydrodynamics

10:40-11:00	5107	Dynamic mode decomposition analysis of turbulent flow around a surface-piercing finite circular cylinder / Songtao Chen , Weiwen Zhao, Decheng Wan
11:00-11:20	5146	Hydrophysical Signature of a Generic Submarine in the Stratified Fluid / Decheng Wan, Fenglai Huang, Liushuai Cao
11:20-11:40	5148	LES Study of Laminar - Turbulent Transition Flows on Axisymmetric Body / Decheng Wan, Zhiqiang Liu
11:40-12:00	5149	Numerical Study of Flow Pressure Fluctuation Induced Radiation Noise of a Three-dimensional Axisymmetric Body / Decheng Wan, Lianjie Yu , Yuan Zhuang

Day 2: Grand Hall A, Chair: Yuki Onishi, Changkye Lee

Session 2A-3: Smoothed Finite Element Methods and Related Techniques

13:00-13:20	4988	Adaptive Quadtree Refinement in Gradient-smoothing Approach for Gradient Elasticity / Changkye Lee , Sundararajan Natarajan, Jurng-Jae Yee
13:20-13:40	5000	Keynote: Application of Edge-based Smoothed Finite Element Method to Electro-deposition Simulation Aiming for Super-linear Mesh Convergence in Film Thickness Accuracy / Yuki Onishi
13:40-14:00	4959	Fast Computation of Thermal Response Based on the Smoothed Finite Element Methods for Thermal Ablation Therapy / Xia Cai Shi, Rui Ping Niu , Wei Shao Wu, Qing Si Li
14:00-14:20	4982	Sensitivity Analysis of Plasticity Correction Procedure in Hole-drilling Uniform Residual Stress Measurement / Tomas Navrat , David Halabuk
14:20-14:40	5135	Analysis of Dynamic Contact Behavior for Biological Structures Based on the Smoothed Finite Element Methods (S-FEMs) / Jingui Zhao , Gang Wang, Chao Sun, Zirui Li
14:40-15:00	5179	Analysis of Transcranial Magneto-acoustic Electrical Stimulation Coupled the Smoothed Finite Element Method and Rayleigh Integral / Nan Wang , Wang Zhong Hu, Gang Wang
15:00-15:20	5069	A Mean Value NSFEM for Polygonal Elements to Solve Particle-laden Flow using Discrete Phase Model / Guo Zhou , Tiantian Wang, Chen Jiang, Zhiyang Song

Day 2: Grand Hall A, Chair: Gang Wang, Nguyen Hoang Phuong
Session 2A-4: Smoothed Finite Element Methods and Related Techniques

Time	ID	Title / Authors
15:40-16:00	5151	Keynote: A Sharp Interface Immersed Edge-based Smoothed Finite Element Method with Extended Fictitious Domain Scheme for Fluid-structure Interaction / Gang Wang , Yin Hong, Chicheng Ma, Chengjiao Yu, Xu Han
16:00-16:20	4987	Elastic Analysis for Porous Microstructure using Virtual Element Method (VEM) / Nguyen Hoang Phuong , Le Van Canh, Ho Le Huy Phuc, Jurng-Jae Yee
16:20-16:40	4926	Filtering Spurious Eigenmodes in Electromagnetic Cavities Discretized by Energy-orthogonal Finite Elements / Francisco Brito
16:40-17:00	4965	A Fully Cell-based Immersed Smoothed Finite Element Method with the Mean Value Coordinate Projection using Quadrilateral Elements for Fluid-structure Interaction / Shuhao Huo , Chen Jiang, G.R. Liu
17:00-17:20	4997	High accuracy ES/ONS-FEM method based on ES-FEM and optimized NS-FEM for thermo-elastic coupling problems / Qiuxia Fan
17:20-17:40	5098	Numerical Simulation on Convection and Heat Transfer Problems using Smoothed Finite Element Method / Chen Hong

Day 2: Grand Hall B
Session 2B-1: Computational Particle Dynamics
Chair: Moubin Liu, Jean-Philippe Ponthot

Time	ID	Title / Authors
09:00-09:20	4974	Particle Finite Element Method for 2D/3D Fluid-Structure Interactions, Including Contact Interactions / Jean-Philippe Ponthot
09:20-09:40	4989	MPI Massive Parallelization of Smoothed Particle Hydrodynamics for Strong Fluid-structure Interaction / Jiahao Liu
09:40-10:00	5045	Numerical Simulation of Three-dimensional SLM Based on SPH Method / Ting Long, Zhiwei Zhao
10:00-10:20	5053	High Fidelity Numerical Simulation of Selective Laser Melting Based on GPU-accelerated SPH Method / Yibo Ma , Xu Zhou, Nianzhi Hang, Moubin Liu

Day 2: Grand Hall B
Session 2B-2: Computational Particle Dynamics
Chair: Dianlei Feng, Moubin Liu

Time	ID	Title / Authors
10:40-11:00	4992	Keynote: Recent Development of SPH Applications in G.B.I. (Geo- Bio- & Impact) Engineering / Dianlei Feng
11:00-11:20	5116	A Normal Flux-based SPH-FEM Coupling Method for Simulating Fluid-Shell Interactions / Fei Xu, Weibin Yan , Xianmin Chen
11:20-11:40	5120	Total Lagrangian Material Point Method Under High Strain-rate Deformation / Saurabh Singh , Harpreet Singh, Puneet Mahajan
11:40-12:00	5060	SPH Simulation of Shoal of Fish / XueJian Wang , Can Huang

Day 2: Grand Hall B**Session 2B-3: Data, Uncertainty, Machine Learning and Digital Twin****Chair: Khac-Duy Nguyen, Cuong HA-MINH**

Time	ID	Title / Authors
13:00-13:20	5033	Damage Identification in Space Frame Structures using Convolutional Neural Networks and Modal Strain Energy / Khac-Duy Nguyen , Duy-Vu Dinh, Tan-Phu Vo, Duc-Duy Ho
13:20-13:40	5185	Interval Uncertainty Analysis of Wave Propagation Constants in Piezoelectric Shunting Acoustic Metamaterials / Xinpeng Zhang
13:40-14:00	5035	Accuracy Adaptive Multigrid Solutions of Compressible Flows with Discontinuous Galerkin Methods / Shu-Jie Li
14:00-14:20	5118	Sobolev-PINNs for Static Analysis of Rod and Beam Problems / Cuong Nguyen , Anh Nguyen
14:20-14:40	5003	Prediction of the nonlinear transversal compression behavior of high performance fibers using machine learning / Cuong HA-MINH
14:40-15:00	5068	Comparison of Metal Additive Manufacturing Analysis using a Large-scale Finite Element Method and Experimental Data / Taku Murakami
15:00-15:20	4972	A Robust Thermoelastic Topology Optimization Method Considering Both Stress and Manufacturing Constraints / Gongteng Zhang , Jing Zheng, Bo Ma

Day 2: Grand Hall B**Session 2B-4: Waves, Vibration, and Elastodynamics in Materials and Structures****Chair: Weiqiu Chen, Vu-Hieu Nguyen**

Time	ID	Title / Authors
15:40-16:00	5176	Semi-analytical Isogeometric Analysis of Waves Propagation in Elastic and Poroelastic Waveguides / Vu-Hieu Nguyen , Fakhraddin Seyfaddini, Hung Nguyen-Xuan
16:00-16:20	5133	Magnetic tunable metamaterials / Liang Si, Ronghao Bao
16:20-16:40	5152	A finite element approach for nonlinear coupling analysis of magnetostrictive materials Terfenol-D / Weiming Tao
16:40-17:00	5139	Radial vibration analysis of composite piezoelectric transducers resting on elastic supports / Huiming Wang
17:00-17:20	5062	An Enhanced Finite Element Method for the Vibration Analysis of Linear Elastics / Lei Sun , Qiang Gui, Wei Li
17:20-17:40	5075	Numerical Simulation of the Collection Efficiency for Dust Deposition Devices in Atmospheric Boundary Layer / Ning Huang, Kang Gong , Jie Zhang, Hongchao Dun, Guang Li

Day 2: Lavender 3**Session 2C-1: Mechanics of soft materials****Chair: Chuang Feng, Isamu Riku**

Time	ID	Title / Authors
09:00-09:20	5034	Effect of Concentration of Ion in the Solution on the Deformation Behavior of DN Gel Under Simple Tension / Isamu Riku
09:20-09:40	4956	Damped Vibration Analysis of Graphene Nanoplatelet Reinforced Dielectric Membrane Using Taylor Series Expansion and Differential Quadrature Methods / Chuang Feng
09:40-10:00	4948	Mechanical Modeling of Hydrogel Composites with Different Fiber Volume Fractions in Multiple Orientations / Xiangchuan Nian , Qingsheng Yang
10:00-10:20	5093	Towards a Less Dissipative Computation of Detonation Problems Based on Reduced Chemical Kinetics Models / Yi-Jhen Wu , Yang-Yao Niu

Day 2: Lavender 3**Session 2C-2: Damage, Failure and Fracture in Materials, Drag Model for Flows****Chair: Frantisek Sebek, Thuy Nguyen**

Time	ID	Title / Authors
10:40-11:00	4933	Small Punch and Three-point Bending Test Failure Predictions by an Element Deletion Technique / Frantisek Sebek , Petr Kubik
11:00-11:20	4936	Contribution to Griffith Theory of Fracture for Predicting Fracture Toughness / Thuy Nguyen , Daniel Bonamy
11:20-11:40	5037	Modeling quasi-static crack propagation using preconditioned numerical manifold method / Yao Jiang, Yongliang Wang, Yimin Zhang, Fanke Wu, Zhijun Liu
11:40-12:00	5083	Drag Model of Finite-sized Particle in Turbulent Wall-bound Flow Based on a Fully Resolved Simulation and a Hybrid Parallel Approach / Ping Wang

Day 2: Lavender 3, Chair: Zhuojia Fu, Elena Atroshchenko**Session 2C-3: Kernel and machine learning based solutions of PDEs, Acoustic Scattering**

Time	ID	Title / Authors
13:00-13:20	5130	Keynote: Machine Learning Method for Structural Vibration Induced Underwater Acoustic Propagation / Zhuojia Fu , Qiang Xi, Wenzhi Xu
13:20-13:40	5123	Physics Informed Neural Networks for Solving Boundary Integral Equations / Elena Atroshchenko , Han Zhang, Cosmin Anitescu, Stephane Bordas, Timon Rabczuk
13:40-14:00	5004	Adaptive Neural Network with an Effective Activation Function for Solving Time Fractional Diffusion Equations / Junhong Yue , Ziqing Yang, Ruiping Niu, Hongen Jia
14:00-14:20	5111	Novel Deep Learning Approaches for Learning Scientific Simulations / Saurabh Deshpande , Raul Ian Sosa, Stephane Bordas, Jakub Lengiewicz
14:20-14:40	5077	Physics-informed Radial Basis Network (PIRBN) for Solving Nonlinear Partial Differential Equations / Jinshuai Bai , G.R. Liu, Laith Alzubaidi, Xi-Qiao Feng, YuanTong Gu
14:40-15:00	5191	Machine Learning Based Approaches for Ultimate Compression Capacity Prediction of Concrete Filled Double Skin Steel Tube Columns. / Piyawat Boonlertnirun
15:00-15:20	4953	Dynamic Crack Propagation Analysis by Coupling the Boundary Element Method and the Bond-based Peridynamics / Yang Yang , Yijun Liu

Day 2: Lavender 3**Session 2C-4: Computational Biomechanics****Chair: Ken-Ichi Tsubota, Hiromi Miyoshi**

Time	ID	Title / Authors
15:40-16:00	5017	Computer Simulation of Red and White Thrombi Formation Determined by Blood Flow Velocity / Ken-Ichi Tsubota , Wataru Tokuno
16:00-16:20	5127	Development and Application of a Biophysical Approach to Study Dynamic Mechanical Interaction Between Actin and Cell Nucleus / Hiromi Miyoshi , Chiharu Nakahara, Yugo Nagamine
16:20-16:40	5114	Cell Mechanic Based on a Centroidal Void Cylindrical Tensegrity Model to Evaluate the Vibration of a Cellular Cytoskeleton / Buntara Sthenly Gan , Eiji Nouchi, Tomoteru Oka, Noriyuki Kataoka, Yoshihisa Kawano
16:40-17:00	5036	Weight Initialization in Physics-informed Neural Networks to Enhance Consistency of Mass-loss Predictions for a Plant Cell During Drying / Chanaka Prabuddha Batuwatta Gamage , C.M. Rathnayaka, H.C.P. Karunasena, M.A. Karim, Y.T. Gu
17:00-17:20	5106	Development of a Novel Numerical Scheme for Largely-moving Boundary Flow Problems Based on the Mesh-constrained Discrete Point Approach / Takeharu Matsuda , Satoshi Ii
17:20-17:40	5105	Mechanical Modeling of Cell Membrane Including Interactions Between Plasma Membrane and Actomyosin Cortex / Kohsuke Tsukui , Hiromi Miyoshi, Naoya Sakamoto, Satoshi Ii

August 9th, 2023, Wednesday

Day 3: Grand Hall A

Session 3A-1: Computational Particle Dynamics

Chair: Dianlei Feng, Xiaoxing Liu

Time	ID	Title / Authors
09:00-09:20	5140	Numerical Simulation on Debris Bed Formation Behavior using Improved MPS Method / Xiaoxing Liu
09:20-09:40	5066	Numerical Modeling of Multi-phase Water Entry with a GPU-accelerated SPH Method / Chaoyang Guo
09:40-10:00	5102	Numerical Investigation of Particle Deposition on Substrates in Cold Spraying by SPH Method / Fei Xu, Zhen Dai , Jiayi Wang, Qiuze Yang, Yazhou Guo
10:00-10:20	5125	Simulation of Non-cohesive Soil Turning Based on an SPH Model / Can Yi , Dianlei Feng, Man Hu, Yu Huang

Day 3: Grand Hall A

Session 3A-2: Computational Particle Dynamics

Chair: Moubin Liu, Dianlei Feng

Time	ID	Title / Authors
10:40-11:00	5142	Whole Process Modeling of Selective Laser Melting with a DEM-FVM-FEM Coupled Framework / Xu Zhou , Moubin Liu
11:00-11:20	5144	A Data-driven Dimensional Analysis Framework to Predict the Track Size and Porosity Evolution in Selective Laser Melting / Nianzhi Hang , Zekun Wang, Moubin Liu
11:20-11:40	5147	MPS Simulation of Liquid Sloshing Inside a Spherical Tank / Decheng Wan, Congyi Huang
11:40-12:00	5156	A Research of Water Dropping of Fire-fighting Aircraft Based on VOF to DPM Method / Yumeng Shi

Day 3: Grand Hall A

Session 3A-3:

Chair: Guirong Liu

Time	ID	Title / Authors
13:00-13:20		
13:20-13:40		
13:40-14:00		
14:00-14:20		
14:20-14:40		
14:40-15:00		
15:00-15:20		

Day 3: Grand Hall B**Session 3B-1: Optimization of materials and structures, and Coupled Methods****Chair: Xiaowei Deng, Jian Chen**

Time	ID	Title / Authors
09:00-09:20	4942	Topology Optimization and Experimental Investigation of 3D Printing Planar X-Joint Manufactured by Stainless Steel and High-Strength Steel / Xiaowei Deng
09:20-09:40	5137	Experimental and Numerical Studies on Penetrating Granular Packings / Jian Chen , Mika Tei, Ettore Barbieri, Daisuke Nishiura, Mikito Furuichi
09:40-10:00	4957	Topology Optimization Via Physics-Informed Neural Network / Hyogu Jeong , YuanTong Gu
10:00-10:20	5021	Nitsche-type Isogeometric Analysis-based Topology Optimization / Mian Zhou

Day 3: Grand Hall B**Session 3B-2: Structural Reliability Analysis and Design Optimization****Chair: Zhe Zhang, Weiwei Chen**

Time	ID	Title / Authors
10:40-11:00	5096	Transfer Learning Enforced Structural Reliability-based Design Optimization / Zhe Zhang , Li Chen, Gang Yang, Chao Jiang
11:00-11:20	4990	The First Order Time-variant Reliability Expansion Method / Bingyu Ni, Weiwei Chen , Wanyi Tian, Chao Jiang
11:20-11:40	4973	A Fail-safe Topology Optimization Based on Multiscale Structures / Jianghong Yang , Yingjun Wang
11:40-12:00	4991	Calibration of Expert Opinions for Reliability Assessment of Multi-State Systems: A Consensus Reaching Model / Tangfan Xiahou

Day 3: Lavender 3**Session 3C-1: Computational Mechanics for Composite Plates and Shells****Chair: Zhen Wang, Xiaodong Chen**

Time	ID	Title / Authors
09:00-09:20	5150	Global and Local Instability of Variable Angle Tow Composite Sandwich Plates Under Axial Compression with Emphasis on Explaining the Reasons for the Occurrence of the Non-uniform Wrinkling Phenomena / Xiaodong Chen
09:20-09:40	5178	Eigenvalues and eigenfunctions of nonuniform beams with a new method based on perturbation method / Zhen Wang
09:40-10:00	5091	Multiscale Mechanics and Design of Nanocellulose Materials / YuanZhen Hou , XiaYun Ni, YinBo Zhu, HengAn Wu
10:00-10:20	5082	Design of Acoustic Logic Gates Based on the Multiple Scattering Theory and Optimization / Jacek Mieczyslaw Filar , Pawel Packo

Day 3: Lavender 3**Session 3C-2: Techniques for Composites and Heterogeneous Materials****Chair: Quy-Dong To, Fangsen Cui**

Time	ID	Title / Authors
10:40-11:00	5154	Boundary-volume Formulation and FFT Solver for Numerical Homogenization of Conductive Composites with Arbitrary Contrasts and Imperfect Interface / Quy-Dong To
11:00-11:20	5064	Keynote: Application of Metaclusters of Point Scatterers to Control Structural Vibration / Pawel Packo , Jacek Filar
11:20-11:40	5005	A Spherical Harmonic-random Field Coupled Method for Efficient Reconstruction of CT-image Based 3D Aggregates with Controllable Multiscale Morphology / Fuqiang Guo , Zhenjun Yang
11:40-12:00	5109	Physics informed neural learning of wavefields using Gabor basis functions / Tariq Alkhalifah , Xinquan Huang

Memo page

Memo page

DISCOVER HO CHI MINH CITY



Get around with Grab

Download the Grab app off the app store, and you can use it to hail both taxi rides and motorbike rides. You can also order easy and quick food delivery.

How to cross the street

The street of Saigon can be intimidating to cross, but no worries! As long as you keep walking, the motorbikes and cars will avoid you.

Be aware of pickpockets

Sadly, the city is not without faults. Pickpocketing is a very common phenomenon in the city. Remember to keep your belongings close to you.



See the top landmarks

Walk down Đồng Khởi street to acquaint yourself with the Notre Dame Cathedral, the city's Central Post Office, and the Saigon Opera House. On a more local level, Bến Thành Market and the Jade Emperor Pagoda are worth a visit.

Shop small boutiques

Around District 1, a host of old apartments and former office buildings have been repurposed as shopping centres. Decades-old buildings such as 22 Lý Tự Trọng and 42 Nguyễn Huệ are brimming with all kinds of fascinating stores.



Eat street food

Ho Chi Minh City locals love to gather around dented metal tables across the city for incredible roadside feasts. Don't miss highlights such as bánh mì, southern-style savoury pancakes (bánh xèo) and broken rice (cơm tấm).



ABOUT HO CHI MINH CITY

**14th International Conference
on Computational Methods
(6-10th August)**

Ho Chi Minh City, formerly known as Saigon, is a lot of things. The city is the most populous city in Vietnam, with a population of around 9.3 million in 2023.

The city is rich with history, as it was the the capital of French Indochina, then became the capital of South Vietnam until the fall of Saigon in 1975. Thus, the city is known for its well-preserved French colonial architecture, vibrant street life, and its varied cultural institutions. More than that, the city is known for the scorching heat, the cheap yet incredibly delicious street food, the people's hospitality, and the street as a bike race.

