

## International Conference on Multi-scale Science and Engineering (ICMSE 2023)

Day1: Tuesday, July, 18, 2023		Venue: Large Banquet Hall C
16:30~17:00	Registration	
17:00~19:00	Welcome Reception (Refreshments)	
Day2: Wednesday, July, 19, 2023		Venue: Medium Banquet Hall C
09:00~09:30	Registration	
09:30~09:40	Opening Ceremony	
Track_1 Continuum Mechanics		
09:40~10:05	<i>Keynote Presentation</i> CM_001 Stable Möbius bands obtained by isometrically deforming circular helicoids . Eliot Fried, Mechanics and Materials Unit, OIST, Japan	
10:05~10:30	<i>Keynote Presentation</i> CM_002 Multiscale study of Bio-composites: from nature to engineering. Zhao Qin, Civil and Environmental Engineering, Syracuse University, USA	
10:30~10:45	<i>Invited Presentation</i> CM_003 High-performance simulation framework for extreme soil-structure interactions . Jinhyun Choo, Department of Civil and Environmental Engineering, KAIST, Korea	
10:45~11:00	Coffee Break	
Track_2 Nanomechanics & Particle-based Simulations		
11:00~11:15	<i>Invited Presentation</i> NM_001 The effect of atomic hydrogen on the behavior of a single dislocation of $\langle 111 \rangle \{112\}$ in bcc tungsten: atomistic study. Keonwook Kang, Yonsei University, Korea	
11:15~11:30	<i>Invited Presentation</i> NM_002 Strengthening mechanism of Ti65(AlCrNbV)28Zr7 medium entropy alloys under different thermomechanical treatments. Chang-Wei Huang, Department of Civil Engineering, Chung Yuan Christian University, Taiwan.	
11:30~11:45	<i>Invited Presentation</i> NM_003 Code development for large-scale molecular dynamics . Byeongchan Lee, Department of Mechanical Engineering, Kyung Hee University, Korea	
11:45~12:00	<i>Invited Presentation</i> NM_004 Particle based simulation for bioinspired gradient composites. Shu-Wei Chang, Department of Civil Engineering, NTU, Taiwan	
12:00~13:30	Lunch	

Track_3 Polymeric Materials	
13:30~13:45	<i>Invited Presentation</i> PM_001 Influence of microstructures on viscoelastic features of cellular materials. Li-Wei Liu, Department of Civil Engineering, National Taiwan University, Taiwan
13:45~14:00	<i>Invited Presentation</i> PM_002 Nonlocal fracture in elastomers: experiments and continuum modeling . Hansohl Cho, Department of Aerospace Engineering, KAIST, Korea
14:00~14:15	<i>Invited Presentation</i> PM_003 Effect of mutations on the hierarchical molecular structure and mechanical properties of epithelial keratin. Chia-Ching Chou, Institute of Applied Mechanics, NTU, Taiwan
14:15~14:35	Coffee Break
Track_4 AI Applications	
14:35~14:50	<i>Invited Presentation</i> AI_001 Deep Generative Approach for Bioinspired Structural Materials. Chi-Hua Yu, Department of Engineering Science, National Cheng Kung University, Taiwan
14:50~15:05	<i>Invited Presentation</i> AI_002 Data-driven methodology for predicting and designing composite properties . Seunghwa Ryu, Department of Mechanical Engineering, KAIST, Korea
15:05~15:20	<i>Invited Presentation</i> AI_003 DGMR as a spatial-temporal rainfall feature extractor across various scales. Li-Pen Wang, Department of Civil Engineering, National Taiwan University, Taiwan
15:20~15:35	<i>Invited Presentation</i> AI_004 Generative AI-powered Product Design for Manufacturing . Namwoo Kang, CCS Graduate School of Mobility, KAIST, Korea
15:35~15:40	Short Break
Track_5 Bio-Fluid Mechanics	
15:40~15:55	<i>Invited Presentation</i> BM_002 Monitoring Live Cell Oxygen Microenvironments Using Microfluidic Devices and Frequency Domain Fluorescence Lifetime Imaging Microscopy (FD-FLIM). Hsiao-Mei Wu, Department of Biomechanics Engineering, NTU, Taiwan
15:55~16:10	<i>Invited Presentation</i> BM_003 Continuum mechanics of extreme response analysis and measurement noise reduction for Stokes flow under uncertainty. Chien-Kai Wang, Department of Mechanical Engineering, NTU, Taiwan
18:00~21:00	Banquet
Day3: Thursday, July, 20, 2023	
Venue: Chapel	
09:00~09:30	Registration
09:30~11:00	Tawain-Korea Joint Research Speed Dating
11:00~11:30	Closing Session