

Programme of Frontiers in Applied Mechanics

Schedule

Date	Time	Event
Nov. 7, 2015 (Saturday)	10:00-18:00	Registration (陕西世纪金源大饭店)
	18:00-	Welcome reception (陕西世纪金源大饭店)
Nov. 8, 2015 (Sunday)	08:30-08:45	Opening ceremony & Opening lecture
	08:45-12:00	Invited talks
	12:00-13:30	Lunch
	13:30-17:45	Invited talks
	18:30	Dinner (Discussion & Networking)
Nov. 9, 2015 (Monday)	08:30-12:00	Invited talks
	12:00-13:30	Lunch
	13:30-17:45	Invited talks
	18:30	Dinner
Nov. 10, 2015 (Tuesday)	08:30-12:00	Invited talks
	12:00-13:30	Lunch
	13:30-17:00	Group discussion

November 8, 2015 (Sunday)

08:30-08:35: Opening Ceremony: Prof. Zishun Liu (Xi'an Jiaotong University)	
08:35-08:45: Opening Lecture: Prof. Daining Fang (Beijing Institute of Technology)	
Prof. Tiejun Wang (Xi'an Jiaotong University)	
Invited Talks: Each Speaker: 15min presentation	
Discussion Leader: Gengkai Hu, Kian Meng Lim	
08:45-09:00	Xi-Qiao Feng (Tsinghua University): Wetting of Biological Materials with Hierarchical Surface Structures
09:00-09:15	Somsak Swaddiwudhipong (National University of Singapore): Computational Mechanics and Its Applications
Discussion Leader: Somsak Swaddiwudhipong, Bin Liu	
09:15-09:30	Jinsong Leng (Harbin Institute of Technology): Applications of Shape Memory Polymers and Composites
09:30-09:45	Heow Pueh Lee (National University of Singapore): Mechanics of Natural Fibre Composites
09:45-10:00	Huiling Duan (Peking University): Thermo-Mechanical Properties of Irradiated Polycrystals by Multi-Scale Modeling
10:00-10:15 Group photo & 10:15-10:30 Coffee break	
Discussion Leader: Huiling Duan, Jian Wang	
10:30-10:45	Xu Han (Hunan University): Theory and Application of the Inverse Problem in Penetration and Explosion
10:45-11:00	Boo Cheong Khoo (National University of Singapore): Dynamics of Airfoil Leading Edge Separation Control Using Pulsed Nanosecond Dielectric Barrier Discharge Plasma Actuator
11:00-11:15	Yuehong Qian (Shanghai University): Numerical Studies of Fixed and Moving Boundary Fluid Flow Problems Using Lattice Boltzmann Method
Discussion Leader: Heow Pueh Lee, Xu Han	
11:15-11:30	Kian Meng Lim (National University of Singapore): Experimental and Numerical Study of Cell Membrane Stiffness of Green Algae
11:30-11:45	Jian Wang (Kingston University): Feasibility Study of Active Suppression of Drag Using Biomimetic Sharkskin
11:45-12:00	Gengkai Hu (Beijing Institute of Technology): Shear Resonance Scattering of Pentamode Acoustic Cloak
12:00-13:30 Lunch	

Discussion Leader: Guozheng Kang, Xue Feng	
13:30-13:45	Baohua Ji (Beijing Institute of Technology): Mechanics of Mechanosensing in Cell Migration, Polarization and Arrangement
13:45-14:00	Ning Hu (Chongqing University): Experimental and Numerical Study on The Improvement of Interlaminar Mechanical Properties of Al/Gfrp Laminates
14:00-14:15	Xinrui Niu (City University of Hong Kong): Mechanical Behavior of Biological Materials and Bio-Inspired Structures
14:15-14:30	Zaoyang Guo (Beijing University of Aeronautics and Astronautics): Large Increment Method (LIM): A General Force-based Finite Element Method for Nonlinear Material Problems
Discussion Leader: Boo Cheong Khoo, Xinrui Niu	
14:30-14:45	Guozheng Kang (Southwest Jiaotong University): Uniaxial and Multiaxial Cyclic Deformations of Super-Elastic Niti Shape Memory Alloys
14:45-15:00	Xiaoqiao He (City University of Hong Kong): A Cellular Automata Simulation for The Fracture Behavior of Carbon Nanotubes
15:00-15:15	Xue Feng (Tsinghua University): Chemo-Mechanical Coupling Effect during the Oxidation Evolution: Study at Both Macro and Micro Scale
15:15-15:30	Licheng Guo (Harbin Institute of Technology): Characterization of Fracture Toughness of Viscoelastic Nonhomogenous Composites
15:30-15:45	Coffee break
Discussion Leader: Ning Hu, Hua Li	
15:45-16:00	Xianghe Peng (Chongqing University): Determination of Eshelby Tensor for Mechanical Properties of Composites with Elastoplastic Matrix
16:00-16:15	Guoxing Lu (Swinburne University of Technology): Quasi-Static Bending Behaviour of Sandwich Beams with Thin-Walled Tubes as Core
16:15-16:30	Han Jiang (Southwest Jiaotong University): Correlation between the Evolution of Molecular Entanglement and Material Properties of Amorphous Glassy Polymers
16:30-16:45	Yuanqing Li (Chongqing University): Flexible Stress Sensor Based on Carbon Cotton
Discussion Leader: Xiaoqiao He, Guoxing Lu	
16:45-17:00	Hua Li (Nanyang Technological University): Experimental study on the fluid mechanics of bubble generation via a hydrofoil
17:00-17:15	Dongdong Wang (Xiamen University): Stabilized Meshfree Method for Landslide Simulation
17:15-17:30	Tongqing Lu (Xi'an Jiaotong University): Nonlinear Characteristics of A Dielectric Elastomer Tube under Electromechanical Coupling Loading
17:30-17:45	Chun Lu (King Abdulah University of Science & Technology, Saudi Arabia): Mehcanics Related Research in King Abdulah University
18:30	Dinner (Discussion & networking)

November 9, 2015 (Monday)

Invited Talks: Each Speaker: 15min presentation	
Discussion Leader: Gongfa Chen, Moubin Liu	
08:30-08:45	T.E. Tay (National University of Singapore): Modelling Progressive Damage in Fiber-Reinforced Composites
08:45-09:00	Shaohua Chen (Institute of Mechanics, Chinese Academy of Sciences): Motion Induced by A Strain Gradient Field
09:00-09:15	Yulong Li (Northwestern Polytechnical University): Atomic Simulation of the Mechanical Properties of Nanocrystalline Metal Mg
Discussion Leader: Vincent B C Tan, Xinghua Shi	
09:15-09:30	Xu Guo (Dalian University of Technology): Doing Topology Optimization Explicitly and Geometrically: A New Moving Morphable Components Based Framework
09:30-09:45	Bin Liu (Tsinghua University): Standardized Compliance Matrices for General Anisotropic Materials and A Simple Measure of Anisotropy Degree Based on Shear-Extension Coupling Coefficient
09:45-10:00	Moubin Liu (Peking University): Dissipative Particle Dynamics (DPD) - Some Recent Developments
10:00-10:15 Coffee break	
Discussion Leader: Qian Ding, Jin Qian	
10:15-10:30	Vincent B C Tan (National University of Singapore): A Vibro-Acoustic Modulation Method for the Detection of Delamination and Kissing Bond in Composites
10:30-10:45	Zhanfang Liu (Chongqing University): Generalized Elasticity and its Size effects
10:45-11:00	Xinghua Shi (Institute of Mechanics, Chinese Academy of Sciences): Rotation-facilitated rapid transport of nanorods in mucosal tissues
Discussion Leader: Shaohua Chen, Guangyu Shi	
11:00-11:15	Gongfa Chen (Guangdong University of Technology): Biomechanical Assessment for Healing Progression of Fractured Long Bones: Numerical Investigations of Bending Stiffness and Resonant Frequency
11:15-11:30	Jin Qian (Zhejiang University): Mechanics of Individual and Ensemble Molecular Adhesion
11:30-11:45	Fangsen Cui (IHPC, Singapore): Further Design and Development of Covered Stents
11:45-12:00	Jizeng Wang (Lanzhou University): Mechanics on DNA Packaging and Ejection in Bacteriophage
12:00-13:30 Lunch	

Discussion Leader: Mamtimin Geni, Qingsheng Yang	
13:30-13:45	Hui Zheng (Shanghai Jiaotong University): Vibration ANALYSIS OF Laminated and FGMs shell structures
13:45-14:00	Jizhou Song (Zhejiang University): Mechanics of Laser-Driven Non-Contact Transfer Printing
14:00-14:15	Guangyu Shi (Tianjin University): Effect of Strain Gradient along Beam Axis on Flexural Vibration Analysis Based on One Dimensional Beam Theories
14:15-14:30	Weiguo Li (Chongqing University): High-Temperature Mechanical Properties of Ultra-High Temperature Ceramic /Metallic Materials
Discussion Leader: Hui Zheng, Jizhou Song	
14:30-14:45	Zichen Deng (Northwestern Polytechnical University): Symplectic Analysis for Dynamic Properties of Sandwich Plats with Honeycomb Cores
14:45-15:00	Liqun Tang (South China University of Technology): Study of the Yield Surface of Metal Foams under Multiaxial Loads
15:00-15:15	Qingsheng Yang (Beijing University of Technology): Mechanics of CNT Assemblies and Their Composites
15:15-15:30	Pin Lu (Hefei University of Technology): Partial-Slip Contact on Rough Surfaces
15:30-15:45	Coffee break
Discussion Leader: Jizeng Wang, Wenbo Luo	
15:45-16:00	Mamtimin Geni (Xinjiang University): Optimal Matching Parameters of GT Rotor System for the Minimum Passing Critical Vibration Amplitude with Different RSS Support
16:00-16:15	Shan Tang (Chongqing University): Multiscale Modeling Guided Design of Soft Solids
16:15-16:30	Zhanli Liu (Tsinghua University): Multi-field coupling fracture modeling and application in hydraulic fracture
16:30-16:45	Xiaoming Zhou (Beijing Institute of Technology): Acoustic Meta-Damping Materials
Discussion Leader: Shan Tang, Fangsen Cui	
16:45-17:00	Wenbo Luo (Xiangtang University): Fractional Derivative Rheological Model for Dynamical Mechanical Behavior of Carbon-Black Filled Rubber
17:00-17:15	Yan Li (Tongji University): Development of High Performances and Multi-Functional Plant Fiber Reinforced Composites
17:15-17:30	Marie-Jean Thoraval (Xi'an Jiaotong University): High-Speed Interfacial Flows
17:30-17:45	Zuoqi Zhang (Wuhan University): On the Hierarchy Number of Load-bearing Biological Materials: the Larger, the Better?
18:30	Dinner

November 10, 2015 (Tuesday)

Invited Talks: Each Speaker: 15min presentation	
Discussion Leader: Hui Yang	
08:30-08:45	Jun Liang (Harbin Institute of Technology): Effective Properties and Nonlinear Mechanical Behavior of 3d Needled C/C-Sic Composites
08:45-09:00	Zhendong Sha (Xi'an Jiaotong University): Metallic Glass and Nanoglass
09:00-09:15	Fei Xu (Northwestern Polytechnical University): Large Scale Water Entry Simulation with Smoothed Particle Hydrodynamics on Single- and Multi-GPU Systems
Discussion Leader: Pengfei He	
09:15-09:30	Zishun Liu (Xi'an Jiaotong University): Mechanics of Shape Memory Polymers
09:30-09:45	Bo Li (Tsinghua University): Morphogenesis in Cellular systems
09:45-10:00	Fangyun Lu (National University of Defense Technology): Energy Distribution during the Explosive Separation Process
10:00-10:15 Coffee break	
Discussion Leader: Bo Li	
10:15-10:30	Hui Yang (Northwestern Polytechnical University): Simulated Microgravity Effect on Gene and Protein Expression of <i>Escherichia coli</i>
10:30-10:45	Yumin Cheng (Shanghai University): The Improved Element-Free Galerkin Method for Nonlinear Solid Mechanics
10:45-11:00	Qian Ding (Tianjin University): Non-Linear Dynamics of A Steering Gear System with Backlashes
Discussion Leader: Zhendong Sha	
11:00-11:15	Zhi Zong (Dalian University of Technology): A Stripwise Method for Vortex-Induced-Vibration (Viv) of Ocean Risers
11:15-11:30	Pengfei He (Tongji University): Phase Field Model for Brittle Fracture
11:30-11:45	Lihai Zhang (The University of Melbourne, Australia): Structural Condition Assessment of Concrete Bridges under Heavy Trucks
11:45-12:00	Yuanwen Gao (Lanzhou University): Nonlinear Hysteretic Magnetoelectric Effect of Layered Composites
12:00-12:15	Guang-Kui Xu (Xi'an Jiaotong University): Binding Kinetics of Cell Adhesion Molecules
12:30- Lunch	
13:30-17:00 Group discussion	