





The 19th HKSTAM Annual Conference in conjunction with The 11th Jiangsu-HK Forum on Mechanics and Its Application

Conference Program (28 March 2015)

Conference Venue: Institute for Advanced Study (IAS) at Hong Kong University of Science and Technology (HKUST)

March 28, Saturday, Morning (IAS Lecture Theatre, HKUST)

08:30 – 09:00 [30 mins]	Registration and reception [IAS Lobby, HKUST]			
09:00 – 09:20 [20 mins]	Opening addresses, souvenirs presentations (MC: Professor Gang WANG 王剛, Secretary of HKSTAM) Professor YK LEE (李貽昆) Ms Xuan WU (邬萱) President of HKSTAM Leader of Jiangsu Delegation, Secretary of JSTAM			
09:20 – 10:00 [40 mins]	Chair: Professor Jian LU, Immediate President of HKSTAM Distinguished Lecture I Professor Tongyi ZHANG (張統一) Fang Professor of Engineering and Chair Professor, Department of Mechanical and Aerospace Engineering Hong Kong University of Science and Technology "The Surface Eigenstress Model and Size-dependent Young's Modulus and Ultimate Tensile Strength"			

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Lunch at IAS Lobby, HKUST				
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March 28, Saturday, Afternoon (IAS Building, HKUST)

14:00 – 15:30 [1 hr 30 mins]	Session A1 [Lecture Theatre, G/F] Chair: Prof Junhua ZHAO	Session B1 [IAS, Seminar Room 1, 1/F] Chair: Prof Haimin YAO	Session C1 [IAS, Seminar Room 2, 2/F] Chair: Prof ZQ Yue	Session D1 [IAS, Seminar Room 3, 4/F] Chair: Prof Juncai XU	
14:00 – 14:15 [15 mins]	LU Yang in situ Nano-Fatigue Characterizations of 1-D Nanostructures	ZHAO Cong The Study of Cancer-cell Capturing in Microfiltration Chips under Different Capillary Numbers	YUE Zhong-qi Quentin Expansion and Migration of Dense Gas as Cause of Wenchuan Earthquake	XU Juncai A New Implementation of Geometric Semantic Genetic Programing for Dam Safety Factor	
14:15 – 14:30 [15 mins]	BIAN Jianjun Atomistic deformation mechanisms in copper nanospheres	SHAGOSHTASBI Hooman Resistivity Profile of Single Pore during Electroporation	HUANG Duruo Stochastic simulation of spatially distributed earthquake ground motions	MA Fang Jie Crack width analysis of reinforced concrete beams by modified discrete crack model	
14:30 – 14:45 [15 mins]	CHEN Bing Indentation Size Effect of Ceramic Particle Reinforced Polymeric Nanocomposites	ZHAN Yuexing Poro-Visco-Hyperelastic Modelling of Hydrogel Composites	HU Jun Modal identification and model updating of a factory building with ambient vibration test data utilizing a Bayesian approach	HE Chong Experimental Verification of Fracture-mode Map for Brittle Coatings	
14:45 – 15:00 [15 mins]	LI Weiqun Thickness-dependent fracture of amorphous carbon coating on SnO2 nanowire electrodes	HUI Tsz Hin A novel technique of probing coupled cell adhesion and mechanical deformation by optical tweezers	HU Qin Bayesian methodology in railway ballast damage detection based on a continuous modelling method	DENG Yani An Accelerated Grid-based BEM for Geometrically Nonlinear Problems	
15:00 – 15:15 [15 mins]	ZHANG Hongti Room-Temperature Super Elasticity of Single Crystalline Silicon Nanowires	ZHU Qian Shape deformation of the nuclear envelope during cell division	GUO Ning Multiscale modelling of failure in saturated sand	ALABI Stephen Adeyemi The Improvement of Finite Element Model of a Rail-Sleeper -Ballast System using Measured Time-Domain Field Test Data	
15:15 – 15:30 [15 mins]	WANG Binjun Unzipping of Twin Lamella in Nanotwinned Nickel Nanowires	WEI Xi Mechanical Behaviour of Filamentous Networks Governed by the Physical Properties of the Cross-linking Molecules	PAN Wei Biham–Middleton–Levine model in consideration of cooperative willingness	YANG Jiahua Bayesian Model Updating Using a Markov Chain Monte Carlo Algorithm	
15:30 – 15:45	Coffee Break (IAS Lobby, HKUST)				
[15 mins]	Speakers of the following sessions please load their presentation files onto the computers in this break.				

15:45 – 17:15 [1 hr 30 min]	Session A2 [IAS Lecture Theatre, G/F] Chair: Prof H.F. LAM	Session B2 [IAS Seminar Room 1, 1/F] Chair: Prof Xinrui NIU	Session C2 [IAS Seminar Room 2, 2/F] Chair: Prof Wan-Huan ZHOU	Session D2 [IAS Seminar Room 3, 4/F] Chair: Prof Yang LU		
15:45 – 16:00 [15 mins]	CICORIA David Numerical Comparison of Two Solvers on The Effect of Hydrogen Addition on Laminar Premixed Counter-flow CH4-air Flames	CHEN Ning 中医经络与振动模态	SOOMRO Imran Ali Pre-cracked response of the rocks under uniaxial compression by using X-ray tomography	JIA Peng Improved Analysis for Gas-Filled Encapsulated Thermal-Acoustic Transducer		
16:00 – 16:15 [15 mins]	FOOLADGAR Ehsan Large Eddy Simulation of a Swirl-stabilized Pilot Combustor from Conventional to Flameless Mode	WONG Jasmin Effect of Endothelial Cell Morphology on Hemodynamic Forces in Blood Transport	CHENG Zhuang An investigation on micro-mechanism of creep in sands using x ray tomography	XU Wei Thermoresistive Micro Calorimetric Flow Sensor Array by using CMOS MEMS Technology		
16:15 – 16:30 [15 mins]	PENG Hua Yi Numerical study of wake flow characteristics of a five-straight-bladed vertical axis wind turbine based on computational fluid dynamics	FU Jimin c-axis Preferential Orientation of Hydroxyapatite Accounts for the High Wear Resistance of the Black Carp (mylopharyngodon Piceus) Teeth	WEI Jiangtao Micromechanical indictors for post-liquefaction behaviors of granular soil	ZHANG Weiguan Sensitivity Study of the MEMS Microphone with a Composited Layer Diaphragm		
16:30 – 16:45 [15 mins]	LI Qi A Monte Carlo based method simulating both particle and wave behaviours of phonon transport	LI Chu Numerical demonstration of negative thermophoresis of nanoparticles in the free molecular regime	ZHOU Wan-Huan Shear Strength and Unconfined Compression Strength of Unsaturated Completely Decomposed Granite Soil	SHI Xiaomei Design of Micromachined Condenser Microphones with Concave Backplates		
16:45 – 17:00 [15 mins]	ZHANG Yujie A robust simulation method for curvature driven flows	XIAO Lanlan Numerical simulation of a single cell flowing through a narrow slit	Li Xingyue A Coupled CFD-DEM Simulation of Dam-Break	CHONG Po Fat A Capacitive Micromachined Ultrasonic Transducer (CMUT) Array with Single Layer Graphene Membrane		
17:00 – 17:15 [15 mins]	MO Jingwen On the Validity of the Young-Laplace Equation for the Fluid Infiltration in Hydrophobic Nanochannels		WU Huanran Multiscale Modelling of Compaction Band in Porous Sandstone	ZHANG Meng A Micro-electro-mechanical Switch for Power Applications		
17:15 – 18:00	HKSTAM Annual General Meeting [IAS Lecture Theatre, HKUST]					
[45 mins]	Attendees: Representatives of all Institution Members and all Full HKSTAM Members					
18:00 – 20:00	Conference banquet at G-Restaurant, HKUST (香港科技大学南北小厨)					