ICAM 2026, Day 1, 9 June 2026, Tuesday

HK Time		Venue
8:30 - 9:15	**Registration opens**	LT-18
9:15 - 9:30	**Opening Ceremony**	LT-18
9:30 - 10:30	**<u>William Benter Distinguished Lecture (Chair: Prof. Ya Yan Lu)</u>**	
	Deformations to the complex plane, novel asymptotic techniques, and the large t-asymptotics of the Riemann zeta function	
	Prof. Thanasis Fokas, University of Cambridge, UK	
10:30 - 11:00	**Coffee Break**	
	PARALLEL SESSION	
	<u>Inverse problems and applications (Chair: Prof. Hongyu Liu)</u>	LT-18
11:00 – 11:30	**An inverse problem for Schrödinger equation with multi-frequencies**	
	Prof. Guanghui Hu, Nankai University, China	
11:30 – 12:00	**Adjoint state methods for traveltime tomography: Some recent progress**	
	Prof. Jianliang Qian, Michigan State University, USA	
12:00 – 12:30	**Convexification method for moving targets**	
	Prof. Jingzhi Li, Southern University of Science and Technology, China	
	<u>Stochastic analysis and simulation (Chair: Prof. Chenchen Mou)</u>	P4701
11:00 – 11:30	**Central limit theorem for ergodic averages of Markov chains and the comparison of sampling algorithms for heavy-tailed distributions**	
	Prof. Aleksandar Mijatovic, Warwick University, UK	
11:30 – 12:00	**Generating solution paths of Markovian stochastic differential equations using diffusion models**	
	Prof. Xuefeng Gao, The Chinese University of Hong Kong, Hong Kong	
12:00 – 12:30	**Realized variance disagreement**	
	Prof. Carsten Chong, Hong Kong University of Science and Technology, Hong Kong	
	<u>Computational analysis of PDEs (Chair: Prof. Weifeng Qiu)</u>	P4302
11:00 – 11:30	**A study on modeling and simulation of electromagnetics in complex media**	
	Prof. Liwei Xu, University of Electronic Science and Technology of China, China	
11:30 – 12:00	**Kernel-based regularity estimation**	
	Prof. Leevan Ling, Hong Kong Baptist University, Hong Kong	
12:00 – 12:30	**From particles to continuum: Multiscale modeling of sea-ice floes**	
	Prof. Quanling Deng, Tsinghua University, China	

	Integrable nonlinear PDEs and their applications (Chair: Prof. Guo-Fu Yu)	P4703
11:00 – 11:30	**Broadband complete population inversion induced by few-cycle breathers in the reduced Maxwell-Bloch Equations** *Prof. Jingsong He, Shenzhen University, China*	
11:30 – 12:00	**Infinite-peakon solutions of the Camassa--Holm equation** *Prof. Xiang-Ke Chang, Chinese Academy of Sciences, China*	
12:00 – 12:30	**Asymptotics of the finite-temperature Bessel kernel determinant** *Prof. Shuai-Xia Xu, Sun Yat-sen University, China*	
	Image processing, machine learning, and applications (Chair: Prof. Jean-Michel Morel)	P4704
11:00 – 11:30	**Solving convolution-type integral equations with preconditioned neural operators** *Prof. Raymond Chan, Lingnan University, Hong Kong*	
11:30 – 12:00	**Diffusion models for Gaussian distributions: Exact solutions and Wasserstein errors** *Prof. Bruno Galerne, University of Orleans, France*	
12:00 – 12:30	**Continuous modeling perspective for imaging science** *Prof. Xile Zhao, University of Electronic Science and Technology of China (UESTC), China*	
12:30 - 13:45	**Lunch Break**	
13:45 - 14:05	**Introduction of the Prize Winner**	
14:05 - 14:15	**Prize Presentation Ceremony and Photo Session**	
14:15 - 15:15	**Plenary I (Chair: Prof. Jonathan Wylie)** **Scientific machine learning: Quo vadimus** *Prof. George Em Karniadakis, Brown University, USA*	
15:15 - 15:45	**Coffee Break**	
	Special symposium celebrating the William Benter Prize for Dr. George Karniadakis (Chair: Prof. Yue Yu)	LT-18
15:45 – 16:15	**A few problems in quantum chemistry that still refuse to behave — and that I would like George to help us with** *Prof. Yvon Maday, Sorbonne University/Jacques-Louis Lions Laboratory, France*	
16:15 – 16:45	**Finite element versus finite neuron methods** *Prof. Jinchao Xu, King Abdullah University of Science and Technology, Saudi Arabia*	
16:45 – 17:15	**Efficient and accurate spectral methods for PDEs in complex domains** *Prof. Jie Shen, Eastern Institute of Technology Ningbo, China*	
17:15 - 17:45	**Semi-supervised learning with nonlocal operators** *Prof. Qiang Du, Columbia University, USA*	

ICAM 2026, Day 2, 10 June 2026, Wednesday

HK Time		Venue
8:45 - 9:15	**Registration opens**	LT-18
9:15 - 10:15	**Plenary II (Chair: Prof. Xiang Zhou)**	LT-18
	Derivation of effective equations for oscillations in hyperbolic-parabolic systems	
	Prof. Athanasios Tzavaras, King Abdullah University of Science and Technology, Saudi Arabia	
10:15 - 10:45	**Coffee Break**	
	PARALLEL SESSION	
	Special symposium celebrating the William Benter Prize for Dr. George Karniadakis (Chair: Prof. Mohsen Zayernouri)	LT-18
10:45 - 11:15	**Neural pushforward samplers for transient distributions from transport equations with weak adversarial training**	
	Prof. Wei Cai, Southern Methodist University, USA	
11:15 - 11:45	**Overcoming spectral bias via cross-attention**	
	Prof. Tao Zhou, Chinese Academy of Sciences, China	
11:45 - 12:15	**Neural-operator element method: Efficient and scalable finite element method enabled by reusable neural operators**	
	Prof. Lu Lu, Yale University, USA	
	Stochastic analysis and simulation (Chair: Prof. Jing Zhang)	P4701
10:45 - 11:15	**Nonzero-sum dynkin games: Response equilibria and applications to convertible bonds**	
	Prof. Gechun Liang, Warwick University, UK	
11:15 - 11:45	**Bilevel optimization for learning hyperparameters: Application to solving PDEs and inverse problems with Gaussian processes**	
	Prof. Xianjin Yang, California Institute of Technology, USA	
	Computational analysis of PDEs (Chair: Prof. Weifeng Qiu)	P4302
10:45 - 11:15	**Adaptive Newton multi-level algorithm for nonlinear PDEs**	
	Prof. Eun-Jae Park, Yonsei University, South Korea	
11:15 - 11:45	**Projection-free Gauss methods for harmonic maps**	
	Prof. Jilu Wang, Harbin Institute of Technology, Shenzhen, China	
11:45 - 12:15	**Mixed finite element methods for the coupled bodyplate problem**	
	Prof. Rui Ma, Beijing Institute of Technology, China	
	Dynamical systems and machine learning (Chair: Prof. Xiang Zhou)	P4703
10:45 - 11:15	**Critical transitions in stochastic dynamical systems**	
	Prof. Jinqiao Duan, Great Bay University, China	
11:15 - 11:45	**New trends in the stability of Sinkhorn semigroups**	
	Prof. Ajay Jasra, Chinese University of Hong Kong, Shenzhen, China	

11:45 - 12:15	**When SDE meets high-dimensional sampling: New algorithms and new error bounds beyond log-concavity** *Prof. Xiaojie Wang, Central South University, Changsha, China*	
	Inverse problems and applications (Chair: Prof. Zhiqiang Maio)	P4704
10:45 - 11:15	**AI-aided full waveform inversion** *Prof. Yanfei Wang, Institute of Geology and Geophysics, Chinese Academy of Sciences, China*	
11:15 - 11:45	**On the identification of external forces for two-layer quasi-geostrophic model from partial observation data** *Prof. Jijun Liu, Southeast University, China*	
11:45 - 12:15	**Determination of the nutrient consumption rate in a multidimensional DCIS model with a free boundary** *Prof. Keji Liu, Shanghai University of Finance and Economics, China*	
12:15 - 13:45	**Lunch Break**	
13:45 - 14:45	**Plenary III (Chair: Prof. Weifeng Qiu)** **Overcoming the curse of dimensionality in the era of deep learning computing** *Prof. Wei Cai, Southern Methodist University, USA*	LT-18
14:45 - 15:00	**Brief Break**	
	PARALLEL SESSION	
	Special symposium celebrating the William Benter Prize for Dr. George Karniadakis (Chair: Prof. Lu Lu)	LT-18
15:00 - 15:30	**The science of AI** *Prof. Weinan E, Peking University, China*	
15:30 - 16:00	**Finite time blow-up for the Caputo-Hadamard time fractional chemotaxis system: Analysis and computation** *Prof. Changpin Li, Shanghai University, China*	
	Stochastic analysis and simulation (Chair: Prof. Gechun Liang)	P4701
15:00 - 15:30	**Viscosity solutions for HJB equations on the process space** *Prof. Jianjun Zhou, Northwest A&F University, China*	
15:30 - 16:00	**Hamilton-Jacobi-Bellman equations and controlled particle systems for generalized mean field control** *Prof. Huafu Liao, Dalian University of Technology, China*	
	Recent developments in sampling methods, uncertainty quantification, and generative AI (Chair: Prof. Zhiwen Zhang)	P4302
15:00 - 15:30	**A high-dimensional density estimation method and its application for solving PDEs** *Prof. Qifeng Liao, ShanghaiTech University, China*	
15:30 - 16:00	**Test-time guidance for flow-based generative models via enhanced sampling** *Prof. Bao Wang, University of Utah, USA*	

	Random matrix theory and related topics (Chair: Prof. Dong Wang)	P4703
15:00 - 15:30	**Joint moments of the characteristic polynomial of the Ginibre ensemble with merging singularities** *Prof. Meng Yang, Central South University, China*	
15:30 - 16:00	**Debiasing randomized numerical linear algebra via random matrix theory** *Prof. Zhenyu Liao, Huazhong University of Science and Technology, China*	
	Image processing, machine learning, and applications (Chair: Prof. Roy He)	P4704
15:00 - 15:30	**Hierarchical exact solver for large-scale optimal transport and its applications** *Prof. Xiaoqun Zhang, Shanghai Jiao Tong University, China*	
15:30 - 16:00	**Effective solutions to robust orthogonal nonnegative matrix factorization via oblique Manifold Transformation** *Prof. Tieyong Zeng, Beijing Normal University-Hong Kong Baptist University, China*	
16:00 - 16:30	**Coffee Break**	
	Special symposium celebrating the William Benter Prize for Dr. George Karniadakis (Chair: Prof. Lu Lu)	LT-18
16:30 - 17:00	**Probabilistic consequences of heavy tails on numerical analysis and scientific learning** *Prof. Mohsen Zayernouri, Michigan State University, USA*	
17:00 - 17:30	**Energy-stable accelerated optimization using scalar auxiliary variables** *Prof. Zhiping Mao, Eastern Institute of Technology Ningbo, China*	
17:30 - 18:00	**Nonlocal neural operators: Theory and application** *Prof. Yue Yu, Lehigh University, USA*	
	Stochastic analysis and simulation (Chair: Prof. Xiaoli Wei)	P4701
16:30 - 17:00	**Itô-Wentzell-Lions formulae for flows of full and conditional measures on semimartingales** *Prof. Jing Zhang, Fudan University, China*	
17:00 - 17:30	**DeepPAAC: A new deep Galerkin method for principal-agent problems** *Prof. Zimu Zhu, The Hong Kong University of Science and Technology (Guangzhou), China*	
	Recent developments in sampling methods, uncertainty quantification, and Generative AI (Chair: Prof. Zhiwen Zhang)	P4302
16:30 - 17:00	**Acceleration for diffusion models: Theory and practice** *Prof. Gen Li, The Chinese University of Hong Kong, Hong Kong*	
17:00 - 17:30	**Multi-fidelity numerical methods for kinetic models** *Prof. Liu Liu, The Chinese University of Hong Kong, Hong Kong*	
17:30 - 18:00	**Preconditioned one-step generative modeling for Bayesian inverse problems in function spaces** *Prof. Zhongjian Wang, Nanyang Technological University, Singapore*	

	Random matrix theory and related topics (Chair: Prof. Zhenyu Liao)	P4703
16:30 - 17:00	**Multiplicative chaos in random matrix theory and probabilistic number theory** *Prof. Mo Dick Wong, The University of Hong Kong, Hong Kong*	
17:00 - 17:30	**Markov chain comparisons and edge universality for inhomogeneous random matrices** *Prof. Dang-Zheng Liu, University of Science and Technology of China, China*	
17:30 - 18:00	**On a Painlevé representation of joint moments of derivatives of CUE characteristic polynomials** *Prof. Fei Wei, Beijing University of Posts and Telecommunications, China*	
	Image processing, machine learning, and applications (Chair: Prof. Roy He)	P4704
16:30 - 17:00	**Tensor computations and data learning** *Prof. Michael Ng, Hong Kong Baptist University, Hong Kong*	
17:00 - 17:30	**Deepfake facial detection in the paradigm of unsupervised learning** *Prof. Tong Qiao, Hangzhou Dianzi University, China*	
17:30 - 18:00	**Towards personalized and scene-level 3D generation** *Prof. Zhengzhe Liu, Lingnan University, Hong Kong*	

ICAM 2026, Day 3, 11 June 2026, Thursday

HK Time		Venue
8:45 - 9:15	**Registration opens**	LT-18
9:15 - 10:15	**Plenary IV (Chair: Prof. Hongyu Liu)** **Deep learning for solving PDE inverse problems** *Prof. Gang Bao, Zhejiang University, China*	LT-18
10:15 - 10:45	**Coffee Break**	
	PARALLEL SESSION	
	Special symposium celebrating the William Benter Prize for Dr. George Karniadakis (Chair: Prof. Nat Trask)	LT-18
10:45 - 11:15	**Development and application of spectral/hp element for complex geometry flow simualtion: Nektar** *Prof. Spencer Sherwin, Imperial College London, UK*	
11:15 - 11:45	**Competition or cooperation? Simulation science and the expanding world of scientific machine learning** *Prof. Mike Kirby, University of Utah, USA*	
11:45 - 12:15	**Kolmogorov superposition theorem: Construction, approximation and networks** *Prof. Li-Lian Wang, Nanyang Technological University, Singapore*	
	Computational analysis of PDEs (Chair: Prof. Lina Zhao)	P4701
10:45 - 11:15	**Analysis of a mixed finite element method for Poisson's equation with rough boundary data** *Prof. Huadong Gao, Huazhong University of Science and Technology, China*	
11:15 - 11:45	**An adaptive hybridizable discontinuous Galerkin method for Darcy-Forchheimer flow in fractured porous media** *Prof. Haitao Leng, Guangzhou University, China*	
11:45 - 12:15	**Quantity-of-interest based adaptive LSFEMs with physically meaningful dual PDEs and built-in estimators** *Prof. Shun Zhang, City University of Hong Kong, Hong Kong*	
	Image processing, machine learning, and applications (Chair: Prof. Ronald Lui)	P4302
10:45 - 11:15	**Deep inverse problems with single-instance priors** *Prof. Angelica Aviles-Rivero, Tsinghua University, China*	
11:15 - 11:45	**Quaternion adaptive approximation normalization graph guided implicit low rank for robust matrix completion** *Prof. Qiyu Jin, Inner Mongolia University, China*	
11:45 - 12:15	**Unveiling hidden dynamics: Reconstructing systems from time-label-free data** *Prof. Zuoqiang Shi, Tsinghua University, China*	

	Random matrix theory and related topics (Chair: Prof. Meng Yang)	P4703
10:45 - 11:15	**Equilibrium measures for higher-dimensional rotationally symmetric Riesz gases** *Prof. Sung-Soo Byun, Seoul National University, Republic of Korea*	
11:15 – 11:45	**Spectral analysis under heterogeneous random perturbations** *Prof. Ke Wang, Hong Kong University of Science and Technology, Hong Kong*	
11:45 - 12:15	**Matrix harmonic analysis at high temperature** *Prof. Jiyuan Zhang, South China University of Technology, China*	
	Inverse problems and applications (Chair: Prof. Yan Jiang)	P4704
10:45 - 11:15	**Finite element error analysis for elliptic parameter identification with power-type nonlinearity** *Prof. Dehan Chen, Central China Normal University, China*	
11:15 - 11:45	**A mathematical theory of microscale hydrodynamic cloaking and shielding by electro-osmsis** *Dr. Zhiqiang Miao, City University of Hong Kong, Hong Kong*	
11:45 - 12:15	**An inverse potential problem in a variable order time fractional diffusion equation** *Prof. Daijun Jiang, Central China Normal University, China*	
12:15 - 13:45	**Lunch Break**	
13:45 - 14:45	**Plenary V (Chair: Prof. Dan Dai)** **The random matrix hard edge** *Prof. Peter Forrester, University of Melbourne, Australia*	LT-18
14:45 - 15:00	**Brief Break**	
	PARALLEL SESSION	
	Special symposium celebrating the William Benter Prize for Dr. George Karniadakis (Chair: Prof. Zhiping Mao)	LT-18
15:00 - 15:30	**A meshfree exterior calculus (MEEC) for generalizable and data-efficient learning of physics from point clouds** *Prof. Nathaniel Trask, University of Pennsylvania, USA*	
15:30 - 16:00	**Uncertainty quantification and model discrepancy in scientific machine learning** *Prof. Ling Guo, Shanghai Normal University, China*	
	Stochastic analysis and simulation (Chair: Prof. Xianjin Yang)	P4701
15:00 - 15:30	**Path characteristic functions and convergence of stochastic processes** *Prof. Chong Liu, Shanghai Tech University, China*	
15:30 - 16:00	**Deep learning for the multiple optimal stopping problem** *Prof. Mathieu Lauriere, New York University Shanghai, China*	

	Dynamical systems and machine learning (Chair: Prof. Xiuyuan Cheng)	P4302
15:00 - 15:30	**Machine learning for dynamical Systems: From chaos to conservation laws** *Prof. Hongkun Zhang, Great Bay University, China*	
15:30 - 16:00	**Estimating committor functions via deep adaptive sampling on rare transition paths** *Prof. Xiaoliang Wan, Louisiana State University, USA*	
	Integrable nonlinear PDEs and their applications (Chair: Prof. Xiaomeng Xu)	P4703
15:00 - 15:30	**Large order breathers for NLS equation** *Prof. Liming Ling, South China University of Technology, China*	
15:30 - 16:00	**Confluent hypergeometric kernel determinant on multiple large intervals** *Prof. Lun Zhang, Fudan University, China*	
	Recent developments in sampling methods, uncertainty quantification, and Generative AI (Chair: Dr. Zhongjian Wang)	P4704
15:00 - 15:30	**Log-difference-of-convex sampling and its optimization aspect** *Prof. Hoang Phuc Hau Luu, Nanyang Technological University, Singapore*	
15:30 - 16:00	**Convection-diffusion equation: A theoretically certified framework for neural networks** *Prof. Tangjun Wang, The University of Hong Kong, Hong Kong*	
16:00 - 16:30	**Coffee Break**	
	Special symposium celebrating the William Benter Prize for Dr. George Karniadakis (Chair: Prof. Zhiping Mao)	LT-18
16:30 - 17:00	**Tackling spectral bias in deep neural networks via parameter reparameterization** *Prof. Xuhui Meng, Huazhong University of Science and Technology, China*	
17:00 - 17:30	**Physics-informed Laplace neural operator for learning partial differential equations** *Prof. Minseok Choi, Pohang University of Science and Technology, South Korea*	
17:30 - 18:00	**Structure-preserving construction of collision operators for kinetic equations from molecular dynamics** *Prof. Huan Lei, Michigan State University, USA*	
	Contributed talks (Chair: Prof. Shun Zhang)	P4701
16:30 - 16:50	**Truncated kernel stochastic gradient descent on spheres** *Mr. Jinhui Bai, Fudan University, China*	
16:50 - 17:10	**Generalized moving least-squares methods for solving vector-valued PDEs on unknown manifolds** *Mr. Rongji Li, ShanghaiTech University, China*	
17:10 - 17:30	**On the eigenvalue rigidity of the Jacobi unitary ensemble** *Mr. Chenhao Lu, City University of Hong Kong, Hong Kong*	
17:30 - 17:50	**Discontinuous Galerkin methods for the steady-state solutions of Euler equations** *Dr. Lei Wei, City University of Hong Kong, Hong Kong*	

	Dynamical systems and machine learning (Chair: Prof. Xiaoliang Wan)	P4302
16:30 - 17:00	**HyDFVM: A hybrid finite-volume learning for hyperbolic equations with discontinuous solutions** *Prof. Qingsong Zou, Sun Yat-sen University, China*	
17:00 - 17:30	**Approximation of intrinsic Hölder functions on manifolds by ambient Gaussian kernels** *Prof. Xiuyuan Cheng, Duke University, USA*	
17:30 - 18:00	**The iterative convolution-thresholding methods for interface related optimization problems with priorities** *Prof. Dong Wang, Chinese University of Hong Kong, Shenzhen, China*	
	Integrable nonlinear PDEs and their applications (Chair: Prof. Liming Ling)	P4703
16:30 - 17:00	**On uniform large genus asymptotics for Witten's intersection numbers and Brézin-Gross-Witten numbers** *Prof. Di Yang, University of Science and Technology of China, China*	
17:00 - 17:30	**Cauchy-Jacobi orthogonal polynomials and the integrable lattices** *Prof. Guo-Fu Yu, Shanghai Jiao Tong University, China*	
17:30 - 18:00	**Stokes phenomenon, isomonodromy deformation and representation theory** *Prof. Xiaomeng Xu, Peking University, China*	
	Contributed talks (Chair: Prof. Shun Zhang)	P4704
16:30 - 16:50	**A strongly mass-conservative method for the coupled Navier-Stokes and Darcy-Forchheimer equations** *Mr. Jingyu Liu, City University of Hong Kong, Hong Kong*	
16:50 - 17:10	**Probability methods and theory of adaptive sampling for solving differential equations with neural networks** *Prof. Jiayu Zhai, ShanghaiTech University, China*	
17:10 - 17:30	**Weak generative sampler to efficiently sample invariant distribution** *Dr. Zhiqiang Cai, The University of Hong Kong, Hong Kong*	
17:30 - 17:50	**Geometry-adaptive operators via learned charts** *Mr. Chun Wun Cheng, University of Cambridge, UK*	

ICAM 2026, Day 4, 12 June 2026, Friday

HK Time		Venue
8:45 - 9:15	**Registration opens**	LT-18
9:15 - 10:15	**Plenary VI (Chair: Prof. Mengqi Zhang)**	LT-18
	Recent progress in viscoelastic (polymer) fluid flows	
	Prof. Rich Kerswell, Cambridge University, England.	
10:15 - 10:45	**Coffee Break**	
	PARALLEL SESSION	
	<u>Special symposium celebrating the William Benter Prize for Dr. George Karniadakis (Chair: Prof. Yue Yu)</u>	LT-18
10:45 - 11:15	**Towards large scientific learning models with In-Context Operator Networks (ICON)**	
	Prof. Liu Yang, National University of Singapore, Singapore	
11:15 - 11:45	**Physics-informed, physics-free, and numerical analysis-informed machine learning for complex systems**	
	Prof. Costas (Constantinos) Siettos, University of Naples Federico II, Italy	
11:45 - 12:15	**Curvature-aware optimization for high-accuracy physics- informed neural networks (PINNs)**	
	Prof. Khemraj Shukla, Brown University, USA	
	<u>Random matrix theory and related topics (Chair: Prof. Luming Yao)</u>	P4701
10:45 - 11:15	**Local universality of a special solution of the DMPK equation and universal conductance fluctuations of quasi-1D wires**	
	Prof. Dong Wang, University of Chinese Academy of Sciences, China	
11:15 - 11:45	**Central limit theorems with logarithmic singularities for the spherical ensemble and beyond**	
	Prof. Yuanyuan Xu, Chinese Academy of Sciences, China	
	<u>Inverse problems and applications (Prof. Chaohua Duan)</u>	P4302
10:45 - 11:15	**Neural network yields regularization for ill-posed inverse problems**	
	Prof. Ye Zhang, Beijing Institute of Technology, China	
11:15 - 11:45	**Optical inversion using plasmonic contrast agents**	
	Prof. Xinlin Cao, The Hong Kong Polytechnic University, Hong Kong	
11:45 - 12:15	**Point source identification for the heat equation**	
	Prof. Bangti Jin, The Chinese University of Hong Kong, Hong Kong	
	<u>Computational analysis of PDEs (Chair: Prof. Lina Zhao)</u>	P4703
10:45 - 11:15	**Optimization and preconditioning: TPD algorithms for nonlinear PDEs**	
	Prof. Ruchi Guo, Sichuan University, China	
11:15 - 11:45	**Recent advances in parareal algorithms**	
	Prof. Zhi Zhou, The Hong Kong Polytechnic University, Hong Kong	

11:45 - 12:15	**Physics-informed neural networks for multiscale PDEs with discontinuous high-contrast coefficients** *Prof. Wing Tat Leung, City University of Hong Kong, Hong Kong*	
	Stochastic analysis and simulation (Chair: Prof. Huafu Liao)	P4704
10:45 - 11:15	**Control variate method for nonlinear partial differential equations by stochastic branching** *Prof. Nicolas Privault, Nanyang Technological University, Singapore*	
11:15 - 11:45	**A neural surrogate for discretization schemes of SDEs** *Prof. Riu Naito, University of Toyama, Japan*	
11:45 - 12:15	**The global well-posedness for master equations of mean field games of controls** *Prof. Xintian Liu, Dalian University of Technology, China*	
12:15 - 13:45	**Lunch Break**	
13:45 - 14:45	**Plenary VII (Chair: Prof. Ronald Lui)** **A geometric perspective of generative AI** *Prof. Xianfeng David Gu, The State University of New York, USA*	LT-18
14:45 - 15:00	**Brief Break**	
	PARALLEL SESSION	
	Dynamical systems and machine learning (Prof. Xiang Zhou)	LT-18
15:00 - 15:30	**A supervised learning scheme for computing Hamilton-Jacobi equation via density coupling** *Prof. Jianbo Cui, The Hong Kong Polytechnic University, Hong Kong*	
15:30 - 16:00	**Tensor Neural Network and Its Applications** *Prof. Hehu Xie, Chinese Academy of Sciences, Beijing, China*	
	Contributed talks (Chair: Prof. Wing Tat Leung)	P4701
15:00 - 15:20	**On the ergodic and average capacity of clustered cell-free networks: A moment-based computational perspective on random matrix theory** *Mr. Han Hao, Tsinghua University, Beijing, China*	
15:20 – 15:40	**LDIF: A Lie-Darboux isometric framework for unconstrained neural simulation of thin shell bending** *Mr. Hanyu Hu, City University of Hong Kong, Hong Kong*	
15:40 - 16:00	**Generative path-finding method for Wasserstein gradient flow** *Mr. Chengyu Liu, City University of Hong Kong, Hong Kong*	
	Inverse problems and applications (Chair: Prof. Yajuan Wang)	P4302
15:00 - 15:30	**Inversions of stochastic processes from their ergodic measures of nonlinear SDEs** *Prof. Zhihui Liu, Southern University of Science and Technology, China*	
15:30 - 16:00	**A feature-based regularization framework for nonlinear inverse problems and its applications** *Prof. Guangyu Gao, The Hong Kong Polytechnic University, Hong Kong*	

	Integrable nonlinear PDEs and their applications (Chair: Prof. Cheng-fa Wu)	P4703
15:00 - 15:30	**Long-time asymptotics of integrable equations with three-order Lax pairs** *Prof. Dengshan Wang, Beijing Normal University, China*	
15:30 - 16:00	**Connection problems for real Painlevé I transcendents: poles, zeros, and global asymptotics** *Prof. Yutian Li, Nanfang College, China*	
	Image processing, machine learning, and applications (Chair: Prof. Jean-Michel Morel)	P4704
15:00 - 15:30	**From preferred orientation to unpaired data learning in Cryo-EM** *Prof. Chenglong Bao, Tsinghua University, China*	
15:30 - 16:00	**A PCA based variational model for surface reconstruction from point clouds** *Prof. Hao Liu, Hong Kong Baptist University, Hong Kong*	
16:00 - 16:30	**Coffee Break**	
	Dynamical systems and machine learning (Chair: Prof. Hongkun Zhang)	LT-18
16:30 - 17:00	**Data-driven discovery of asymmetric interacting particle systems** *Prof. Jinchao Feng, Great Bay University, China*	
17:00 - 17:30	**Efficient algorithms for machine learning: Insights from optimal transport and information theory** *Prof. Hao Wu, Tsinghua University, China*	
17:30 - 18:00	**Generative models and probability flow: Levy score function** *Prof. Xiang Zhou, City University of Hong Kong, Hong Kong*	
	Contributed talks (Chair: Prof. Wing Tat Leung)	P4701
16:30 - 16:50	**A priori error bounds for boundary-adapted PINN solutions of elliptic PDEs: Application to mean escape time problems** *Mr. Nathanael Tepakbong, City University of Hong Kong, Hong Kong*	
16:50 - 17:10	**Resolution-invariant operator learning via encoder-decoder representations** *Mr. Jiaqi Yang, Fudan University, China*	
17:10 - 17:30	**A quantitative approximation framework for flow distillation in diffusion models** *Mr. Hanfei Zhou, Fudan University, China*	
17:30 - 17:50	**Neural estimation of the information bottleneck based on a mapping approach** *Mr. Lingyi Chen, Tsinghua University, China*	
	Contributed talks (Chair: Prof. Wing Tat Leung)	P4302
16:30 - 16:50	**Parameter-robust preconditioner for Stokes-Darcy coupled problem with Lagrange multiplier** *Dr. Xue Wang, Shandong University, China*	
16:50 - 17:10	**Edge density expansions for the classical Gaussian and Laguerre ensembles** *Dr. Anas Abdur Rahman, The University of Hong Kong, Hong Kong*	
17:10 - 17:30	**Operator learning for solving Fokker-Planck equations with various initial conditions** *Mr. Yaobin Wang, Beijing Normal-Hong Kong Baptist University, China*	
17:30 - 17:50	**An interpolation perspective on neural network generalization** *Miss Jin Guo, City University of Hong Kong, Hong Kong*	

17:50 – 18:10	**Fast solvers for numerical simulations with applications in microfluidics and antenna design** *Prof. Shihua Gong, The Chinese University of Hong Kong, Shenzhen, China*	
	Integrable nonlinear PDEs and their applications (Chair: Prof. Yutian Li)	P4703
16:30 - 17:00	**Rogue waves and their patterns in the vector nonlinear Schrödinger equation** *Prof. Cheng-fa Wu, Shenzhen University, China*	
17:00 - 17:30	**Painlevé hierarchy and the higher order analogues of the Tracy-Widom distribution** *Prof. Wen-Gao Long, Hunan University of Science and Technology, China*	
17:30 - 18:00	**Asymptotics for the noncommutative Painlevé II equation** *Prof. Luming Yao, Shenzhen University, China*	
	Image processing, machine learning, and applications (Chair: Prof. Jean-Michel Morel)	P4704
16:30 - 17:00	**The sinographic scripts strike back: Recent advances in the automatic transcription of east Asian historical documents** *Prof. Colin Brisson, EPHE-PSL, France*	
17:00 - 17:30	**Typographic shape modeling and a contrario analysis for philology at scale** *Prof. Seginus Mowlavi, Ecole normale superieure Paris-Saclay, France*	
17:30 - 17:50	**BézierFormer: Affine-invariant shape classification via control point attention** *Mr. Xiao Liu, City University of Hong Kong, Hong Kong*	