Workshop on Mathematics and Artificial Intelligence
(02 Feb 2026–06 Feb 2026)

List of Speakers and Talks' Title

Name and Affiliation	Talk Title
Chenglong Bao Yau Mathematical Sciences Center Tsinghua University, China	Learn to Synthesize Data in Imaging
Bin Dong Beijing International Center for Mathematical Research Peking University, China	AI for Mathematics: From Digitization to Intelligentization
Thomas Gaskin The London School of Economics and Political Science, UK	Hybrid Neural Modelling: Theory and Applications
Shaoning Han National University of Singapore, Singapore	A Geometric Perspective on Polynomially Solvable Convex Maximization
Hui Ji National University of Singapore, Singapore	Advances in Self-Supervised Image Denoising: From Gaussian Noise to Real-World Noise
Kai Jiang School of Mathematics and Computational Science Xiangtan University, China	Origin of Quasiperiodic Interfaces
Qingtang Jiang School of Mathematical Sciences Zhejiang Normal University, China	Blind Separation of Non-Stationary Multi-Component Signals: Enhanced SST/Chirplet Methods and Their Applications
Wei Jiang School of Mathematics and Statistics Wuhan University, China	A New Variational model for Simulating Solid-state Dewetting problems
Yuling Jiao School of Artificial Intelligence Wuhan University, China	Provable Diffusion Posterior Sampling for Bayesian Inversion
Lican Kang School of Mathematics and Statistics Wuhan University, China	Schrödinger-Föllmer Diffusion: Sampling, Optimization, Generative Learning
Huan Lei Michigan State University, USA	Structure-Preserving Construction of Collision Operators for Kinetic Equations from Molecular Dynamics
Qianxiao Li National University of Singapore, Singapore	Learning, Approximation and Control

Name and Affiliation	Talk Title
Yinan Li School of Artificial Intelligence Wuhan University, China	Average orders of Automorphism groups and Average-case complexity of Tensor Isomorphism problems
Xiliang Lu School of Mathematics and Statistics Wuhan University, Chin	Approximation error for Holder class with Transformers
Tan Minh Nguyen National University of Singapore, Singapore	Understanding Weight Space Symmetries in Contemporary Deep Learning Architectures
Tongyao Pang Yau Mathematical Sciences Center Tsinghua University, China	Diffusion Models for Inverse Problems: From Pretrained Priors to Posterior Sampling
Yong Sheng Soh National University of Singapore, Singapore	Learning Sparse Representations with Symmetries
Jian Sun School of Mathematics and Statistics Xi'an Jiaotong University, China	Generative AI: Mathematical Foundations and Applications
Kim Chuan Toh National University of Singapore, Singapore	Adam-family Methods with Decoupled Weight Decay in Deep Learning
Xin Tong National University of Singapore, Singapore	Diffusion models for High Dimensional Distributions
Lihan Wang National University of Singapore, Singapore	Quantitative estimates on Convergence rates of Kinetic dynamics for Sampling
Zaiwen Wen Beijing International Center for Mathematical Research Peking University, China	Learning-Based Algorithms for Solving Combinatorial Optimization
Pinchen Xie Lawrence Berkeley National Labs, USA	Variational Learning of Open Quantum Dynamics from Sparse and Noisy Data
Liu Yang National University of Singapore, Singapore	Towards Large Scientific Learning Models with In-Context Operator Networks (ICON)
Zhijian Yang School of Mathematics and Statistics Wuhan University, China	A Complete Error Analysis for Deep Ritz Method
Juntao You School of Artificial Intelligence Wuhan University, China	Advances in Fast Nonconvex Algorithms for Low-Rank Hankel Matrix Recovery

Name and Affiliation	Talk Title
Haijun Yu Academy of Mathematics and Systems Sciences Chinese Academy of Sciences, China	A Gradient-Oriented Diffusion Sampling Method for Deep Partial Differential Equation Solvers
Cheng Yuan School of Mathematics and Statistics Wuhan University, China	On the Stabilization of PINNs
Lei Zhang Beijing International Center for Mathematical Research Peking University, China	SPIKE: Stable Physics-Informed Kernel Evolution Method for Solving Hyperbolic Conservation Laws
Pingwen Zhang Wuhan University, China	Applied Mathematics Inspired by Irrational Numbers
Xiaofei Zhao School of Mathematics and Statistics Wuhan University, China	Unsupervised Operator Learning Approach for Dissipative equations via Onsager principle
Tao Zhou Academy of Mathematics and Systems Sciences Chinese Academy of Sciences, China	Efficient Deep Learning Methods for Very High Dimensional Quasilinear Parabolic PDEs and HJB Equations
Yuhua Zhu University of California, Los Angeles, USA	Optimal PhiBE — A Model-Free PDE-Based Framework for Continuous-Time Reinforcement Learning