



DKU- NUSRI Joint Workshop on Pure and Applied Mathematics 2022

Schedule



6th-9th Jan. Duke Kunshan University
Zoom ID: 913 0849 7114 Passcode: 471585

[https://duke.zoom.us/j/91308497114?pwd=VzdXUldVM1VjQUJPM1lhc
kZ6NjZXZz09](https://duke.zoom.us/j/91308497114?pwd=VzdXUldVM1VjQUJPM1lhc kZ6NjZXZz09)

Thursday 6th Jan. Theme: Pure Math. 8 Talks

Time	Chair	Speaker
8:30-8:45	Shixin Xu	Open session
8:45-9:45	Lei Zhang	Dinh Tien Cuong Random walks in the general linear group
9:45-10:30		Weiwei Wu Symplectomorphism groups of rational surfaces
10:30-10:45	Break	Break
10:45-11:30	Weiwei Wu	Xinliang An Anisotropic Dynamical Horizons Arising in Gravitational Collapse
11:30-12:15		Xiaoqian Xu Suppression of explosion by mixing
12:15-13:30	Break & Lunch	Break & Lunch
13:30-14:30	Xiaoqian Xu	Weixiao Shen On the Hausdorff dimension of the graph of a Weierstrass-type function
14:30-15:15		Konstantinos Efstathiou Singular Lagrangian fibrations and integrable Hamiltonian systems
15:15-15:30	Break	Break
15:30-16:15	Konstantinos Efstathiou	Tengren Zhang Cusped Hitchin representations and Anosov representations for geometrically finite Fuchsian groups
16:15-17:00		Zhanqiang Bai Lusztig's a-functions for classical Weyl groups
17:00-20:00	Break & Dinner	Break & Dinner

Friday 7th Jan. Theme: Applied Math. 8 Talks

Time	Chair	Speaker
8:45-9:45	Jianfeng Zhang	Shige Peng Nonlinear Path-Dependent PDEs and Nonlinear Expectation
9:45-10:30		Jinniao Qiu Viscosity Solutions of Stochastic Hamilton-Jacobi-Bellman Equations
10:30-10:45	Break	Break
10:45-11:45	Chenchen Mou	Jianfeng Zhang Set values of non-zero sum games and mean field game
11:45-12:30		Zhou Zhou A Time-Inconsistent Dynkin Game
12:30-13:45	Break & Lunch	Break & Lunch
13:45-14:30	Chao Deng	Xiaolu Tan A principal-agent problem with exit contract
14:30-15:15		Dangxin Chen Does the leverage effect affect the return distribution?
15:15-15:30	Break	Break
15:30-16:15	Jing Zhang	Cyril Benezet TBA
16:15-17:00		Simone Scotti TBA
17:00-20:00	Break & Dinner	Break& Dinner

Saturday 8th Jan. Theme: Applied Math. 8 Talks

Time	Chair	Speaker
8:45-9:45	Jingrun Chen	Zuowei Shen Deep Approximation via Deep Learning
9:45-10:30		Haizhao Yang Generalization Analysis of Deep-Learning-based PDE Solvers
10:30-10:45	Break	Break
10:45-11:30	Haizhao Yang	Jingrun Chen Understanding Loss Landscapes of Neural Network Models in Solving Partial Differential Equations
11:30-12:15		Dongmian Zou Anomaly detection via robust autoencoders
12:15-13:30	Break & Lunch	Break & Lunch
13:30-14:30	Chao Zhou	Defeng Sun Exploring the Second-order Solution Sparsity in Statistical Optimization Problems
14:30-15:15		Juan Li On the near-viability property of controlled mean-field flows
15:15-15:30	Break	Break
15:30-16:15	Juan Li	Xudong Li Non-convex Factorization and Manifold Formulations in Low-rank Matrix Optimization
16:15-17:00		Xianjin Yang Numerical methods for Mean field Games based on Gaussian Processes and Fourier Features
17:00-20:00	Break & Dinner	Break & Dinner

Sunday 9th Jan. Theme: Applied Math. 8 Talks

Time	Chair	Speaker
8:45-9:45	Zhen Zhang	Guowei Wei How Math and AI are revolutionizing biosciences
9:45-10:30		Kelin Xia Topological data analysis based machine learning for drug design
10:30-10:45	Break	Break
10:45-11:30	Kelin Xia	Yongqiang Cai Polymeric Bilayer Interfaces and Their Elastic Properties
11:30-12:15		Cong Qin Asymptotic analysis of long-term investment with two illiquid and correlated assets
12:15-13:30	Break & Lunch	Break & Lunch
13:30-14:30	Xiaofei Zhao	Weiying Ren Modelling moving contact lines on elastic membrane
14:30-15:15		Zhen Zhang Effective boundary conditions for dynamic contact angle hysteresis
15:15-15:30	Break	Break
15:30-16:15	Shixin Xu	Xiaofei Zhao Low-regularity integrators for KdV-type equations
16:15-17:00		Wei Jiang Sharp-Interface Approaches for Simulating Solid-State Dewetting Problems
17:00-20:00	Break & Dinner	Break & Dinner