THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

中国科学院数学与系统科学研究院
Academy of Mathematics & Systems Science, CAS

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

CAS AMSS-PolyU Joint Laboratory of Applied Mathematics Workshop 2022
December 22-23

This workshop is organized by CAS AMSS-PolyU Joint Laboratory of Applied Mathematics and supported by AMSS, PolyU, AMA and CAS-Croucher Funding Scheme for Joint Laboratories.

Mode of delivery	:	**Online via Zoom**
Meeting link	:	**https://polyu.hk/Jantp**
Meeting ID | Passcode	:	**942 5395 7435 | cas2022**
Webpage	:	**www.polyu.edu.hk/ama/news-and-events/jlab-ws-2022/**

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Date/ Time	Speakers / Chairs	Titles
22 December 2022 (Thursday)		
Opening	Defeng Sun (PolyU)	
9:00am - 9:15am	Ya-xiang Yuan (AMSS) Xiaojun Chen (PolyU) Group Photo	
Session 1: Differential Equations	Zhonghua Qiao (PolyU)	
9:15am - 10:00am	Fanghua Lin (New York University)	Liquid Crystal Droplets: Observations, Numerics, Models and Analysis
	Break	
10:15am - 11:00am	Ping Zhang (AMSS)	Gevrey Solutions of Quasi-Linear Hyperbolic Hydrostatic Navier-Stokes System
11:00am - 11:45am	Tong Yang (PolyU)	Analysis on Tollmien-Schlichting Waves in MHD and Compressible Fluid
Session 2: Mathematical Finance	Zhan Shi (AMSS)	
2:30pm - 3:15pm	Min Dai (PolyU)	Strategic Investment under Uncertainty with First-and Second-Mover Advantages
3:15pm - 4:00pm	Yongsheng Song (AMSS)	The Central Limit Theorem and the Law of Large Numbers under Sublinear Expectations Break
	Break	
5:00pm - 5:45pm (23 December)	Nizar Touzi (Ecole Polytechique)	Mean Field Game of Mutual Holding and Systemic Risk
23 December 2022 (Friday)		
Session 3: Statistics	Xingqiu Zhao (PolyU)	
9:15am - 10:00am	Tengyuan Liang (University of Chicago)	Universal Prediction Band and Variance Interpolation via Semi-Definite Programming
	Break	
10:15am - 11:00am	Jian Huang (PolyU)	Conditional Deep Generative Learning
11:00am - 11:45am	Xinyu Zhang (AMSS)	Optimal Parameter-Transfer Learning by Semiparametric Model Averaging
Session 4: Optimization	Yu-hong Dai (AMSS)	
2:30pm - 3:15pm	Xin Liu (AMSS)	Optimization Models and Approaches for Strictly Correlated Electrons
3:15pm - 4:00pm	Houduo Qi (PolyU)	Euclidean Distance Matrix Optimization and Its Application to Portfolio Theory
	Break	
4:15pm - 5:00pm	Daniel Kuhn (Ecole Polytechique Federale de Lausanne)	A General Framework for Optimal Data-Driven Optimization

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• AMSS (Academy of Mathematics and Systems Science) • AMA (Department of Applied Mathematics, PolyU)