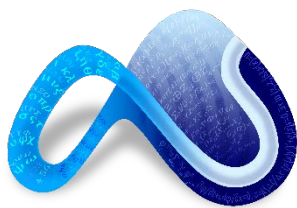


The Taiwan–Hong Kong Joint Conference on Applied Mathematics and Related Topics 2025

2025 臺港應用數學及相關問題研討會



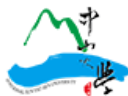
Math, CUHK

National Sun Yat-sen University

台灣·高雄·中山大學

Kaohsiung, Taiwan.

May 23-26, 2025



國立中山大學 National Sun Yat-sen University
Department of Applied Mathematics 應用數學系



Math, HKBU

Organizers: 中山大學: 黃毅青 (WONG Ngai-Ching)

中文大學: 邵慰慈 (SHIU Wai Chee), 麥偉樑 (MAK Wai Leung, Hugo)

浸會大學: 林其鋒 (LAM Kei Fong, Andrew), 蔡沛樺 (CHOI Pui Wah)

This is the third event in this series, following those hosted by National Cheng Kung University in 2018 and National Chung Cheng University in 2024. Our aim is to provide an opportunity for mathematicians from Taiwan and Hong Kong to share research ideas and foster collaboration. Students are especially encouraged to participate as speakers.

Plenary speakers: DON Wai Sun (曾維新 HKBU), HON Yiu Chung Benny (韓耀宗 CUHK), LI Chi-Kwong (李志光 College of May and William, USA), SHEN Chun-Yen (沈俊嚴 NTU), SHIU Wai Chee (邵慰慈 CUHK)

Confirmed speakers:

Hong Kong: (CUHK) CHOY, Zi Him Jason (蔡子謙), CHUNG Tse Shun Eric (鍾子信), MAK Hugo Wai Leung (麥偉樑), TIAMIYU, Abd'gafar Tunde, WONG Chak Fu Jeff (黃澤富); (HKBU) CHAN Ting Fung (陳廷峰), HON Yu Sing Sean (韓汝星), LAM Kei Fong Andrew (林其鋒), LIU Hao (劉皓), MENG Xiao (孟瀟), PAN Junjun (潘琚琚), SU Yichen (蘇怡琛), WANG Xuanwu (王玄武), WU Tian (吳天), YANG Jingyu (楊晶宇), ZHANG Hao (張昊); (HKU) TSE Alvin Cheuk Hin (謝卓軒)

Taiwan: (NSYSU) CHEN Chih-Wei (陳志偉), CHUNG Szu-Chi (鍾思齊), HSU Po-Han (許柏翰), LI Tsung-Lin (李宗鎡), LIN C.-H. Jephian (林晉宏), TAN Chee Han (陳志漢), SHIH Jia-Han (施嘉翰); (Others) CHANG Kai Chin (張凱晴, NCCU), HO Pak-Tung (何柏通, TKU), KE Wen-Fong (柯文峰 NCKU), LAM Ching-Hung (林正洪, AS), LAM, Wai-Kit (林偉傑, NTU), LI Jhih-Huang (李志煌, NTU), HSU Hsiang-Ling (許湘伶 NKU), HUANG Chih-Chiang (黃志強, NCCU), Huang Hao-Wei (黃皓瑋, NTHU), Amir Noorizadegan (NTU), TSAI Ming-Cheng (蔡明誠, NTUT), WANG Ya-Shu (王雅書, NCHU)

Sponsors: The Mathematical Society, Mathematics Research Promotion Center, Chinese University of Hong Kong, Hong Kong Baptist University, and National Sun Yat-sen University

The Taiwan–Hong Kong Joint Conference on Applied Mathematics and Related Topics 2025

“2025 臺港應用數學及相關問題研討會” 議程

台灣·高雄·國立中山大學

2025.05.23-25

(4/1 暫定議程)

	5/23 (星期五)	5/24 (星期六)	5/25 (星期日)
8:50-9:30 am		李志光	沈俊嚴
9:30-10:00		Noorizadegan/林正洪	許柏翰/孟 瀟
10:00-10:30		施嘉翰/王雅書	謝卓軒/鍾思齊
10:30-10:45	休 息		
10:45-11:15		蘇怡琛/黃皓璋	陳志偉/韓汝星
11:15-11:45		黃澤富/蔡明誠	麥偉樑/李志煌
11:45-12:15		劉 皓/柯文峰	何柏通/張凱晴
12:15-13:50	午 餐		
13:50-14:30	報到、註冊 及歡迎茶會	韓耀宗	曾維新
14:30-15:00		王玄武/林其鋒	
15:00-15:15	休 息		
15:15-15:45	開 幕 式	許湘伶/潘琄琄	
15:45-16:15	邵慰慈	林偉傑/黃志強	
16:15-16:30	休 息		
16:30-17:00	李宗銓	陳志漢/陳廷峰	
17:00-17:30	鍾子信	吳 天/張 昊	
17:30-18:00	林晉宏	楊晶宇/蔡子謙	
18:30-		晚 宴	

註 1：平行場次，分別在兩個演講室進行。

註 2：拍團體照時間為 5/24, 12:20。

註 3：5/25 星期日下午，自費參訪旗津燈塔、海灘、海鮮晚餐。

2025.05.23 (星期五)

12:15-13:50 午 餐

13:50-15:20 報到、註冊及歡迎茶會

15:20-15:35 開 幕 式

15:35-16:15 大會演講 邵慰慈: Face-magic Labelings of Some Polygonal Graphs

16:15-16:30 休 息

16:30-17:00 李宗鏐: Computing the canonical decomposition of unbalanced tensors by homotopy method

17:00-17:30 鍾子信: Learning a generalized multiscale prolongation operator

17:30-18:00 林晉宏: Spectral Clustering: Theory and Practice

2025.05.24 (星期六)

8:50-9:30 大會演講 李志光: Linear Preserver Problems in Quantum Information Science

9:30-10:00 Amir Noorizadegan: From Meshless Methods to Deep Learning: A Conditioning Perspective

林正洪: Automorphism groups of vertex operator algebras

10:00-10:30 施嘉翰: Measuring multivariate regression association via spatial signs

王雅書: Linear maps preserving disjoint idempotents

10:30-10:45 休 息

10:45-11:15 蘇怡琛: Greedy Trial Subspace Selection in Meshfree Time-Stepping Scheme with Applications in Coupled Bulk-Surface Pattern Formations

黃皓璋: TBA

10:30-10:45 休 息

11:15-11:45 黃澤富: Analyzing a Snake and Ladder Game with Markov Chains

蔡明誠: Multiplicative trace and spectrum preservers on nonnegative and stochastic matrices

11:45-12:15 劉 皓: Operator Learning and Neural Scaling Laws

柯文峰: Maximum block intersection numbers for finite field generated 2-designs

12:20 團 體 照

12:25-13:50 午 餐

13:50-14:30 大會演講: 韓耀宗 A Novel Highway Network for Surface Reconstruction in Computer Graphics

- 14:30-15:00 王玄武：Smoothing Methods to Estimate Varying-Coefficient Additive Models
林其鋒：Phase field models for two phase micropolar fluids with mixtures
- 15:00-15:15 休 息
- 15:15-15:45 許湘伶：Optimal designs with multiple correlated responses for experiments
潘琺琺：Constrained Quaternion Matrix Factorization with Applications on Image Processing
- 15:45-16:15 林偉傑：Correlation decay and limit theorems in disordered monomer-dimer models
黃志強：Traveling Waves of Reaction-Diffusion Equation
- 16:15-16:30 休 息
- 16:30-17:00 陳志漢：Steklov eigenvalues of nearly hyperspherical domains
陳廷峰：Analysis of a phase field topology optimization problem with Cosserat continuum and thermal dissipation
- 17:00-17:30 吳 天：Exploring the Cellular Mechanisms of NAFLD Progression in Mouse Liver
張 昊：Neyman-Pearson Classifier with Successive Convex Approximation for Imbalanced Data
- 17:30-18:00 楊晶宇：A Finite Element/Operator-Splitting Method for the Pucci's Equation
蔡子謙：Inverse problem of determining nonlinear coefficients arising in evolution equations
- 18:30 晚 宴

2025.05.25 (星期日)

- 8:50-9:30 大會演講 沈俊嚴：Hausdorff dimension estimates for polynomial images
- 9:30-10:00 許柏翰：Log-correlation for shifted Dirichlet L -functions
孟 瀟：Analysis and Optimal Control of a Diffusive SIR Model on Metric Graph and Sub-domains
- 10:00-10:30 謝卓軒：Quantised representations of integers as sum of four polygonal numbers
鍾思齊：A Framework for Cryo-EM Image Segmentation with Conditional Random Field
- 10:30-10:45 休 息
- 10:45-11:15 陳志偉：Convergence of Hessian estimator from random samples on a manifold with boundary
韓汝星：Optimal Preconditioners for Nonsymmetric Multilevel Toeplitz

Systems with Application to Solving Non-local Evolutionary PDEs

11:15-11:45 麥偉樑： Application of Remote Sensing, Numerical Modeling and Data Analytic Approaches in Pollutant Retrieval and Monitoring

李志煌： Periodic PushASEP model

11:45-12:15 何柏通： Q-curvature

張凱晴： Data Fitting for Mathematical Biology

12:15-13:50 午 餐

13:50-14:30 大會演講：曾維新 Fifth-Order Bound-, Positivity-, and Equilibrium-Preserving Affine-Invariant AWENO Scheme for Two-Medium γ -based Model of Stiffened Gas