The 4th Australia-China-Japan-Singapore-US Index Theory Conference–Analysis and Geometry on Manifolds

(04 Aug 2025–08 Aug 2025)

ORGANIZING COMMITTEE

Co-Chairs

Han Fei
National University of Singapore

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Venue

IMS Executive Seminar Room
Block S17, Level 3
10 Lower Kent Ridge Rd Singapore 119076

For more information: https://ims.nus.edu.sg/events/acjsu_indextheory

The 4th Australia-China-Japan-Singapore-US Index Theory Conference–Analysis and Geometry on Manifolds

(04 Aug 2025–08 Aug 2025)

Monday, 04 August 2025

Time	Title	Speaker
0900–0930	Registration	
0930–1015	Singular Metrics of Nonnegative Ccalar Curvature and RCD	Xianzhe Dai *University of California, Santa Barbara, USA*
1015–1030	Coffee Break	
1030–1115	Llarull's Theorem on Odd Dimensional Manifolds and Spectral Flow	Guangxiang Su *Nankai University, China*
1115–1130	Coffee Break	
1130–1215	Degenerations of Algebraic Manifolds and Analytic Torsions of Nakano Semi-positive Vector Bundles	Ken-Ichi Yoshikawa *Kyoto University, Japan*
1215–1430	Lunch Break	
1430–1515	Amenability vs Nonamenability in Covering Geometry	Tsuyoshi Kato *Kyoto University, Japan*
1515–1530	Coffee Break	
1530–1615	Small Scale Index Theorem, Scalar Curvature and Gromov's Simplicial Norm	Qiaochu Ma *Texas A&M University, USA*
1615–1630	Coffee Break	
1630–1715	Algebraic Topology of 24 Dimensional String Manifolds	Ruizhi Huang *Chinese Academy of Sciences, China*

Tuesday, 05 August 2025

Time	Title	Speaker
0915–0930	Registration	
0930–1015	Generalized Positive Scalar Curvature on Spin^c Manifolds	Jonathan Rosenberg *University of Maryland, USA*
1015–1030	Coffee Break	
1030–1115	Lie Groupoid Structures on Donaldson Moduli Spaces	Bryan Bai-Ling Wang *The Australian National University, Australia*
1115–1130	Coffee Break	

Tuesday, 05 August 2025

Time	Title	Speaker
1130–1215	Automorphic Forms and the Sup Norm Problem : A Survey	Jyotirmoy Sengupta *India Association for the Cultivation of Science, India*
1215–1430	Lunch Break	
1430–1515	Dualities among W-algebras with N=2 Supersymmetry	Andrew Linshaw *University of Denver, USA*
1515–1530	Coffee Break	
1530–1615	Macroscopic Index and Fractionally Quantized Traces	Guo Chuan Thiang *BICMR, Peking University, China*
1615–1630	Coffee Break	
1630–1715	TBC	Qin Li *Southern University of Science and Technology, China*

Wednesday, 06 August 2025

Time	Title	Speaker
0915–0930	Registration	
0930–1015	On a Family of Non-formal Star Products of Entire Functions	Siye Wu *National Tsing Hua University, Hsinchu*
1015–1030	Group Photo & Short Break	
1030–1115	Index Formula for Quarter-plane Toeplitz Operators via Extended Symbols	Shin Hayashi *Aoyama Gakuin University, Japan*
1115–1130	Coffee Break	
1130–1215	Reflections on Mathai's Career	Peter Bouwknegt *The Australian National University, Australia*

Thursday, 07 August 2025

Time	Title	Speaker
0915–0930	Registration	
0930–1015	Superconnection and Orbifold Chern Character	Xiang Tang *Washington University in St. Louis, USA*
1015–1030	Coffee Break	

Thursday, 07 August 2025		
Time	**Title**	**Speaker**
1030–1115	The Large-Time Behavior of the Heat Kernel on Symmetric Spaces and Bismut's Formula	Yanli Song *Washington University in St. Louis, USA*
1115–1130	Coffee Break	
1130–1215	The Equivariant Fried Conjecture for Suspension Flow	Peter Hochs *Radboud University, Netherlands*
1215–1430	Lunch Break	
1430–1515	Noncommutative Geometry of the Satake Compactification	Nigel Higson *The Pennsylvania State University, USA*
1515–1530	Coffee Break	
1530–1615	Covering Complexity, Scalar Curvature, and Quantitative Index Theory	Hao Guo *Tsinghua University, China*
1615–1630	Coffee Break	
1630–1715	Euler Characteristic, Equivariant K-homology and Higher Kazhdan Projections	Hang Wang *East China Normal University, China*
1830	*Conference Dinner (By invitation only)* The Scholar Restaurant	

Friday, 08 August 2025		
Time	**Title**	**Speaker**
0915–0930	Registration	
0930–1015	Tensor Networks in Condensed Matter Physics and Subfactors	Yasuyuki Kawahigashi *The University of Tokyo, Japan*
1015–1030	Coffee Break	
1030–1115	Stable Homotopy Theory of Invertible Quantum Spin Systems	Yosuke Kubota *Kyoto University, Japan*
1115–1130	Coffee Break	
1130–1215	Quasi-representations and a K-theoretic Invariant	Jianchao Wu *Fudan University, China*
1215–1430	Lunch Break	
1430–1515	Nonpositively Curved and Infinite Dimensional Spaces and the Novikov Conjecture	Guoliang Yu *Texas A&M University, USA*
1515–1530	Coffee Break	

Friday, 08 August 2025		
Time	**Title**	**Speaker**
1530–1615	Coarse Baum--Connes Conjecture for l^q Coarsely Embeddable Spaces	Jinmin Wang *Chinese Academy of Sciences, China*
1615–1630	Coffee Break	
1630–1715	On Gromov's Dihedral Rigidity Conjecture of Scalar Curvature	Zhizhang Xie *Texas A&M University, USA*

This schedule is accurate as of 25 Jul 2025 and is subjected to changes.