

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

(04 Aug 2025–08 Aug 2025)



ORGANIZING COMMITTEE

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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

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

Tuesday, 05 August 2025		
Time	Title	Speaker
0915–0930	Registration	
0930–1015	Generalized Positive Scalar Curvature on Spin^c Manifolds	Jonathan Rosenberg <i>University of Maryland, USA</i>
1015–1030	Coffee Break	
1030–1115	Lie Groupoid Structures on Donaldson Moduli Spaces	Bryan Bai-Ling Wang <i>The Australian National University, Australia</i>
1115–1130	Coffee Break	

Tuesday, 05 August 2025		
Time	Title	Speaker
1130–1215	Automorphic Forms and the Sup Norm Problem : A Survey	Jyotirmoy Sengupta <i>India Association for the Cultivation of Science, India</i>
1215–1430	Lunch Break	
1430–1515	Dualities among W-algebras with N=2 Supersymmetry	Andrew Linshaw <i>University of Denver, USA</i>
1515–1530	Coffee Break	
1530–1615	Macroscopic Index and Fractionally Quantized Traces	Guo Chuan Thiang <i>BICMR, Peking University, China</i>
1615–1630	Coffee Break	
1630–1715	TBC	Qin Li <i>Southern University of Science and Technology, China</i>
Wednesday, 06 August 2025		
Time	Title	Speaker
0915–0930	Registration	
0930–1015	BRST Current and the Noether Theorems	Siye Wu <i>National Tsing Hua University, Hsinchu</i>
1015–1030	Group Photo & Short Break	
1030–1115	Index Formula for Quarter-plane Toeplitz Operators via Extended Symbols	Shin Hayashi <i>Aoyama Gakuin University, Japan</i>
1115–1130	Coffee Break	
1130–1215	Reflections on Mathai's Career	Peter Bouwknegt <i>The Australian National University, Australia</i>
Thursday, 07 August 2025		
Time	Title	Speaker
0915–0930	Registration	
0930–1015	Superconnection and Orbifold Chern Character	Xiang Tang <i>Washington University in St. Louis, USA</i>
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 <i>Washington University in St. Louis, USA</i>
1115–1130	Coffee Break	
1130–1215	The Equivariant Fried Conjecture for Suspension Flow	Peter Hochs <i>Radboud University, Netherlands</i>
1215–1430	Lunch Break	
1430–1515	Noncommutative Geometry of the Satake Compactification	Nigel Higson <i>The Pennsylvania State University, USA</i>
1515–1530	Coffee Break	
1530–1615	Covering Complexity, Scalar Curvature, and Quantitative Index Theory	Hao Guo <i>Tsinghua University, China</i>
1615–1630	Coffee Break	
1630–1715	Euler Characteristic, Equivariant K-homology and Higher Kazhdan Projections	Hang Wang <i>East China Normal University, China</i>
1830	<i>Conference Dinner (By invitation only)</i> 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 <i>The University of Tokyo, Japan</i>
1015–1030	Coffee Break	
1030–1115	Stable Homotopy Theory of Invertible Quantum Spin Systems	Yosuke Kubota <i>Kyoto University, Japan</i>
1115–1130	Coffee Break	
1130–1215	Quasi-representations and a K-theoretic Invariant	Jianchao Wu <i>Fudan University, China</i>
1215–1400	Lunch Break	
1400–1445	Nonpositively Curved and Infinite Dimensional Spaces and the Novikov Conjecture	Guoliang Yu <i>Texas A&M University, USA</i>
1445–1500	Coffee Break	
1500–1545	On Gromov’s Dihedral Rigidity Conjecture of Scalar Curvature	Zhizhang Xie <i>Texas A&M University, USA</i>

Friday, 08 August 2025		
Time	Title	Speaker
1545–1600	Coffee Break	
1600–1645	Dihedral Rigidity and Index Theory on Manifolds with Polyhedral Boundary	Jinmin Wang <i>Chinese Academy of Sciences, China</i>

This schedule is accurate as of 30 Jul 2025 and is subjected to changes.