

Index Theory and Complex Geometry Part 2 (29 Apr–3 May 2024)



ORGANIZING COMMITTEE

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Venue

IMS Auditorium
Institute for Mathematical Sciences
3 Prince George's Park Singapore 118402

Index Theory and Complex Geometry Part 2
Section B: Recent progresses in Index Theory
6–10 May 2024

Monday, 06 May 2024		
Time	Title	Speaker
0900–0930	Registration	
Session Chair: Weiping Zhang (Nankai University, China)		
0930–1030	<i>IMS Distinguished Lecture Series</i> Hypoelliptic Laplacian and the trace formula	Jean-Michel Bismut Université Paris-Saclay, France
1030–1100	Break	
1100–1200	Classifying Compact G_2 -Manifolds	Sebastian Goette Universität Freiburg, Germany
1200–1400	Lunch Break	
Session Chair: Xianzhe Dai (University of California, Santa Barbara, USA)		
1400–1500	Degenerations of Riemann surfaces and small eigenvalues of Laplacian	Kenichi Yoshikawa Kyoto University, Japan
1500–1530	Break	
1530–1630	Recent progress on Bismut-Cheeger eta forms	Bo Liu East China Normal University, China
Tuesday, 07 May 2024		
Time	Title	Speaker
0915–0930	Registration	
Session Chair: Xiaonan Ma (Institut de Mathématiques de Jussieu-Paris Rive Gauche, France)		
0930–1030	Logarithmic vanishing theorems on compact Kahler manifolds	Kefeng Liu University of California, Los Angeles, USA
1030–1100	Break	
1100–1200	Classical Aspects of Higher-Form Symmetry	Siye Wu National Tsing Hua University, Hsinchu
1200–1400	Lunch Break	
Session Chair: Kenichi Yoshikawa (Kyoto University, Japan)		
1400–1500	Positive mass theorem and positive scalar curvature for singular metrics	Xianzhe Dai University of California, Santa Barbara, USA
1500–1530	Break	

Tuesday, 07 May 2024		
Time	Title	Speaker
1530–1630	A glimpse into Weiping Zhang's mathematical work	Xiaonan Ma Institut de Mathématiques de Jussieu-Paris Rive Gauche, France
1555–1620	Break	
1800	Workshop Dinner The Scholar Restaurant	
Wednesday, 08 May 2024		
0845–0900	Registration	
Session Chair: Paul-Emile Paradan (Université de Montpellier, France)		
0900–1000	An index theorem for manifolds with polyhedral boundary and scalar curvature rigidity	Guoliang Yu Texas A&M University, USA
1000–1010	Quick Break	
1010–1110	Analytic transfer in K-homology for Witt stratified spaces	Paolo Piazza Sapienza Università di Roma, Italy
1110–1120	Quick Break	
1120–1220	Symplectic Morse Theory and Witten Deformation	Xiang Tang Washington University, USA
1220–1400	Lunch Reception at IMS	
Thursday, 09 May 2024		
Time	Title	Speaker
0915–0930	Registration	
Session Chair: Kefeng Liu (University of California, Los Angeles, USA)		
0930–1030	A deformed Hermitian Yang-Mills flow	Jixiang Fu Fudan University, China
1030–1100	Break	
1100–1200	A higher order mass	Guofang Wang Universität Freiburg, Germany
1200–1400	Lunch Break	
Session Chair: Sebastian Goette (Universität Freiburg, Germany)		
1400–1500	Orthogonal almost complex structure and its Nijenhuis tensor	Zizhou Tang Nankai University, China
1500–1530	Break	
1530–1630	Critical points of functionals and their geometry	Qing-Ming Cheng Fukuoka University, Japan

Friday, 10 May 2024		
Time	Title	Speaker
0845–0900	Registration	
Session Chair: Paolo Piazza (Sapienza Università di Roma, Italy)		
0900–1000	Duflo-Kontsevich type theorem for dg manifolds	Ping Xu The Pennsylvania State University, USA
1000–1030	Break	
1030–1130	Multiplicities of discrete series with respect to a symmetric pair and index theory	Paul-Emile Paradan Université de Montpellier, France

This schedule is accurate as of 10 May 2024 and is subjected to changes.