

The First Symposium of Geometry and Statistics in Beijing (China)

Satellite conference of the ICBS

Yanqi Lake Beijing Institute of Mathematical Sciences and Applications, Yau Center at Tsinghua University (July 29 - 31, 2023)

Offline Venue: A3-1a 205, Lecture room 2 of the Basic Science Conference

For more information, [click here](#).

Saturday, July 29, 2023		
Time (GMT + 8)	Title	Speaker
8:30-8:45	Check in at BIMSA	
8:45-9:00	Welcome Remarks	Zhigang Yao/Rongling Wu
Morning Session Chair: Zhigang Yao		
9:00-10:00	The wald space for phylogenetic trees	Stephan Huckemann (Göttingen)
10:00-10:10	Break	
10:10-11:10	AI for mathematics	Yang-Hui He (London Institute for Mathematical Sciences)
11:10-11:20	Break	
11:20-12:20	Random fixed boundary flows: a twin sister of principal flow?	Zhigang Yao (NUS/ Harvard CMSA)
12:20-13:50	12:20 pm Group Photo followed by Lunch	
Afternoon Session Chair: Ezra Miller		
13:50-14:50	Grand Biological Universe: The geometric construction of genome space and its applications	Stephen Yau (Tsinghua Univeristy)
14:50-15:00	Break	
15:00-16:00	Cross-Validated Estimation for Penalised Skew Normal and Beyond	Jian Zhang (U of Kent)
16:00-16:10	Break	
16:10-17:10	New Statistical Learning Method for Independent Component Analysis with Applications to Brain EEG	Chunming Zhang (UW Madison)

*: Remote Talk

Sunday, July 30, 2023		
Time (GMT + 8)	Title	Speaker
	Morning Session Chair: Zhigang Yao	
9:00-10:00	Geometry of measures on stratified spaces	Ezra Miller (Duke University)
10:00-10:10	Break	
10:10-11:10	Bayesian inference of genome-phenotype associations using phylogenies and genome sequence data	Scott Edwards (Harvard University)
11:10-11:20	Break	
11:20-12:20	Geometry enhanced deep learning prediction of multibody protein interaction complex structures	Xinqi Gong (Renming U)
12:20-13:50	Lunch	
	Afternoon Session Chair: Stephan Huckemann	
13:50-14:50	Diffusions means in geometric statistics	Stefan Sommer (U of Copenhagen)
14:50-15:00	Break	
15:00-16:00	On the use of the beta-VAE for learning probabilistic generative models	*Yongdai Kim (SNU)
16:00-16:10	Break	
16:10-17:10	A Monte Carlo Policy Gradient Method with Local Search for Binary Optimization	Zaiwen Wen (Peking University)

Monday, July 31, 2023		
Time (GMT + 8)	Title	Speaker
	Morning Session Chair: Zhigang Yao	
9:00-10:00	Frobenius algebra structure of statistical manifold	Hao Xu (Zhejiang University) Kefeng Liu (UCLA)
10:00-10:10	Break	
10:10-11:10	Optimal transport problem and random matrices theory	Xiangdong Li (AMSS/CAS)
11:10-11:20	Break	
11:20-12:20	TBA	Ke Deng (Tsinghua University)
12:20-13:50	Lunch	
	Afternoon Session Chair: Ezra Miller	
13:50-14:50	Statistical Challenges in Shape Prediction of Biomolecules	Stephan Huckemann (Göttingen)
14:50-15:00	Break	
15:00-16:00	Estimating Maximal Symmetries of Regression Functions	Louis Christie (Cambridge)
16:00-16:10	Closing Remarks	Zhigang Yao

*: Remote Talk