

IMS-NTU joint workshop on Applied Geometry for Data Sciences Part I
(30 Sep 2024–04 Oct 2024)

List of Speakers and Talk Titles

Name & Affiliation	Talk Title
Pierre Alliez <i>Inria Sophia-Antipolis, France</i>	Quadric Error Metrics for Variational Reconstruction and Neural Mesh Representation
Chandrajit Bajaj <i>The University of Texas at Austin, USA</i>	DPO: Differential reinforcement learning with application to optimal geometric and topological configuration search
Xavier Bresson <i>National University of Singapore, Singapore</i>	Graph Transformers and Developments
Cheng Cheng <i>Sun Yat-sen University, China</i>	Graph Fourier Transforms on Directed Graphs
Chuan-Shen Hu <i>Nanyang Technological University, Singapore</i>	Quotient Complex (QC)-based Learning Models for Material Data Analysis
Jian Jiang <i>Wuhan Textile University, China</i>	Harnessing Topology and AI for Virtual Screening
Parvaneh Joharinad <i>Universität Leipzig, Germany</i>	Locally distorted metric spaces and their representations
Ye Ke <i>Academy of Mathematics and Systems Science, CAS, China</i>	Kempe's Universality Theorem and rational curves on real classical groups
Stephan Klaus <i>Mathematisches Forschungsinstitut Oberwolfach, Germany</i>	A topological perspective on the space of all samplings from a manifold
Christian Kuehn <i>Technische Universität München, Germany</i>	Dynamics on Neural Networks
Ming Li <i>Zhejiang Normal University, China</i>	From Heterophilous Graph Learning to Heterophilous Hypergraph Learning: Exploring New Frontiers
Pietro Lio <i>University of Cambridge, UK</i>	Actionable and responsible graph representation learning in medicine
Lin Liu <i>Shanghai Jiaotong University, China</i>	Statistical Inference of GLMs and Causal Effects in Observational Studies under Proportional Asymptotics

Name & Affiliation	Talk Title
Steve Marron <i>University of North Carolina at Chapel Hill, USA</i>	Object Oriented Data Analysis
Konrad Polthier <i>Freie Universität Berlin, Germany</i>	Vibrations of Geometric Shapes
Areejit Samal <i>The Institute of Mathematical Sciences, Chennai, India</i>	Geometry-inspired measures with diverse applications in network science
Emil Saucan <i>Braude College of Engineering Karmiel, Israel</i>	Discrete Geometric Invariants for Textures Classification
Sho Sonoda <i>RIKEN, Japan</i>	Deep Ridgelet Transform: Harmonic Analysis for Deep Neural Network
Xian Wei <i>East China Normal University, China</i>	Geometric Transformer Learning for Point Clouds
Tailin Wu <i>Westlake University, China</i>	Learning adaptive and compositional models for multi-resolution simulation and inverse design
Rex Ying <i>Yale University, USA</i>	Building Foundation Models via Hyperbolic Representation Learning
Dingxuan Zhou <i>The University of Sydney, Australia</i>	Mathematical theory of structured deep neural networks
Dongmian Zou <i>Duke Kunshan University, China</i>	Exploring Effective Representations Using Hyperbolic Neural Networks
Kun Zhan <i>Lanzhou University, China</i>	Graph neural estimators
Bohang Zhang <i>Peking University, China</i>	A Quantitative Framework for Graph Neural Network Expressiveness via Graph Homomorphism
Xiaosheng Zhuang <i>City University of Hong Kong, Hong Kong S.A.R</i>	Permutation Equivariant Graph Framelets for Heterophilous Graph Learning

This list is accurate as of 01/Oct/2024 and is subjected to changes.