

## Interactions of Statistics and Geometry (ISAG) II (14–24 Oct 2024)

### List of Speakers and Talks' Title and Slides

Name & Affiliation	Talk Title
John Aston University of Cambridge, UK	Using Geometry in Non-Parametric Statistics
Benjamin Eltzner Max Planck Institute for Mathematics in the Sciences, Germany	Tutorial Smeariness: Central Limit Theorem and Examples ( <a href="#">Slides</a> )  Testing for Uniqueness of Estimators
Charles Fefferman Princeton University, USA	Joint Distinguished Talk with Statistics and Math Fitting Smooth Functions to Data
Fernando Galaz-García Durham University, UK	Metric geometry of spaces of persistence diagrams
Stephan Huckemann University of Göttingen, Germany	Tutorial I: Motivation and Generalized Fréchet Means II: “Classical” Fréchet Means III: Some Asymptotics for Generalized Fréchet Means IV: Some Statistics on Stratified Spaces: Manifold Stability, Stickiness and Smeariness ( <a href="#">Slides</a> )
Sungkyu Jung Seoul National University, Korea	Huber means on Riemannian manifolds
Huiling Le The University of Nottingham, UK	The influence of the cut locus on the CLT for Frechet means
Steve Marron University of North Carolina, USA	Backwards PCA for Compositional Data
Jonathan Mattingly Duke University, USA	The random tangent field and central limit theorems on stratified spaces
Marina Meila University of Washington, USA	Manifold Learning, Explanations and Eigenflows
Ezra Miller Duke University, USA	Tutorial Geometric central limit theorems on singular spaces ( <a href="#">Slides1</a> ) ( <a href="#">Slides2</a> ) ( <a href="#">Slides3</a> ) ( <a href="#">Slides4</a> ) ( <a href="#">Slides5</a> )

Name & Affiliation	Talk Title
Washington Mio Florida State University, USA	Probing the Shape of Metric and Networked Data Through Observables
Sayan Mukherjee Max Planck Institute for Mathematics in the Sciences, Germany	Modeling shapes and surfaces
Susovan Pal Vrije Universiteit Brussel, Belgium	Optimal lifts and their roles in the asymptotics of inference on shapes
Xavier Pennec Université Côte d'Azur INRIA, Sophia-Antipolis, France	Advances in Geometric statistics with Flag spaces
Stephen M. Pizer University of North Carolina at Chapel Hill, USA	Object Correspondence for Statistics via Interior Geometry
Yvo Pokern University College London, UK	Inference for a Riemannian Ornstein-Uhlenbeck Process on Covariance Matrices
Armin Schwartzmann University of California, San Diego, USA	Toward a scaling-rotation geometry of symmetric positive definite matrices
Stefan Sommer Københavns Universitet, Denmark	Kunita flows, shape stochastics, and phylogenetic inference
Jiaji Su National University of Singapore, Singapore	Principal Decomposition with Nested submanifolds
Wilderich Tuschmann Karlsruher Institut für Technologie, Germany	Moduli Spaces of Metrics and locally symmetric spaces
Guowei Wei Michigan State University, USA	Topological deep learning: The past, present, and future
Jie Wu BIMSA, China	GLMY Theory and Topological Statistics
Yingying Wu University of Houston, USA	Comparison Theorems of Phylogenetic Spaces and Algebraic Fans
Jun Zhang University of Michigan Ann Arbor and SIMIS, USA	Information Geometry: An Invitation