

Interpretable Inference via Principled BNP Approaches in Biomedical Research and Beyond

(08 Jul 2024–02 Aug 2024)

List of Speakers and Talk Titles

Name & Affiliation	Talk Title
Peter Alquier <i>ESSEC Business School, Singapore</i>	PAC-Bayesian Bounds for Offline Contextual Bandits
Santiago Marin Ardila <i>The Australian National University, Australia</i>	BOB: Bayesian Optimized Bootstrap for Uncertainty Quantification in Gaussian Mixture Models
Raffaele Argiento <i>University of Bergamo, Italy</i>	Covariate-Informed Model-Based Clustering
Cecilia Balocchi <i>The University of Edinburgh, UK</i>	Improving uncertainty quantification in Bayesian cluster analysis
Rafael Medeiros Cabral <i>National University of Singapore, Singapore</i>	Scalable Bayesian Clustering for Multi-View Data: Unveiling Dependencies in High Dimensions
Federico Camerlenghi <i>Università degli Studi di Milano-Bicocca, Italy</i>	Predictive characterizations of feature allocation models: general theory and related applications
Marta Catalano <i>Luiss University, Italy</i>	Merging rate of opinions via optimal transport on random measures
Minwoo Chae <i>Pohang University of Science and Technology, S. Korea</i>	Online Bernstein-von Mises Theorem
Noirrit Kiran Chandra <i>The University of Texas at Dallas, USA</i>	Functional connectivity across the human subcortical auditory system using an autoregressive matrixGaussian copula graphical model approach with partial correlations Inferring Covariance Structure from Multiple Data Sources via Subspace Factor Analysis
Alessandro Colombi <i>University of Milano-Bicocca, Italy</i>	Discovering species richness in multiple populations
Claudia Contardi <i>University of Pavia, Italy</i>	Poisson credible intervals in Bayesian nonparametric estimation of the unseen
Claudio Del Sole <i>Università Bocconi, Italy</i>	A Random Partition Model with Dependence on Covariates Poisson credible intervals in Bayesian nonparametric estimation of the unseen

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Yunshan Duan <i>The University of Texas at Austin, USA</i>	Immune Profiling among Colorectal Cancer Subtypes using Dependent Mixture Models Spatial transcriptomics profiling of the tumor microenvironment with dependent random partitions
Edwin Fong <i>The University of Hong Kong, Hong Kong SAR</i>	Bayesian Nonparametric Inference with the Martingale Posterior
Beatrice Franzolini <i>Università Bocconi, Italy</i>	Multivariate species sampling models for partially exchangeable data and beyond
Shufei Ge <i>ShanghaiTech University, China</i>	Poisson Hyperplane Processes with Rectified Linear Units
Lorenzo Ghilotti <i>Università degli Studi di Milano, Italy</i>	Bayesian analysis of product-form feature allocation models
Subhashis Ghosal <i>North Carolina State University, USA</i>	Bayesian Inference for High-dimensional Time Series by Latent Process Modeling Immersion posterior: Giving Bayes an extra degree of freedom to meet frequentist goals under structural restrictions
María Fernanda Gil Leyva Villa <i>IIMAS-UNAM, Mexico</i>	Markov stick-breaking processes
Clara Grazian <i>University of Sydney, Australia</i>	A Bayesian Semiparametric Approach for Long Memory Analysis
Alessandra Guglieimi <i>Politecnico di Milano, Italy</i>	Bayesian clustering of high-dimensional data via latent repulsive mixtures
Michele Guindani <i>University of California, Los Angeles, USA</i>	<u>Keynote Introductory Lecture</u> Flexible Models for Complex Data: An Introduction to Bayesian Nonparametric Methods
Kapil Gupta <i>Indian Institute of Management Bangalore, India</i>	A divide-and-conquer approach for spatio-temporal analysis of large house price data from Greater London
Nhat Ho <i>The University of Texas at Austin, USA</i>	Bayesian Nonparametrics Meets Data-Driven Robust Optimization
Akira Horiguchi <i>Duke University, USA</i>	A tree perspective on stick-breaking models in covariate-dependent mixtures Sampling depth trade-off in function estimation under a two-level design
Alejandro Jara <i>Pontificia Universidad Católica de Chile, Chile</i>	Bayesian Copula Density Estimation Using Bernstein Yett-Uniform Priors

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Yuan Ji <i>The University of Chicago, USA</i>	Plaid Atoms Model with Application to Clinical Trials
Gregor Kastner <i>University of Klagenfurt, Austria</i>	Bayesian Machine Learning meets Formal Methods: An application to spatio-temporal data
Jaeyong Lee <i>Seoul National University, S. Korea</i>	Constrained Dirichlet Processes and Moment Condition Models
Antonio Lijoi <i>Università Bocconi, Italy</i>	New insights on hierarchical random measures
Li Ma <i>Duke University, USA</i>	A partial likelihood approach to a bayesian treebased density model <i>Tutorial</i> Generative modeling and nonparametric inference with trees and recursive partitions
Steven MacEachern <i>The Ohio State University, USA</i>	The posterior distribution as a computational object <i>Tutorial</i> A modeller's perspective on Bayesian Nonparametrics
Ramses Mena <i>Universidad Nacional Autónoma de México (UNAM), Mexico</i>	From multivariate Bernoulli observations to Bayesian nonparametrics: A clinical footprint application
Kerrie Mengersen <i>Queensland University of Technology, Australia</i>	<i>Tutorial</i> Bayesian nonparametrics in practice
Deyu Ming <i>University College London, UK</i>	Deep Gaussian Process Emulation for Model Networks using Stochastic Imputation
Alexander Mozdzen <i>University of Klagenfurt, Austria</i>	Non-local mixture models with repulsive weights
Peter Müller <i>The University of Texas at Austin, USA</i>	DP-SPGLM: semiparametric bayesian inference for a GLM using inhomogeneous normalized random
Long Nguyen <i>University of Michigan, USA</i>	Dendrogram of mixing measures: Hierarchical clustering and model selection using finite mixture models <i>Tutorial</i> Optimal transport based posterior contraction theory for latent structured models
Yang Ni <i>Texas A&M University, USA</i>	<i>Tutorial</i> Applications of Bayesian nonparametrics in multiomics and electronic health records

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Peter Orbanz <i>University College London, UK</i>	<u>Tutorial</u> Exchangeability and symmetry in statistics and machine learning
Garrit Page <i>Brigham Young University, USA</i>	Informed Random Partition Models with Temporal Dependence
Fernando Quintana <i>Pontificia Universidad Católica de Chile, Chile</i>	A change-point random partition model for large spatio-temporal datasets
Giovanni Rebaudo <i>Università di Torino, Italy</i>	Graph-Aligned Random Partition Models Understanding partially exchangeable nonparametric priors for discrete structures
Tommaso Rigon <i>University of Milano-Bicocca, Italy</i>	A Bayesian theory for the estimation of biodiversity
Ziyi Song <i>University of California, Irvine, USA</i>	Clustering Computer Mouse Tracking Data with Informed Hierarchical Shrinkage Partition Priors
Yanshuo Tan <i>National University of Singapore, Singapore</i>	The Computational Curse of Big Data for Bayesian Additive Regression Trees: A Hitting Time Analysis
Lorenzo Trippa <i>Harvard University, USA</i>	Bayesian Combinatorial Multi-Study Factor Analysis
Victoria Volodina <i>The University of Exeter, UK</i>	Propagating moments in probabilistic graphical models for decision support systems
Sara Wade <i>The University of Edinburgh, UK</i>	Investigating neuronal connectivity patterns from MAPseq data: a hierarchical Bayesian mixture approach
Shijia Wang <i>ShanghaiTech University, China</i>	An adaptive ABC-MCMC with Global-Local proposals
Yanxun Xu <i>Johns Hopkins University, USA</i>	<u>Tutorial</u> Bayesian Nonparametric Statistics for Advancing Innovation and Discovery in Precision Medicine
Junyi Zhang <i>The Hong Kong Polytechnic University, Hong Kong SAR</i>	Posterior sampling from truncated inverse-lévy measure representation of NRMI mixtures Posterior Inference for Truncated Inverse-Lévy Measure Representation of CRMs
Michael Minyi Zhang <i>University of Hong Kong, Hong Kong SAR</i>	A Semi-Bayesian Nonparametric Estimator of the Maximum Mean Discrepancy Measure
Zhaoxi Zhang <i>University of Edinburgh, UK</i>	The underlap coefficient as a measure of covariate dependence in cluster analysis

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Xiaotian Zheng <i>University of Wollongong, Australia</i>	Model-based inference for spatial biological-dissimilarity indices
Tianjian Zhou <i>Colorado State University, USA</i>	Random coefficient regression: Nonidentifiability and nonparametric estimation

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