Interpretable Inference via Principled BNP Approaches in Biomedical Research and Beyond

Closing Workshop and ISBA BNP networking meeting
(30 July–2 August 2024)

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

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National University of Singapore

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For more information:
https://ims.nus.edu.sg/events/interpretable-inference-via-principled-bnp-approaches-in-biomedical-research-beyond/

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Tuesday, 30 July 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
Session Chair: Raffaele Argiento (University of Bergamo)		
0930–1100	*Tutorial* Exchangeability and symmetry in statistics and machine learning (Part I)	Peter Orbanz *University College London, UK*
1100–1130	Group Photo & Tea Break	
Session Chair: Akira Horiguchi (Duke University)		
1130–1155	PAC-Bayesian Bounds for Offline Contextual Bandits	Pierre Alquier *ESSEC Business School, Singapore*
1155–1220	Scalable Bayesian Clustering for Multi-View Data: Unveiling Dependencies in High Dimensions	Rafael Medeiros Cabral *National University of Singapore, Singapore*
1220–1340	Lunch Break	
Session Chair: Raffaele Argiento (University of Bergamo)		
1340–1510	*Tutorial* Generative modeling and nonparametric inference with trees and recursive partitions (Part I)	Li Ma *Duke University, USA*
1510–1535	Tea Break	
Session Chair: Noirrit Kiran Chandra (The University of Texas at Dallas)		
1535–1600	A Semi-Bayesian Nonparametric Estimator of the Maximum Mean Discrepancy Measure	Michael Minyi Zhang *University of Hong Kong, Hong Kong SAR*
1600–1625	Bayesian analysis of product-form feature allocation models	Lorenzo Ghilotti *Università degli Studi di Milano, Italy*
1625–1650	A Bayesian theory for the estimation of biodiversity	Tommaso Rigon *University of Milano-Bicocca, Italy*
1650–1715	Clustering Computer Mouse Tracking Data with Informed Hierarchical Shrinkage Partition Priors	Ziyi Song *University of California, Irvine, USA*
1720	1-way transfer from IMS to Travelodge Harbourfront	

Tuesday, 30 July 2024		
Time	**Title**	**Speaker**
1840	Conference Dinner Social Aperitivo @ Sofitel Sentosa Resort & Spa 1-way transfer from Travelodge Harboufront Lobby - Sofitel Sentosa	

Wednesday, 31 July 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
Session Chair: Maria de Iorio (National University of Singapore)		
0930–1100	*Tutorial* Bayesian nonparametrics in practice(Part I)	Kerrie Mengersen *Queensland University of Technology, Australia*
1100–1130	Tea Break	
Session Chair: Tommaso Rigon (University of Milano-Bicocca)		
1130–1155	Sampling depth trade-off in function estimation under a two-level design	Akira Horiguchi *Duke University, USA*
1155–1220	Spatial transcriptomics profiling of the tumor microenvironment with dependent random partitions	Yunshan Duan *University of Texas at Austin, USA*
1220–1245	Model-based inference for spatial biological-dissimilarity indices	Xiaotian Zheng *University of Wollongong, Australia*
1245–1400	Lunch Break	
Session Chair: Peter Müeller (University of Texas at Austin)		
1400–1530	*Tutorial* Generative modeling and nonparametric inference with trees and recursive partitions (Part II)	Li Ma *Duke University, USA*
1530–1600	Tea Break	
Session Chair: Clara Grazian (University of Sydney)		
1600–1625	Discovering species richness in multiple populations	Alessandro Colombi *University of Milano-Bicocca, Italy*
1625–1650	Understanding partially exchangeable nonparametric priors for discrete structures	Giovanni Rebaudo *University of Turin, Italy*
1650–1715	Bayesian Nonparametric Inference with the Martingale Posterior	Edwin Fong *University of Hong Kong, Hong Kong SAR*

Wednesday, 31 July 2024		
Time	**Title**	**Speaker**
1715–1740	Inferring Covariance Structure from Multiple Data Sources via Subspace Factor Analysis	Noirrit Chandra *University of Texas at Dallas, USA*

Thursday, 01 August 2024		
Time	**Title**	**Speaker**
0900–0915	Registration	
Session Chair: Igor Pruenster (Università Bocconi)		
0915–1045	*Tutorial* Exchangeability and symmetry in statistics and machine learning (Part II)	Peter Orbanz *University College London, UK*
1045–1115	Tea Break	
Session Chair: Edwin Fong (University of Hong Kong)		
1115–1140	A Bayesian Semiparametric Approach for Long Memory Analysis	Clara Grazian *University of Sydney, Australia*
1140–1205	Markov stick-breaking processes	María Fernanda Gil Leyva Villa *Universidad Nacional Autónoma de México, Mexico*
1205–1230	Bayesian Machine Learning meets Formal Methods: An application to spatio-temporal data	Gregor Kastner *University of Klagenfurt, Austria*
1230–1330	***Lunch Reception by IMS***	
Session Chair: Alessandra Guglielmi (Politecnico di Milano)		
1330–1500	*Tutorial* Bayesian nonparametrics in practice(Part II)	Kerrie Mengersen *Queensland University of Technology, Australia*
1500–1530	Tea Break	
Session Chair: Gregor Kastner (University of Klagenfurt)		
1530–1555	The underlap coefficient as a measure of covariate dependence in cluster analysis	Zhaoxi Zhang *University of Edinburgh, UK*
1555–1620	Poisson Hyperplane Processes with Rectified Linear Units	Shufei Ge *ShanghaiTech University, China*
1620–1640	Tea Break	
Session Chair: Beatrice Franzolini (Università Bocconi)		
1640–1705	Poisson credible intervals in Bayesian nonparametric estimation of the unseen	Claudia Contardi *University of Pavia, Italy*

Thursday, 01 August 2024		
Time	**Title**	**Speaker**
1705–1730	Hierarchically dependent mixture hazard rates for modelling competing risks	Claudio Del Sole *Università Bocconi, Italy*
1730–1755	Propagating moments in probabilistic graphical models for decision support systems	Victoria Volodina *The University of Exeter, UK*

Friday, 02 August 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
Session Chair: Minwoo Chae (Pohang University of Science and Technology)		
0935–1000	Deep Gaussian Process Emulation for Model Networks using Stochastic Imputation	Deyu Ming *University College London, UK*
1000–1025	A divide-and-conquer approach for spatio-temporal analysis of large house price data from Greater London	Kapil Gupta *Indian Institute of Management Bangalore, India*
1025–1050	An adaptive ABC-MCMC with Global-Local proposals	Shijia Wang *ShanghaiTech University, China*
1050–1115	BOB: Bayesian Optimized Bootstrap for Uncertainty Quantification in Gaussian Mixture Models	Santiago Marin Ardila *The Australian National University, Australia*
1115–1140	Tea Break	
Session Chair: Federico Camerlenghi (Università degli Studi di Milano-Bicocca)		
1140–1205	Posterior Inference for Truncated Inverse-Lévy Measure Representation of CRMs	Junyi Zhang *Hong Kong Polytechnic University, Hong Kong SAR*
1205–1230	Online Bernstein-von Mises Theorem	Minwoo Chae *Pohang University of Science and Technology, S. Korea*
1230–1255	Non-local mixture models with repulsive weights	Alexander Mozdzen *University of Klagenfurt, Austria*

This schedule is accurate as of 02 Aug 2024 and is subjected to changes.