This is a DRAFT program.

It is subject to change.

We expect most changes to be minor.

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IISA 2026

Conference Program

December 26–30, 2026

Venue: TBA

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Wednesday, December 30 **42**

Student Poster Competition **48**

Schedule at a Glance

Time	Block	Sessions and events	Parallels
Saturday, December 26			
10:00–11:30		**Conference Inauguration**	
11:30–12:30	M2	**Plenary Lecture:** S. Rao JAMMALAMADAKA	1
12:30–14:00		*Lunch*	
14:00–15:45	A1	Contributed, Invited-Rapid, Invited-Topical, Invited-Special, Short Course 2, Student Paper	9
16:00–16:30		*Break*	
16:30–18:30	A2	Contributed, Invited-Rapid, Invited-Topical, Short Course 2, Student Paper	8
Sunday, December 27			
08:00–09:15		*Breakfast*	
09:20–11:00	M1	Contributed, Invited-Rapid, Invited-Topical, Short Course 1	9
11:15–12:30	M2	Invited-Topical, Short Course 1	9
12:30–14:00		*Lunch*	
14:00–15:00	A1	**Plenary Lecture:** Christian ROBERT	1
15:10–16:30	A2	Invited-Rapid, Invited-Topical, Short Course 3	8
16:30–17:00		*Break*	
17:00–18:30	A3	Invited-Topical, Short Course 3	8
Monday, December 28			
08:00–09:15		*Breakfast*	
09:20–11:00	M1	Contributed, Invited-Rapid, Invited-Topical	8
11:15–12:30	M2	Invited-Topical, Short Course 4	8
12:30–14:00		*Lunch*	
14:00–15:15	A1	Invited-Topical	8
15:30–16:30	A2	**Plenary Lecture:** Nalini RAVISHANKER	1
16:30–22:00		**Banquet**	
Tuesday, December 29			
08:00–09:15		*Breakfast*	
09:20–11:00	M1	Contributed, Invited-Rapid, Invited-Topical	8
11:15–12:30	M2	Invited-Topical, Invited-Special, Short Course 5	9
12:30–14:00		*Lunch*	
14:00–15:00	A1	**Bahadur Lecture:** James M. ROBINS	1
15:10–16:30	A2	Invited-Topical	8
16:30–17:00		*Break*	
17:00–18:30	A3	Contributed, Invited-Rapid, Invited-Topical	8
Wednesday, December 30			
08:00–09:15		*Breakfast*	
09:20–11:00	M1	Contributed, Invited-Rapid, Invited-Topical	8
11:15–13:00	M2	Contributed, Invited-Rapid, Invited-Topical	7
13:00–14:00		*Lunch*	

Block = session slot of the day (M = morning, A = afternoon). Parallels = number of parallel sessions running in that block. Only the session types that are in the program are listed. All venues: TBA.

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Conference Program in Full

December 26–30, 2026

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Saturday December 26

Conference Inauguration

Venue: TBA

Time : **10:00 - 11:30**

26.M2.1.S107 PLENARY: Lecture 1

Venue: TBA

Time : **11:30 - 12:30**

11:30 S. Rao JAMMALAMADAKA

Time : **12:30 - 14:00 Lunch** *Venue:* TBA

Parallel sessions *(A1)*

Time : **14:00 - 15:45**

26.A1.1.S001 INVITED-TOPICAL: Statistical Methods in Data-Driven Decision Making

Venue: TBA

Time : **14:00 - 15:15**

Chair : Soudeep DEB, Indian Institute of Management Bangalore

Organizer : Subho MAJUMDAR

14:00 A Data-Driven Approach to Spatial Zoning in Dynamic Real Estate Markets
Soudeep DEB, *Indian Institute of Management Bangalore*

14:25 Rapid Change Detection in Neuroimage Data
Snigdhansu CHATTERJEE, *University of Maryland Baltimore County*

14:50 Consistency as a Testable Property: Statistical Methods to Evaluate AI Agent Reliability
Subho MAJUMDAR, *Indian Institute of Management Bangalore*

26.A1.2.S002 INVITED-TOPICAL: Design Theory and Agricultural Experiments

Venue: TBA

Time : **14:00 - 15:15**

Chair : Rakhi SINGH, IIT Madras

Organizer : Abhyuday MANDAL

14:00 An Infinite Series of Triple Arrays
Sunanda BAGCHI, *Indian Statistical Institute, Bangalore*

14:25 Efficient Network Balanced Designs for Multi-Tree Monocrop Agroforestry Experiments
Peter T. BIRTEEB, *Faculty of Agriculture Food and Consumer Sciences, University for Development Studies*

14:50 Partially Replicated Designs
Vinaykumar L N, *ICAR-Indian Agricultural Statistics Research Institute*

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26.A1.3.S003 INVITED-TOPICAL: From Networks to Risk: Methods for Biomedical Studies *Venue:* TBA

Time : **14:00 - 15:15**
Chair: Ning NING, Texas A&M University
Organizer: Samiran SINHA

14:00 Clustering and Community Detection via K-Rays
Jesus Arroyo RELION, *Texas A&M University*

14:25 Journey2Image: Predicting Renal Cell Carcinoma (RCC) Patient Events with Convolutional Neural Networks
Mayank TEWARI, *Organization - Sigmoid Analytics ; University - National University of Singapore*

14:50 Statistical Learning of Rhythmic Gene–Gene Interactions in Circadian Transcriptomics
Samiran SINHA, *Department of Statistics and Data Science, Texas A&M University*

26.A1.4.S004 INVITED-RAPID: Statistics for Dependent Data and Bayesian Analysis of Reliability and Lifetime Models *Venue:* TBA

Time : **14:00 - 15:30**
Chair: Siuli MUKHOPADHYAY, IIT Bombay
Organizers: Swati CHANDNA and Samiran GHOSH

14:00 A Squared Adjacency Spectral Embedding Approach to Graph Clustering
Sandipan ROY, *University of Bath*

14:15 Data-Driven Estimation of Rare Event Probabilities for Spatial Extremes with Applications
Barman MADHAB, *Decision Sciences, Indian Institute of Management (IIM) Bangalore*

14:30 Bayesian Variable Selection Using Riemannian Manifold MCMC
Vivekananda ROY, *Iowa State University*

14:45 Modelling Measles Transmission Across Time, Space and Age
Siuli MUKHOPADHYAY, *IIT Bombay*

15:00 Enhancing Inference for Small Cohorts via Transfer Learning and Weighted Integration of Multiple Datasets
Subharup GUHA, *Dartmouth College*

15:15 TBA
Samiran GHOSH, *TBA*

26.A1.5.S005 CONTRIBUTED: Bayesian and High-Dimensional Inference: Variable Selection, Heavy Tails and Covariance Models *Venue:* TBA

Time : **14:00 - 15:30**
Chair: Debarshi CHAKRABORTY, Iowa State University
Organizer: SPC IISA

14:00 Bayesian Variable Selection for Ultra High-Dimensional Semiparametric Additive Partial Linear Models
Debarshi CHAKRABORTY, *Iowa State University*

14:15 Bahadur Representation for Regularized Value-at-Risk under Heavy-Tailed Portfolio Models
Lakshminarayan CHOUDUR, *Stevens Institute of Technology*

14:30 Ismdbc: Density-Based Clustering via Influence Space and Mutual Core Distance
Anunaya MANOJ, *University of Lucknow*

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14:45 **CLT for Linear Spectral Statistics of Sample Covariances of Superposition of Separable Covariance Components**
Javed HAZARIKA, *Indian Statistical Institute, Kolkata*

15:00 **Theory of Bayesian Heritability Estimation under Covariance Misspecification**
Sayantan ROY, *Texas A&M University*

15:15 **Modeling Purpose-Driven Tourism to Countries: A Bayesian Approach with Cross-Category Dependence**
Amrutha SESHAGIRI, *Indian Institute of Management Bangalore*

26.A1.6.S006 CONTRIBUTED: Biostatistics in Practice: Clinical Trials, Indirect Comparisons and Health Outcomes

Venue: TBA

Time : **14:00 - 15:30**
Chair : *Swapna DESHPANDE, Novartis Healthcare Pvt Ltd*
Organizer : *SPC IISA*

14:00 **Beyond Head-to-Head Trials: Matching-Adjusted Indirect Comparison for Repositioning Established Therapies**
Swapna DESHPANDE, *Novartis Healthcare Pvt Ltd*

14:15 **Policy and Value Iteration Algorithms for Risk-Sensitive First Exit Time Zero-Sum Games with Varying Discount Factors**
Amit GHOSH, *IIT Guwahati*

14:30 **Cluster-Level Analysis in Three-Level Cluster Randomised Trials with Multi-Level Covariate-Dependent Missingness**
Satish PRADHAN, *Indian Institute of Science Education and Research Thiruvananthapuram*

14:45 **Blest's Measure for Discrete Variables: Independence Test and Applications**
Trisha RANI, *Indian Institute of Technology Ropar*

15:00 **Impact of Rotavac Introduction on Rotavirus Outcomes in Children Under Five in India**
Shoummo SEN GUPTA, *Koita Centre for Digital Health, IIT Bombay*

15:15 **Early Postoperative Health-Related Quality of Life Following Elective Cholecystectomy: A Prospective Multicentric Assessment Using EQ-5D-5L in Northern India**
Prateek SHUKLA, *Amity University, Lucknow Campus*

26.A1.7.S108 INVITED-SPECIAL: Special Lectures

Venue: TBA

Time : **14:00 - 15:10**

14:00 **Frailty-Extended NHPP Cure Models for Heterogeneous Long-Term Survival Data.**
Asha GOPALAKRISHNAN, *Cochin University of Science & Technology*

14:35 **Can AI Become the Next Statistician? The Future of Statistical and Scientific Modeling**
Joga GOBBURU, *University of Maryland School of Pharmacy/Center for Translational Medicine*

26.A1.8.S109 SHORT-COURSE: Introduction to Python for Data Science, Machine/Deep Learning

Venue: TBA

Time : **14:00 - 15:45**
Short Course : *2 (Part 1 of 2)*

14:00 **Rishikesh YADAV**, *IIT Mandi*

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26.A1.9.S120 STUDENT PAPER COMPETITION: Probability and Theory of Statistics and Data Sciences *Venue:* TBA

Time : **14:00 - 15:15**
Chair: Shalabh, IIT Kanpur
Organizer: SPC IISA

14:00 Flexible Inference for Winners with Conditional Validity
Soham BAKSHI, *University of Michigan*

14:15 Slice-Informed Adaptive Bounding for Hybrid PDMP Samplers in Hierarchical Bayesian Spatial Models
Rochisnu DEY, *Indian Institute of Technology Kanpur*

14:30 An Exact Pointwise Characterization of Quantile Total Variation Denoising
Deep GHOSHAL, *University of Illinois Urbana-Champaign*

14:45 Distributional Balancing for Causal Inference: A Unified Framework via Characteristic Function Distance
Diptanil SANTRA, *University of Illinois Urbana-Champaign*

15:00 Spectra of Contractions of the Gaussian Orthogonal Tensor Ensemble
Himasish TALUKDAR, *Indian Statistical Institute Kolkata*

Time : **16:00 - 16:30 Break** *Venue:* TBA

Parallel sessions *(A2)* *Time :* **16:30 - 18:30**

26.A2.1.S007 CONTRIBUTED: Reliability, Lifetime Prediction and Distribution Theory with Machine Learning *Venue:* TBA

Time : **16:30 - 18:00**
Chair: Harshita AGARWAL, Indian Institute of Technology Bombay
Organizer: SPC IISA

16:30 A Novel Deep Learning Approach to Predict Remaining Useful Life of Batteries under Right Censoring
Harshita AGARWAL, *Indian Institute of Technology Bombay*

16:45 On the Rising Sun Angular Models
S.V.S. GIRIJA, *Hindu College Guntur*

17:00 Progressive Stress Accelerated Life Testing Based Prediction of Remaining Useful Life of Load-Sharing Systems
Anil MAURYA, *NIT Surat*

17:15 Dynamic Claim-Level Loss Reserving Using Nonparametric Forecasting and Expert Information
Parth Mohan MISRA, *Indian Institute of Management Ahmedabad*

17:30 An Adoptive Exponential Gamma Mixture Distribution with Statistical Properties and Applications
Lalita SINGH, *Dr. Bhim Rao Ambedkar University, Agra*

17:45 Multivariate Stochastic Degradation Modeling for RUL Prediction with Stress Interactions
Yashjeet Pratap SINGH, *Department of Statistics Banaras Hindu University Varanasi*

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26.A2.2.S010 INVITED-TOPICAL: Testing and Inference

Venue: TBA

Time : **16:30 - 17:45**
Chair: *Subhra Sankar DHAR, IIT Kanpur, India*
Organizer: *Abhyuday MANDAL*

16:30 **TBA**
Niladri CHAKRABORTY, *TBA*

16:55 **A Jackknife Empirical Likelihood Ratio Test for Comparing Two Populations via Harmonic Mean Residual Life Function**
Shyamal GHOSH, *School of Data Science, IISER Thiruvananthapuram*

17:20 **TBA**
Nil Kamal HAZRA, *TBA*

26.A2.3.S011 INVITED-TOPICAL: AI and Statistics in Health

Venue: TBA

Time : **16:30 - 17:45**
Chair: *Chandrasekaran KANDASAMY, Icmr-Nirt*
Organizer: *Kaushik GHOSH*

16:30 **Bayesian Approach for Tuberculosis Data with Mixed Effects Model.**
Chandrasekaran KANDASAMY, *Icmr-Nirt*

16:55 **The AI of AI: Modeling and Analysis of the All-Round Impact of AI on Some Important Human Societal Domains**
Sujay DATTA, *University of Akron (Ohio)*

17:20 **TBA**
Abhirup DATTA, *TBA*

26.A2.4.S012 CONTRIBUTED: Reliability, Ageing Properties and Quality Monitoring

Venue: TBA

Time : **16:30 - 18:00**
Chair: *Ravi KUMAR, University of Haifa*
Organizer: *SPC IISA*

16:30 **Optimal Allocation Policies for Relevations in Coherent Systems**
Ravi KUMAR, *University of Haifa*

16:45 **Quantile Based Reliability Analysis of Weighted Extropy**
Santosh KUMAR CHAUDHARY, *Central University of Jharkhand*

17:00 **Reinforcement Learning for Adaptive Quality Inspection: A Quick Switching System Approach**
Vela Muruga Anurahini P, *PSG College of Arts & Science, Coimbatore*

17:15 **Centralised Statistical Monitoring in Academic Clinical Trials : A Case Study of the VERONICA-Nigeria Trial**
Rashmi PANT, *The George Institute for Global Health, India*

17:30 **On Stochastic Ordering and Ageing Properties of K-Out-of-N Systems**
Saifur RAHAMAN, *Raiganj University*

17:45 **Redundancy Allocation Problem for a Series System with Randomly Weighted K-Out-of-N Subsystems**
Darshana YADAV, *Indian Institute of Technology Jodhpur*

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26.A2.5.S013 CONTRIBUTED: Clinical Trial Design and Survival Analysis: Bayesian and Nonparametric Approaches *Venue:* TBA

Time : **16:30 - 18:00**
Chair: Meghna BOSE, National University of Singapore
Organizer: SPC IISA

16:30 Bayesian Integration G-Formula for Platform SMART Designs Allowing the Addition of New Treatments
Meghna BOSE, *National University of Singapore*

16:45 Oral Solid Dose (OSD) Embedding Decision Making: Platforms, Products and Patients
Kazi Sahajit ISLAM, *GlaxoSmithKline(GSK) Plc*

17:00 Statistical Analysis of Diverse Data Types Derived from Multi-Session Trials
Boyina Devi PRIYANKA, *ICAR- Indian Agricultural Research Institute*

17:15 Bayesian Aggregation of Summary and Individual-Level Data: A Case Study
Arijit PYNE, *Novartis Healthcare Pvt. Ltd.*

17:30 Time-Dependent Two-Way Partial AUC and Partial Youden Index Estimator for Right Censored Data
Arpan SANYAL, *Indian Institute Of Technology Guwahati*

17:45 Comparison of Cox Proportional Hazards and Random Survival Forest Models for Breast Cancer Survival Prediction
Sneha SASIDHARAN, *St Thomas College (Autonomous) Palai, Mahatma Gandhi University Kerala*

26.A2.6.S110 SHORT-COURSE: Introduction to Python for Data Science, Machine/Deep Learning *Venue:* TBA

Time : **16:30 - 18:30**
Short Course: 2 (Part 2 of 2)

16:30 Rishikesh YADAV, *IIT Mandi*

26.A2.7.S121 STUDENT PAPER COMPETITION: Applications of Statistics and Data Sciences *Venue:* TBA

Time : **16:30 - 17:45**
Chair: Shalabh, IIT Kanpur
Organizer: SPC IISA

16:30 Estimating Causal Attribution of Anthropogenic Forcing on High-Temperature Extremes Using a Latent Gaussian Spatial Model
Ritik Roshan GIRI, *Department of Statistics and Data Science, Indian Institute of Technology, Kanpur*

16:45 CoreL-NNGP: Coregionalized Latent NNGP Model for High-Dimensional Binary Markov Occurrences with Application to Indian Rainfall
Swapnonil MONDAL, *Texas A&M University*

17:00 Mapping Nitrate Risk in Drinking Water: A Scalable Bayesian Framework for Spatial Hotspots and Exceedance Assessment
Lizan Meryl PEREIRA, *Indian Institute of Management Bangalore*

17:15 Probabilistic Symbolic Regression for Equation Discovery via Operator-Induced and Regularized Symbolic Forests
Somjit ROY, *Texas A&M University*

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17:30 Latent Mechanistic Gaussian Processes for Partially Observed Stochastic Epidemics
Suchismita ROY, *Duke University*

26.A2.8.S125 INVITED-RAPID: Data-Driven Inference, Time Series Analysis, and Research Synthesis *Venue:* TBA

Time : **16:30 - 17:15**
Chair: Piyush Kant RAI, Banaras Hindu University
Organizer: Arun KAUSHIK

16:30 Modern Literature Review in Statistical Sciences: From Database Searching to Evidence Synthesis
Puneet Kumar GUPTA, *The ICFAI University, Dehradun*

16:45 Regime-Specific Time Series Models
Jitendra KUMAR, *Central University of Rajasthan, Kishangarh, Ajmer*

17:00 Randomized Response under Stochastic Time Change: A Random-Clock Framework for Privacy and Inference
Amit Kumar MISRA, *Babasaheb Bhimrao Ambedkar University Lucknow*

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Sunday December 27

Time : **08:00 - 09:15 Breakfast** *Venue:* TBA

Parallel sessions *(M1)*

Time : **09:20 - 11:00**

27.M1.1.S015 INVITED-TOPICAL: Bayesian Modeling of High-Dimensional Multivariate Time Series Data

Venue: TBA

Time : **09:20 - 10:35**
Chair : Nilanjana CHAKRABORTY, Indian Institute of Management Udaipur
Organizer : Suprateek KUNDU

09:20 A Two-Stage Framework for High-Dimensional Matrix-Valued Time Series via Low-Rank Plus Sparse Panel VAR
Nilanjana CHAKRABORTY, *Indian Institute of Management Udaipur*

09:45 TBA
Sabyasachi MUKHOPADHYAY, *TBA*

10:10 Bayesian Nonparametric Modeling of Whole-Brain Dynamic Directed Connectivity
Moumita DAS, *Indian Institute of Management, Udaipur*

27.M1.2.S016 INVITED-TOPICAL: Modern Causal and Estimand Frameworks for Complex Survival Data in Clinical Trials

Venue: TBA

Time : **09:20 - 10:35**
Chair and Organizer : Ayon MUKHERJEE, Newcastle University

09:20 Beyond Proportional Hazards: A Cumulative Hazard Ratio Test with Delta-Method Variance for Robust Survival Analysis
Anjali PANDEY, *Eli Lilly Services India Private Limited*

09:45 A Clinically Meaningful Estimand for Treatment Discontinuation Due to Adverse Events: A Competing Risk Approach
Kohinoor DASGUPTA, *Senior Director Biostatistics, Novartis Healthcare Pvt Ltd*

10:10 Estimands for Randomized Discontinuation Design in Oncology
Ayush SRIVASTAVA, *Eli Lilly*

27.M1.3.S017 INVITED-TOPICAL: Data Science, Time Series, and AI

Venue: TBA

Time : **09:20 - 10:35**
Chair : Aritra GHOSH, B.P.Poddar Institute of Management and Technology
Organizer : Abhyuday MANDAL

09:20 Estimating the Size of HIV Key Populations Using Incomplete and Spatially Misaligned Data
Prajamitra BHUYAN, *Indian Institute of Management Calcutta*

09:45 Distribution And Time-Series Modelling Of Ordinal Circular Data
Jayant JHA, *Indian Statistical Institute*

10:10 Statistical Data-Driven Modelling and Forecasting
Shalabh, *IIT Kanpur*

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27.M1.4.S014 CONTRIBUTED: Spatial and Spatio-Temporal Modelling for Forecasting and Small Area Estimation *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Rohan Hemant CHHATRE, University of Connecticut
Organizer: SPC IISA

09:20 Evaluating Statistical Methods for Modeling and Forecasting Hourly Precipitations
Rohan Hemant CHHATRE, *University of Connecticut*

09:35 Implications of Residual Orthogonalization in Spatial Mixed Models: Variance Suppression, Asymptotic Bias, and Spectral Remedies
Shreyash DESHMUKH, *Indian Institute of Management Kozhikode*

09:50 Mind the Tail: Improving Machine-Learning Value-at-Risk Forecasts with Extreme Value Theory
Arnab MUKHERJEE, *Indian Institute of Technology Bombay*

10:05 Spatiotemporal Modelling and Hotspot Analysis of Tropical Cyclone Intensification over the North Indian Ocean: A Statistical and Machine Learning Framework
Prashant SAINI, *School of Mathematics and Statistical Sciences, Indian Institute of Technology Mandi, Kamand, Mandi, 175005, Himachal Pradesh, India*

10:20 A Spatio-Wavelet Weighting Method under Machine Learning Framework for Improved Price Forecasting
Akarsh SINGH, *ICAR-Indian Agricultural Statistics Research Institute*

10:35 Leveraging the Potential of Geo-Spatial Auxiliary Predictors in Small Area Estimation
Yashvant YADAV, *Research Scholar, Department of Statistics, Faculty of Mathematical Sciences, University of Delhi*

27.M1.5.S019 INVITED-RAPID: Spatio-Temporal Modelling and Data Science in Modern Environments *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Suman MAJUMDAR, Indian Statistical Institute
Organizers: Kaushik JANA, Suman MAJUMDAR and Sanjay CHAUDHURI

09:20 Identifying Drivers of PFAS Concentration in California Using a High-Dimensional Bayesian SPDE Model for Censored Spatial Responses
Suman MAJUMDAR, *Indian Statistical Institute*

09:35 Efficient Conformal Prediction for Spatially Dependent Data
Arkajyoti SAHA, *University of California, Irvine*

09:50 Analysis of Count Time Series through Integer-Valued Autoregressive (INAR) Process with Zero-Inflation and Seasonality
Subhankar CHATTOPADHYAY, *The West Bengal National University of Juridical Sciences*

10:05 Some Gems from Regression
Mb RAO, *University of Cincinnati*

10:20 A Structural–Inlier–Regular Autoregressive Process for Time Series with Structural Observations
Ishapathik DAS, *Department of Mathematics and Statistics, IIT Tirupati*

10:35 TBA

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27.M1.6.S020 CONTRIBUTED: Theoretical and High-Dimensional Statistics: Penalized Estimation, Likelihood and Urn Models *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Srinivasan BALAJI, George Washington University
Organizer: SPC IISA

09:20 On Affine Multi-Color Urns Grown under Multiple Drawing
Srinivasan BALAJI, *George Washington University*

09:35 Adaptive LASSO Penalized Minimum Density Power Divergence Estimation through Least Squares Approximation: Application to Bone Mineral Density Data from the SWAN Study
Udita GOSWAMI, *IIT (ISM) Dhanbad*

09:50 Order-Restricted Empirical Likelihood Inference for Functional Means
Harsh JAISWAL, *Department of Mathematics and Statistics, Indian Institute of Technology Tirupati*

10:05 A Fuzzy Mnet Regression Model with Variable Selection
Tanvi KOYANDE, *Department of Statistics, Nilkamal School of Mathematics, Applied Statistics & Analytics, SVKM's NMIMS Deemed to be University, Vile Parle West, Mumbai, India, and Research Scholar at Department of Statistics, University of Mumbai, Mumbai, India*

10:20 High-Dimensional Censored Quantile Regression Using Elastic Net Penalty
Mangesh KUTEKAR, *NSoMASA, NMIMS University, Mumbai*

10:35 A Robust Multivariate Joint Location–Scale Test for Gene–Environment Interaction across Correlated Traits
Saurabh MISHRA, *Indian Institute of Technology Hyderabad*

27.M1.7.S021 CONTRIBUTED: Probability Distributions, Dependence and Causal Inference *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Urmisha CHATTERJEE, Indian Statistical Institute, Kolkata
Organizer: SPC IISA

09:20 Constrained Wasserstein Regression
Urmisha CHATTERJEE, *Indian Statistical Institute, Kolkata*

09:35 Simulating Stress Laws under Extremal Dependence: Characterizing What Generative Models Must Preserve
Mantu GUPTA, *Indian Institute of Management Bangalore*

09:50 Limiting Behavior of α-Mixture Models
Ameen MAHMOOD K, *School of Data Science, Indian Institute of Science Education and Research Thiruvananthapuram*

10:05 Y-Wrapped Distributions with Unknown Period: Theory, Non-Regular Inference, and Applications
Vikas SHUKLA, *Indian Institute Of Management Ahmedabad*

10:20 On the Rising Sun Angular Models
Y. SREEKANTH, *Hindu College Guntur*

10:35 The Debiased Score Test: Hunt-and-Test for Semiparametric Hypotheses
Aditya DHAWAN, *University of Cambridge*

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27.M1.8.S106 CONTRIBUTED: Inference and Modelling in Reliability, Clinical Trials and Change Detection *Venue:* TBA

Time : **09:20 - 10:50**
Chair : Kuntal BERA, Department of Statistics and Data Science, IIT Kanpur
Organizer : SPC IISA

09:20 Statistical Inference on Lifetime Performance Index and Supplier Selection Using It under Inverse Gaussian Distribution
Kuntal BERA, *Department of Statistics and Data Science, IIT Kanpur*

09:35 Sequential Change Detection with Controlled Sensing and Composite Hypothesis
Arghya CHAKRABORTY, *Department of Statistics, University of Illinois Urbana-Champaign*

09:50 A Covariate Adjusted Clinical Trial Design for Circular Data
Taranga MUKHERJEE, *University of Calcutta*

10:05 Optimality of Sub-Network Laplace Approximations: New Results and Methods
Swarnali RAHA, *University of Florida*

10:20 Comparative Evaluation of Count Regression Models for Positive Lymph Node Counts in Breast Cancer Patients
Neha SHUKLA, *University of Lucknow*

10:35 A Bayesian Mediation Analysis of the Association Between Non-Communicable Diseases and Depression
Swarnalata TARAI, *Banaras Hindu University*

27.M1.9.S111 SHORT-COURSE: Modern Statistical Computing and Data Analysis with R *Venue:* TBA

Time : **09:20 - 11:00**
Short Course : 1 (Part 1 of 2)

09:20 Arnab HAZRA, *IIT Kanpur*

Parallel sessions *(M2)* *Time :* **11:15 - 12:30**

27.M2.1.S022 INVITED-TOPICAL: Time Series Analysis *Venue:* TBA

Time : **11:15 - 12:30**
Chair : Hira KOUL, Michigan State University
Organizer : N. BALAKRISHNA

11:15 Fitting an Error Density in Two Phase Linear Regression Model
Hira KOUL, *Michigan State University*

11:40 TBA
T V RAMANATHAN, *TBA*

12:05 Product Autoregressive Models for Mixed Marginals
N BALAKRISHNA, *Indian Institute of Technology Tirupati*

27.M2.2.S023 INVITED-TOPICAL: Statistical Modeling Innovations in Drug Development *Venue:* TBA

Time : **11:15 - 12:30**
Chair and Organizer : Kohinoor DASGUPTA, Senior Director Biostatistics, Novartis Healthcare Pvt Ltd

11:15 Sufficient but Not Safe: Informative Discontinuation and Treatment-Induced Delay in Recurrent-Event Trials
Prasenjit BANERJEE, *Bristol Myers Squibb*

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11:40 **Assessing Treatment Effect Heterogeneity in Clinical Trials: The WATCH Workflow with Illustrative Case Studies**
Himanshu POKHRIYAL, *Advanced Quantitative Sciences, Novartis Healthcare Private Limited, Hyderabad, India*

12:05 **Time-to-Event CLRM Framework for Efficient Dose Escalation Design**
Souvik BANERJEE, *Novartis Healthcare Pvt. Ltd., Hyderabad*

27.M2.3.S024 INVITED-TOPICAL: Modern Directions in Bayesian Learning and Data Geometry: Models, Algorithms, and Applications

Venue: TBA

Time : **11:15 - 12:30**
Chair: Kate LEE, TBA
Organizer: Sharmistha GUHA

11:15 **Hypervector in Computer Vision: From CNNs to CLIP**
Sudipan SAHA, *IIT Delhi*

11:40 **TBA**
Siddhartha CHIB, *TBA*

12:05 **TBA**
Kate LEE, *TBA*

27.M2.4.S025 INVITED-TOPICAL: Modern Statistical Methods and Theory for Complex Data

Venue: TBA

Time : **11:15 - 12:30**
Chair: Purnamrita SARKAR, TBA
Organizers: Sharmodeep BHATTACHARYYA and Purnamrita SARKAR

11:15 **TBA**
Purnamrita SARKAR, *TBA*

11:40 **One Shot Conditional Sampling with Kernels Using Nearest Neighbors.**
Anirban CHATTERJEE, *Boston University*

12:05 **TBA**
Vatsal SHARAN, *TBA*

27.M2.5.S018 INVITED-TOPICAL: Advances in Probabilistic Inference

Venue: TBA

Time : **11:15 - 12:30**
Chair: Abhishek CHAKRABORTTY, Texas A&M University
Organizer: Anirban BHATTACHARYA

11:15 **Bayesian Semiparametric Causal Inference: Targeted Doubly Robust Estimation of Treatment Effects**
Abhishek CHAKRABORTTY, *Texas A&M University*

11:40 **Determining the Differentially Expressed Genes When Only the Targeted Genes Are Correlated**
Naveen BANSAL, *Marquette University, USA*

12:05 **Learning from Pairwise Comparisons with Geometric Constraints.**
Abhishek ROY, *Texas A&M University*

DRAFT

27.M2.6.S027 INVITED-TOPICAL: Recent Topics in Causal Inference

Venue: TBA

Time : **11:15 - 12:30**
Chair: Mats STRENSRUD, EPFL
Organizer: Rajarshi MUKHERJEE

11:15 **Causal Identification That Leverages Context**
Mats STENSRUD, *EPFL*

11:40 **TBA**
Lin LIU, *TBA*

12:05 **Survey-Weighted Ordinal Causal Discovery: Application to Veteran Social Needs and Health Indicators**
Soumik PURKAYASTHA, *Center for Healthcare Evaluation Research and Promotion (CHERP), Veterans Affairs Pittsburgh Healthcare System, Pittsburgh, PA, USA/Department of Biostatistics and Health Data Science, University of Pittsburgh School of Public Health, Pittsburgh, PA, USA*

27.M2.7.S028 INVITED-TOPICAL: Design of Experiments for Agricultural Systems Research

Venue: TBA

Time : **11:15 - 12:30**
Chair: Mahesh PANDA, Department of Statistics, Ravenshaw University, Kataka (753003)
Organizer: Rajender PARSAD

11:15 **Criteria-Robust D-Optimal Designs and Model Discrimination for First- and Second-Order Pairwise-Order Models in Order-of-Addition Experiments**
Mahesh PANDA, *Department of Statistics, Ravenshaw University, Kataka (753003)*

11:40 **Optimal Designs for Order-of-Addition Experiments**
Baidyanath MANDAL, *ICAR-Indian Agricultural Research Institute Jharkhand*

12:05 **Statistical Guarantees on Oblique Decision Trees**
Rajita CHANDAK, *University of Wisconsin-Madison*

27.M2.8.S009 INVITED-TOPICAL: Graphs and Networks

Venue: TBA

Time : **11:15 - 12:30**
Chair and Organizer: Subhashis GHOSHAL, North Carolina State University

11:15 **Bayesian Approach to Sparse Precision Matrix Estimation via Immersion Posteriors**
Samhita PAL, *Vanderbilt University Medical Center*

11:40 **Network Isotonic Regression**
Srijan SENGUPTA, *North Carolina State University*

12:05 **Bayesian Inference for High-Dimensional Time Series with a Stationary Directed Acyclic Graphical Structure**
Subhashis GHOSHAL, *North Carolina State University*

27.M2.9.S112 SHORT-COURSE: Modern Statistical Computing and Data Analysis with R

Venue: TBA

Time : **11:15 - 12:30**
Short Course: 1 (Part 2 of 2)

11:15 **Arnab HAZRA**, *IIT Kanpur*

Time : **12:30 - 14:00** **Lunch** *Venue:* TBA

DRAFT

27.A1.1.S113 PLENARY: Lecture 2

Venue: TBA

Time : **14:00 - 15:00**

14:00 **Bayesian Decision-Theoretic Privacy**
Christian ROBERT, *University Paris Dauphine PSL & University of Warwick*

Parallel sessions *(A2)*

Time : **15:10 - 16:30**

27.A2.1.S029 INVITED-TOPICAL: Statistical Learning in the Age of AI

Venue: TBA

Time : **15:10 - 16:25**
Chair: Swarnali BANERJEE, Loyola University Chicago
Organizer: Abhinek SHUKLA

15:10 **Recent Advances in Multi-Stage Compression Algorithms**
Swarnali BANERJEE, *Loyola University Chicago*

15:35 **TBA**
Prashant TRIVEDI, *TBA*

16:00 **TBA**
Abhinek SHUKLA, *TBA*

27.A2.2.S100 INVITED-TOPICAL: Innovative Use of Statistical Methods in Management and Data Science

Venue: TBA

Time : **15:10 - 16:25**
Chair: Shovan CHOWDHURY, Indian Institute of Management Kozhikode
Organizer: Sanjib BASU

15:10 **Designing Optimal Product Inspection Plans: A Flexible Stress–Lifetime Modeling Approach**
Shovan CHOWDHURY, *Indian Institute of Management Kozhikode*

15:35 **TBA**
Karthik SRIRAM, *TBA*

16:00 **A Bayesian Joint Modelling Framework for Hotel Booking Cancellations and Cancellation Timing**
Soumya ROY, *Indian Institute of Management Kozhikode*

27.A2.3.S031 INVITED-TOPICAL: To be Decided

Venue: TBA

Time : **15:10 - 16:25**
Chair: Buddhananda BANERJEE, IIT Kharagpur
Organizer: Somak DUTTA

15:10 **Geometry-Inspired Identifiable Reparameterization for Change-Point Estimation**
Buddhananda BANERJEE, *IIT Kharagpur*

15:35 **Multi-Ancestry Polygenic Score Construction in Human Genetics**
Fred BOEHM, *South Dakota State University*

16:00 **A Data-Adaptive Method for Outlier Detection from Functional Data**
Arjun LAKRA, *B.S. College, Lohardaga, Ranchi University*

DRAFT

27.A2.4.S033 INVITED-TOPICAL: Uncertainty Quantification in Modern Statistics *Venue:* TBA

Time : **15:10 - 16:25**

Chair and Organizer : Nilabja GUHA, University of Manchester

15:10 Newton-Schulz Retraction-Based Inference Enables Hidden Quantum Markov Models to Outperform Classical HMMs
Patricia NING, *Texas A&M University*

15:35 Bayesian Emulators and Uncertainty Quantification on Planet Formation Condition
Anirban MONDAL, *Case Western Reserve University*

16:00 Learning to Guess: Online Prediction with Noisy Queries
Nikhil KARAMCHANDANI, *IIT Bombay*

27.A2.5.S034 INVITED-TOPICAL: Powering Clinical Research with AI: From Insight Generation to QC Excellence *Venue:* TBA

Time : **15:10 - 16:25**

Chair : Sandip ACHARYA, Sr. Principal Scientist II, Johnson and Johnson Innovative Medicine

Organizer : Kohinoor DASGUPTA

15:10 Comparative Performance of Propensity Score Methods in Pregnancy Pharmacovigilance Using Target Trial Emulation
Ranjan TIWARI, *Bristol Myers Squibb*

15:35 From Manual Checks to AI-Enabled Cross TLG Logical QC-A Reproducible Workflow Framework
Saugata DAS, *Johnson and Johnson*

16:00 TBA

27.A2.6.S035 INVITED-TOPICAL: Recent Advancements in Statistics on Spatial and Network Dependence *Venue:* TBA

Time : **15:10 - 16:25**

Chair : Subhankar BHADRA, The Pennsylvania State University

Organizer : Sayar KARMAKAR

15:10 External Validity of Causal Inference under Network Interference with Dependent Outcomes
Subhankar BHADRA, *The Pennsylvania State University*

15:35 Scalable Fixed-Domain Estimation for Noisy Nonstationary Gaussian Random Fields
Kunal DAS, *School of Computing, Montana State University*

16:00 From Events to Causes: Causal Inference in Telecom Networks
Jyotirmoy BANERJEE, *Ericsson*

27.A2.7.S114 SHORT-COURSE: Bayesian Neural Networks and Probabilistic Deep Learning *Venue:* TBA

Time : **15:10 - 16:30**

Short Course : 3 (Part 1 of 2)

15:10 Rishikesh YADAV, *IIT Mandi*

DRAFT

27.A2.8.S047 INVITED-RAPID: AI/ML in Drug Development and Modern Large-Scale Inference *Venue:* TBA

Time : **15:10 - 16:25**
Chair: *Mahesh IYER, Signoid*
Organizers: *Mahesh IYER and Monitirtha DEY*

15:10 AI Augmented Statistical Analysis Plans: A New Paradigm for Clinical Trials
Moumita DASANDHI, *Pfizer*

15:25 AI and Statistics: Collision or Collaboration?
Venkat MUDUNURU, *Sr. Manager, Biostatistics Data & Quantitative Sciences (DQS), Bristol Myers Squibb*

15:40 Machine Learning-Based Early Prediction of Grade ≥3 ALT/AST Elevation
Braja Gopal SAHOO, *Novartis Healthcare Pvt. Ltd.*

15:55 Multiple Testing of Partial Conjunction Hypotheses for Assessing Replicability Across Dependent Studies
Trambak BANERJEE, *University of Kansas*

16:10 TBA
Monitirtha DEY, *TBA*

Time : **16:30 - 17:00 Break** *Venue:* TBA

Parallel sessions *(A3)* *Time :* **17:00 - 18:30**

27.A3.1.S036 INVITED-TOPICAL: Reliability and Industrial Process Analytics *Venue:* TBA

Time : **17:00 - 18:15**
Chair: *Pritam RANJAN, Indian Institute of Management Indore*

17:00 Statistical Modeling for Predicting the Failure Time of an Injection Molding System
Pritam RANJAN, *Indian Institute of Management Indore*

17:25 Reliability Analysis of a Manned Spacecraft System: A Copula-Based Approach
Preeti Wanti SRIVASTAVA, *Department of Operational Research, University of Delhi, Delhi-7, INDIA*

17:50 Causal Effects of Interventions in Business Process Using Observational Data
Narayan SARKAR, *Calcutta University*

27.A3.2.S037 INVITED-TOPICAL: Statistical Learning for Structured and Dependent Data *Venue:* TBA

Time : **17:00 - 18:15**
Chair: *Jyotishka DATTA, Virginia Polytechnic Institute and State University*
Organizer: *Joyee GHOSH*

17:00 Bayesian Transfer Learning in Graphical Models for Modelling Proteomics of Human Pregnancy from Cell Lines
Moumita CHAKRABORTY, *University of Texas Medical Branch at Galveston, TX*

17:25 Matrix-Free Conditional Simulation for Spatial Gaussian Linear Mixed Models
Somak DUTTA, *Iowa State University*

DRAFT

17:50 Multivariate Density Regression with Coordinate-Wise Predictor Selection
Abhra SARKAR, *The University of Texas at Austin, Texas, USA*

27.A3.3.S038 INVITED-TOPICAL: Advances in Statistical AI/ML in Health Sciences *Venue:* TBA

Time : **17:00 - 18:15**
Chair and Organizer: *Kiranmoy DAS, Indian Statistical Institute, Kolkata*

17:00 A Statistical AI/ML Framework to Discover Interpretable Resistant Signatures in Lung Cancer
Shibasish DASGUPTA, *TCG CREST, Kolkata, India and Chennai Mathematical Institute (CMI), Chennai, India*

17:25 An Artificial Intelligence Model for Clinical Event Adjudication in Cardiovascular Clinical Trial,
Hiya BANERJEE, *Eli Lilly and Company*

17:50 A Joint Latent-Class Bayesian Model with Application to ALL Maintenance Studies
Kiranmoy DAS, *Indian Statistical Institute, Kolkata*

27.A3.4.S039 INVITED-TOPICAL: Model-Based Strategies for Decision-Making in Drug Development *Venue:* TBA

Time : **17:00 - 18:15**
Chair and Organizer: *Kohinoor DASGUPTA, Senior Director Biostatistics, Novartis Healthcare Pvt Ltd*

17:00 Calibrating Bayesian Success Criteria to Frequentist Operating Characteristics for Phase-II Trials with Two Binary Endpoints
Solomon CHRISTOPHER, *Bristol Myers Squibb*

17:25 Navigating Non-Proportional Hazards: Insights from Quantile Regression Framework in Clinical Trials
Vipin N, *Novartis Healthcare Private Limited*

17:50 Simulation Based Assessments of Composite Strategies for Handling Intercurrent Events in Clinical Research
Arunangshu BISWAS, *GSK (GlaxoSmithKline)*

27.A3.5.S040 INVITED-TOPICAL: Optimization, Dependence, and Learning in High-Dimensional and Structured Data *Venue:* TBA

Time : **17:00 - 18:15**
Chair and Organizer: *Tuhin MAJUMDER, Wake Forest University, Dept. of Statistical Sciences*

17:00 Building Faster and More Expressive BART Models
Sameer DESHPANDE, *University of Wisconsin–Madison*

17:25 Polyspectral Mean Estimation of General Nonlinear Processes
Dhrubajyoti GHOSH, *Kennesaw State University*

17:50 Fitting Sparse Markov Models to Categorical Time Series Using Convex Clustering
Tuhin MAJUMDER, *Wake Forest University, Dept. of Statistical Sciences*

DRAFT

27.A3.6.S041 INVITED-TOPICAL: Stochastic and Statistical Modeling of Latent Variables *Venue:* TBA

Time : **17:00 - 18:15**
Chair: *T. N. SRIRAM, University of Georgia*
Organizer: *Nivedita BHAKTHA*

17:00 **Online Sequential Leveraging Sampling Method for Streaming Autoregressive Time Series with Application to Seismic Data**
T. N. SRIRAM, *University of Georgia*

17:25 **TBA**
Nivedita BHAKTHA, *TBA*

17:50 **TBA**

27.A3.7.S030 INVITED-TOPICAL: New Developments in Bayesian Statistics: A J-ISBA Sponsored Session *Venue:* TBA

Time : **17:00 - 18:15**
Chair: *Beniamino HADJ-AMAR, University of South Carolina*
Organizer: *Francesco GAFFI (On Behalf Of J-Isba)*

17:00 **An Anytime Valid Test for Inhomogeneous Spatial Point Processes**
Vaidehi DIXIT, *University of Nottingham*

17:25 **TBA**
Arka BANERJEE, *TBA*

17:50 **TBA**
Miheer DEWASKAR, *TBA*

27.A3.8.S115 SHORT-COURSE: Bayesian Neural Networks and Probabilistic Deep Learning *Venue:* TBA

Time : **17:00 - 18:30**
Short Course: *3 (Part 2 of 2)*

17:00 **Rishikesh YADAV**, *IIT Mandi*

DRAFT

Monday December 28

Time : **08:00 - 09:15 Breakfast** *Venue:* TBA

Parallel sessions *(M1)* *Time :* **09:20 - 11:00**

28.M1.1.S043 INVITED-TOPICAL: ISI Session: Advanced Statistical Approaches in Official Statistics and Survey Sampling *Venue:* TBA

Time : **09:20 - 10:35**
Chair : Kaushik JANA, Indian Statistical Institute-Delhi
Organizers : Kaushik JANA and Nalini RAVISHANKER

09:20 Exploring the Potential of Bootstrap for Data Integration from Probability and Non-Probability Data Sources
Fulvia MECATTI, *University of Milano-Bicocca*

09:45 Locating the Middle Class from Household Consumption Expenditure Data: An Endogenous Behavioral Boundary-Detection Framework
Debasis SENGUPTA, *Indian Statistical Institute*

10:10 TBA
Nachiketa CHATTOPADHYAY, *Indian Statistical Institute, Kolkata*

28.M1.2.S124 INVITED-RAPID: Advances in Biostatistical Modeling and Health Research *Venue:* TBA

Time : **09:20 - 10:40**
Chair : Brijesh Pratap SINGH, Banaras Hindu University
Organizer : Abhay Kumar TIWARI

09:20 An Adjustment of Truncation Effect via Parametric and Non-Parametric Approaches: Illustration through Birth Interval Data
Anup KUMAR, *Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India*

09:40 Health-Related Characteristics among Cancer Patients Stratified by Body Mass Index in a Tertiary Care Hospital
Sonam MAHESHWARI, *Government Doon Medical College, Dehrakhas, Dehradun Uttrakhand*

10:00 Predictive Modeling of Cardiovascular Mortality: Evaluating Risk Factors via Logistic Regression and Cox Proportional Hazards
Praveen Kumar MISRA, *Dr. Shakuntala Misra National Rehabilitation University, Lucknow*

10:20 Robust HEWMA-Type Estimators for Population Mean under Non-Normality
Sanjay KUMAR, *Central University of Rajasthan, Kishangarh, Ajmer, Rajasthan, India*

28.M1.3.S045 INVITED-TOPICAL: Advanced Machine Learning for Complex Data Structures: Surveys, Survival, and Spatiotemporal Dynamics *Venue:* TBA

Time : **09:20 - 10:35**
Chair : Ujjwal DAS, Indian Institute of Management Udaipur
Organizer : Tanujit DEY

09:20 Variable Selection in Shared Frailty Models
Ujjwal DAS, *Indian Institute of Management Udaipur*

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09:45 **QNet: Continuous Quantile Regression via Fourier Feature Networks for Censored Survival Analysis**
Sounak CHAKRABORTY, *University of Missouri, Columbia*

10:10 **Recurrent Spatiotemporal Interaction Network (RSIN) for Modeling Public Responses to Wildfire Smoke**
Tanujit DEY, *Harvard Medical School*

28.M1.4.S046 INVITED-TOPICAL: Experimental Design and Applied Studies

Venue: TBA

Time : **09:20 - 10:35**
Chair : Sunanda BAGCHI, Indian Statistical Institute, Bangalore
Organizer : Abhyuday MANDAL

09:20 **Multi-Session Designed Experiments for Simultaneous Evaluation of Sensory Variables**
Mohd HARUN, *ICAR-Indian Agricultural Statistics Research Institute, New Delhi*

09:45 **Spatio-Temporal Climate Vulnerability Mapping**
Sayantani KARMAKAR, *ICAR - National Institute of Abiotic Stress Management*

10:10 **Neutrosophic Analysis of Experimental Data**
Cini VARGHESE, *ICAR-Indian Agricultural Statistics Research Institute*

28.M1.5.S102 INVITED-RAPID: Statistical Innovations in Biomedical Sciences and Drug Development

Venue: TBA

Time : **09:20 - 10:50**
Chair : Leena KULKARNI, NMIMS University
Organizers : Sujit GHOSH, Aloka CHAKRAVARTY and Ravindra KHATTREE

09:20 **Nonparametric Estimation and Comparison of Hazard Functions Using Bernstein Polynomials**
Leena KULKARNI, *NMIMS University*

09:35 **Bayesian Modeling of Oral Mucositis Severity Grades of Oral Cancer Patients**
Madhuri KULKARNI, *Department of Statistics, Savitribai Phule Pune University*

09:50 **ABPA Diagnosis: From Consensus to Precision**
Ankita DEY, *National Institute of Tuberculosis and Respiratory Diseases, New Delhi, India*

10:05 **Clinical Trial Principles in Sanskrit Texts: Ayurvedic Epistemology as Research Methodology**
Aloka CHAKRAVARTY, *Reglytics LLC*

10:20 **"Rev. Bayes' Best Friend: Markov or Laplace?"**
Krishna PADMANABHAN, *Univ of Penn, Madrigal*

10:35 **Efficient 3 Level Factorial Designs for Large Run Size Experiments: An Algorithmic Approach**
Med Ram VERMA, *ICAR-IASRI*

28.M1.6.S048 CONTRIBUTED: Biostatistical Learning, Genomics and Nonparametric Inference

Venue: TBA

Time : **09:20 - 10:50**
Chair : Harsh Vardhan DUBEY, University of Tennessee Health Science Center
Organizer : SPC IISA

DRAFT

09:20 **Integrating External Biological Knowledge Improves Metabolite Effect Estimation**
Harsh Vardhan DUBEY, *University of Tennessee Health Science Center*

09:35 **Neutrosophic-AI for Healthcare: Statistical Intelligence under Uncertainty**
Uma G, *PSG College of Arts & Science, Coimbatore*

09:50 **A New Approach to Symmetry Testing via Burg Entropy**
Gaurav KANDPAL, *Indian Institute of Technology Kharagpur*

10:05 **Novel Statistical Methods for Discovering Genetic Subtypes of a Complex Disease**
Rehan KHAN, *Indian Institute of Technology Hyderabad*

10:20 **Multi-Level Disease Risk Classification of Lung Cancer Patients Based on Gene Expression Data**
Pragya KUMARI, *Indian Institute of Science Education and Research Bhopal, India*

10:35 **Parametrically Guided Transformation for Simultaneous Bias and Variance Reduction in Multivariate Kernel Regression**
Prakash PATIL, *Mississippi State University*

28.M1.7.S049 CONTRIBUTED: Bayesian Computation and Inference for Linked, Censored and Sampled Data

Venue: TBA

Time : **09:20 - 10:50**
Chair : Anupama DAS, Indian Institute of Technology Kanpur
Organizer : SPC IISA

09:20 **Predicting Elevated Depressive Symptoms from Sociodemographic and Lifestyle Factors: A Comparative Machine Learning Study**
Yashasvi RASTOGI, *Department Of Statistics, University of Lucknow*

09:35 **Beyond Expectations: Importance Sampling Quantile Estimation**
Anupama DAS, *Indian Institute of Technology Kanpur*

09:50 **Metropolis-Adjusted Langevin Algorithm for the Albert-Chib Model**
Tiyasa DUTTA, *Washington University in St. Louis(WashU)*

10:05 **Age-Related Cognitive Decline in Elderly India: A Bayesian Perspective**
Chandni MISHRA, *Department of Statistics, Banaras Hindu University*

10:20 **Bayesian Cure Rate Modeling for Interval-Censored Data via Parallel Tempering**
Ananya SINGH, *Department of Statistics, Banaras Hindu University, Varanasi*

10:35 **Multivariate Ordering for Markov Chains**
Saurabh YADAV, *Indian Institute of Technology, Kanpur*

28.M1.8.S123 INVITED-RAPID: Modern Methods in Reliability Theory and Statistical Inference

Venue: TBA

Time : **09:20 - 10:40**
Chair : Sanjay Kumar SINGH, Banaras Hindu University
Organizer : Dinesh KUMAR

09:20 **Frequentist and Bayesian Inference for the Maxwell Distribution under Progressive First-Failure Censoring**
Sachin CHAUDHARY, *Government Medical College, Kannauj, U.P.*

09:40 **Multicomponent Stress–Strength Reliability with Non-Identical Component Strengths under Censoring**
Kapil KUMAR, *Chaudhary Charan Singh University, Meerut*

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10:00 **Dependence Reliability Estimation in Polynomial Type Farlie-Gumbel-Morgenstern Family**
Navin CHANDRA, *Pondicherry University, Puducherry*

10:20 **A Smooth Hazard-Blend Composite Model for Heavy-Tailed Loss Distributions**
H. S. KAPOOR, *Central University of Punjab, Punjab*

Parallel sessions *(M2)*

Time : **11:15 - 12:30**

28.M2.1.S050 INVITED-TOPICAL: Recent Advances in Optimal Inferential Techniques

Venue: TBA

Time : **11:15 - 12:30**
Chair and Organizer : Sudeep BAPAT, Indian Institute of Technology Bombay

11:15 **Comparing Linear Parametric Functions of Two MLR Models Using an Optimal Three-Stage Sequential Sampling Procedure**
Neeraj JOSHI, *IIT Delhi*

11:40 **Classical and Bayesian Inference for Multicomponent Stress-Strength Reliability Based on the Unit Generalized Rayleigh Distribution under Progressive Type-II Censoring**
Tanmay KAYAL, *IIT Mandi*

12:05 **Optimizing Bayesian Sampling Plan Under Progressive First-Failure Censoring via Meta-Heuristic Based Variable Neighborhood Search Algorithms**
Deepak PRAJAPATI, *Indian Institute of Management Lucknow*

28.M2.2.S051 INVITED-TOPICAL: Innovations in Clinical Trial Design: External Evidence, Digital Health, and Complex Designs

Venue: TBA

Time : **11:15 - 12:30**
Chair : Priyanka MAJUMDER, School of Data Science, IISER Thiruvananthapuram
Organizer : Samiran GHOSH

11:15 **Leveraging External Evidence for Augmenting a Single-Arm Study or the Control Arm of an RCT**
Ram TIWARI, *Www.GobalStatSolutions.Com*

11:40 **Innovative Trial Designs in Mobile Health Using Reinforcement Learning**
Bibhas CHAKRABORTY, *Duke-NUS Medical School, National University of Singapore*

12:05 **Sample Size and Cost-Efficient Planning for Stepped-Wedge Cluster Randomized Trials with Varying Cluster Size**
Priyanka MAJUMDER, *School of Data Science, IISER Thiruvananthapuram*

28.M2.3.S052 INVITED-TOPICAL: The Evolving Role of Biostatistics in Modern Drug Development

Venue: TBA

Time : **11:15 - 12:30**
Chair : Pritam GUPTA, Bristol Myers Squibb
Organizer : Budhaditya GOSWAMI

11:15 **An Ecological Distance Framework for Exploratory Visualization of Clinical Trial Safety Similarity**
Pritam GUPTA, *Bristol Myers Squibb*

11:40 **Integrated Bayesian Benefit–Risk Framework for Dose Optimization in Early Development Oncology Studies**
Budhaditya GOSWAMI, *Pfizer Healthcare India Private Limited*

DRAFT

12:05 A Bayesian Information Borrowing Interval Design for Phase I Clinical Trials: The adjBOIN Method
Anupam KUNDU, *Principal Scientist Biostatistics, Johnson & Johnson Innovative Medicine*

28.M2.4.S053 INVITED-TOPICAL: Advances in High-Dimensional Bayesian Inference and Applications *Venue:* TBA

Time : **11:15 - 12:30**
Chair and Organizer: Anirban MONDAL, Case Western Reserve University

11:15 Bayesian Change-Point Detection in High Dimensions
Nilabja GUHA, *University of Manchester*

11:40 TBA
Rishideep ROY, *TBA*

12:05 A Bayesian Time-Varying Seiard Model for State-Level COVID-19 Transmission and Mortality in the United States
Paromita BANERJEE, *John Carroll University*

28.M2.5.S054 INVITED-TOPICAL: Recent Advancements in High-Dimensional Statistical Learning *Venue:* TBA

Time : **11:15 - 12:30**
Chair and Organizer: Samrat ROY, Indian Institute of Management Ahmedabad

11:15 Nonparametric Empirical Bayes Estimation On Heterogeneous Data
Gourab MUKHERJEE, *University of Southern California*

11:40 Statistical Learning in Ising Models
Somabha MUKHERJEE, *National University of Singapore*

12:05 Regularized High-Dimensional Mode-Wise Additive Tensor Autoregression Model
Samrat ROY, *Indian Institute of Management Ahmedabad*

28.M2.6.S055 INVITED-TOPICAL: Advanced Statistical Methodologies for Evidence-Based Official Statistics *Venue:* TBA

Time : **11:15 - 12:30**
Chair: Malabika KOLEY, Indian Institute of Technology Kanpur
Organizer: Saurav GUHA

11:15 Testing SDM and SDEM as Competing Models for Spatial Dependence
Malabika KOLEY, *Indian Institute of Technology Kanpur*

11:40 Small Area Estimation under a Spatio-Temporal Multivariate Area-Level Linear Mixed Model
Saurav GUHA, *Bihar Agricultural University, Bhagalpur*

12:05 TBA

28.M2.7.S044 INVITED-TOPICAL: Recent Advances in Spatio-Temporal Modeling for Environmental and Climate Data *Venue:* TBA

Time : **11:15 - 12:30**
Chair: Arpita MONDAL, Indian Institute of Technology Bombay
Organizer: Sakshi ARYA

11:15 Statistical Extreme Value Analysis for Urban Flood Management
Arpita MONDAL, *Indian Institute of Technology Bombay*

DRAFT

11:40 **Generative Models as Surrogates for Climate Simulation**
Adway MITRA, *Indian Institute of Technology Kharagpur*

12:05 **Data Collection Architectures with Sensors from Internet of Things for Environmental Statistics**
Dr. KODURI, *NRSC(Retd), ISRO*

28.M2.8.S116 SHORT-COURSE: Capture Recapture Experiments *Venue:* TBA

Time : **11:15 - 12:30**
Short Course : 4

11:15 **Diganta MUKHERJEE**, *Indian Statistical Institute*

Time : **12:30 - 14:00** **Lunch** *Venue:* TBA

Parallel sessions *(A1)* *Time :* **14:00 - 15:15**

28.A1.1.S057 INVITED-TOPICAL: Advances in Bayesian Methods and Applications *Venue:* TBA

Time : **14:00 - 15:15**
Chair : Brani VIDAKOVIC, Texas A&M University
Organizer : Bani MALLICK

14:00 **Quantum Wavelet Shrinkage: A Statistical Framework for Bayesian Attenuation Channels**
Brani VIDAKOVIC, *Texas A&M University*

14:25 **Estimation of Cluster-Specific Causal Effects on Spatially Associated Survival Data Using SoftBART**
Deb SINHA, *Florida State University*

14:50 **TBA**
Sanjib BASU, *TBA*

28.A1.2.S058 INVITED-TOPICAL: Statistics and Data Science Education in India's Changing Curriculum and Learning Landscape *Venue:* TBA

Time : **14:00 - 15:15**
Chair : Kaushik JANA, Indian Statistical Institute, Delhi Centre
Organizers : Kaushik JANA and Amiya Ranjan BHOWMICK

14:00 **Undergraduate Statistics Curriculum in a Liberal Arts Setting**
Shailaja SHARMA, *Azim Premji University Bangalore*

14:25 **Building Statistical Intuition through Simulation: Rethinking Statistics Education for Engineering Students under NEP 2020**
Amiya Ranjan BHOWMICK, *Institute of Chemical Technology, Mumbai*

14:50 **TBA**
Mary Ann CHACKO, *TBA*

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28.A1.3.S059 INVITED-TOPICAL: Recent Advances in Extreme Value Analysis

Venue: TBA

Time : **14:00 - 15:15**
Chair: Rishikesh YADAV, IIT Mandi
Organizer: Arnab HAZRA

14:00 **Bayesian Networks for Unravelling the Causative Role of Groundwater on Extreme Flows in the Peninsular Indian River Basins.**
Nanditha J. S., *Indian Institute of Technology Kanpur*

14:25 **Extremal Bayesian Deep Learning Framework for Prediction and Uncertainty Quantification of Weather Extremes**
Rishikesh YADAV, *IIT Mandi*

14:50 **Spatial Wildfire Risk Modeling Using a Tree-Based Multivariate Generalized Pareto Mixture Model**
Arnab HAZRA, *IIT Kanpur*

28.A1.4.S060 INVITED-TOPICAL: Women Statisticians from India

Venue: TBA

Time : **14:00 - 15:15**
Chair: Neha SINGH, TBA
Organizer: Nairanjana DASGUPTA

14:00 **TBA**
Neha SINGH, *TBA*

14:25 **On Weighted Least Squares Estimation of Elementary Chirp Model**
Anjali MITTAL, *Indian Institute of Technology Indore*

14:50 **Covariate-Adjusted Response-Adaptive Designs for Semiparametric Survival Models**
Sayantee JANA, *IIT Hyderabad*

28.A1.5.S061 INVITED-TOPICAL: Novel Statistical Methods for Precision Medicine

Venue: TBA

Time : **14:00 - 15:15**
Chair: Parker KNIGHT, University of North Carolina at Chapel Hill
Organizer: Swati BISWAS

14:00 **Absolute Risk Prediction for Substance Use Disorders Using Bayesian Machine Learning**
Swati BISWAS, *University of Texas at Dallas*

14:25 **Latent Factor Point Processes for Patient Representation in Electronic Health Records**
Parker KNIGHT, *University of North Carolina at Chapel Hill*

14:50 **TBA**

28.A1.6.S056 INVITED-TOPICAL: Advances in Robust Statistics

Venue: TBA

Time : **14:00 - 15:15**
Chair and Organizer: Anand DEO, TBA

14:00 **TBA**
Anand DEO, *TBA*

14:25 **TBA**
Prashanth L.A., *TBA*

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14:50 Robust and Scalable Sure Screening of Fixed Effects in Ultrahigh-Dimensional Linear Mixed Models
Abhik GHOSH, *Indian Statistical Institute*

28.A1.7.S063 INVITED-TOPICAL: Recent Advances in Stochastic Processes *Venue:* TBA

Time : **14:00 - 15:15**
Chair: Vijay KUMAR, Thapar Institute of Engineering & Technology
Organizer: Monika BHATTACHARJEE

14:00 Extension of Fractional Poisson Process, Birth Process and Death Process
Vijay KUMAR, *Thapar Institute of Engineering & Technology*

14:25 Asymptotic Eigenvalue Distribution of Toeplitz and Hankel Matrices with Dependent Entries
Shambhu Nath MAURYA, *Indian Institute Of Technology Roorkee*

14:50 Incentive-Aware Financial Networks
Deepayan CHAKRABARTI, *University of Texas, Austin*

28.A1.8.S032 INVITED-TOPICAL: Government Policy in Data-Deficient Environments *Venue:* TBA

Time : **14:00 - 15:15**
Chair: Arnab BHATTACHARJEE, TBA
Organizer: Jyotirmoy DEY

14:00 Quasi-Experiments for Policy
Dimitrios MINOS, *King's College London*

14:25 Beyond POLS: Robust Estimation and Parameter Stability in Clustered Data
Gopal BASAK, *Indian Statistical Institute*

14:50 TBA
Arnab BHATTACHARJEE, *TBA*

28.A2.1.S117 PLENARY: Lecture 3 *Venue:* TBA

Time : **15:30 - 16:30**

15:30 Nalini RAVISHANKER

Time : **16:30 - 22:00 Banquet** *Venue:* TBA

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Tuesday December 29

Time : **08:00 - 09:15 Breakfast** *Venue:* TBA

Parallel sessions *(M1)* *Time :* **09:20 - 11:00**

29.M1.1.S064 INVITED-TOPICAL: New Methods for Complex Data: Networks, Self-Distillation, and Conditional Inference *Venue:* TBA

Time : **09:20 - 10:35**
Chair: Gourab MUKHERJEE, University of Southern California
Organizer: Paromita DUBEY

09:20 TBA
Sagnik NANDY, *TBA*

09:45 Can Models Learn from Their Own Predictions? A Statistical View of Self-Distillation
Pratik PATIL, *UT Austin*

10:10 Metric CvM: Minimax-Optimal Conditional Paired-Sample Testing via Distance Profiles
Bilol BANERJEE, *National University of Singapore*

29.M1.2.S065 INVITED-TOPICAL: Optimal and Computational Design *Venue:* TBA

Time : **09:20 - 10:35**
Chair: Peter T. BIRTEEB, Faculty of Agriculture Food and Consumer Sciences, University for Development Studies
Organizer: Abhyuday MANDAL

09:20 A Hopfield Process Model for Computer Experiments with Binary Outputs
Abhyuday MANDAL, *University of Georgia*

09:45 TBA
Satya Prakash SINGH, *TBA*

10:10 Pareto-Efficient Designs for Hyperparameter Optimization
Rakhi SINGH, *IIT Madras*

29.M1.3.S066 INVITED-TOPICAL: Recent Advances in Sparse and Latent Structure Modeling *Venue:* TBA

Time : **09:20 - 10:35**
Chair: Moumita CHAKRABORTY, University of Texas Medical Branch at Galveston, TX
Organizer: Joyee GHOSH

09:20 Bayesian Small Area Estimation Using Unit-Level Data and Spatial Random Effects When Units Are Selected with Unequal Probabilities
Gauri DATTA, *University of Georgia*

09:45 Bayesian ICA with Super-Gaussian Source Priors
Jyotishka DATTA, *Virginia Polytechnic Institute and State University*

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10:10 Sparse Separable Factor Analysis in the Complex Domain
Sanvesh SRIVASTAVA, *The University of Iowa*

29.M1.4.S067 INVITED-RAPID: Advances in Change-Point Detection and Time Series Modelling *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Angshuman ROY, TBA
Organizers: Angshuman ROY and Ranjit Kumar PAUL

09:20 TBA
Ananya LAHIRI, *TBA*

09:35 TBA
Angshuman ROY, *TBA*

09:50 Wavelets and Learning Algorithms for Modelling Agricultural Prices
Ranjit Kumar PAUL, *ICAR Indian Agricultural Statistics Research Institute*

10:05 Hybrid Multivariate Markov Chain-Machine Learning Models for Analysis and Forecasting in Agricultural Systems
Shashi SHEKHAR, *Institute of Agril. Sciences, BHU*

10:20 Ensemble Hybrid Approach for Time Series Forecasting
Md YEASIN, *ICAR Indian Agricultural Statistics Research Institute*

10:35 TBA

29.M1.5.S068 CONTRIBUTED: Hypothesis Testing and Inference for Networks, Synthetic Data and Surveys *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Rajdeep BRAHMA, PhD Student at University of Illinois Urbana-Champaign
Organizer: SPC IISA

09:20 Two-Sample Hypothesis Testing for Subspace Equality in Network Data
Rajdeep BRAHMA, *PhD Student at University of Illinois Urbana-Champaign*

09:35 Statistical Efficiency of Modern Synthetic Data
Shourjo CHAKRABORTY, *Washington University in St. Louis*

09:50 A Class of Nonparametric Tests for DMTTF Alternatives Based on Moment Inequality
Koushik DAS, *School of Data Science, Indian Institute of Science Education and Research Thiruvananthapuram*

10:05 Efficient Order-Restricted Inference for Simple Effects in Two-Way Crossed Heteroscedastic ANOVA
Raju DEY, *Department of Statistics and Data Science, Indian Institute of Technology Kanpur, Kanpur, India*

10:20 PPS-Like Models: A Computationally Efficient Alternative to PPS Models and Their Estimation
Omendra GANGWAR, *IIT Guwahati*

10:35 A Novel Class of Logarithmic-Exponential Type Neutrosophic Estimators for Population Mean in Stratified Sampling with an Application to Indian Temperature Data
Anchal YADAV, *Department of Statistics, University of Lucknow*

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29.M1.6.S069 CONTRIBUTED: Adaptive Clinical Trial Designs and Survey Methodology *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Anirban CHAKRABORTY, Indian Statistical Institute
Organizer: SPC IISA

09:20 An Interim Treatment Dropping Approach to Control Type I and Type II Family-wise Error Rates in Multi-Arm Response-Adaptive Designs
Anirban CHAKRABORTY, *Indian Statistical Institute*

09:35 Development of a Three-Stage Randomized Response Model for Sensitive Surveys with a Case Study on Drug Consumption
Chilakapati GANGA BHAVANI, *Research Scholar VIT-AP University*

09:50 Estimation of Variance Under Adaptive Cluster Sampling : An Evidence Based on Regression-Adjusted Variance Estimator Utilizing Auxiliary Information
Prakhar GUPTA, *Banaras Hindu University, Varanasi*

10:05 Predose : Pharmacometrically-Refined Early-Phase Dose Optimization Design for Oncology Study Enhancement
Damitri KUNDU, *Bayesoft*

10:20 A Minimum-Risk and Cost-Efficient Two-Sample Sequential Testing Framework for the Shifted Exponential Models with Application to Precipitation Data.
Ashwani RAJPUT, *Indian Institute of Technology Delhi*

10:35 Kill, Pause or Pivot? Decision-Making in Adaptive Three-Arm Clinical Trials under Uncertainty
Mohak SHARDA, *Glaxo Smith Kline*

29.M1.7.S070 CONTRIBUTED: Reliability, Stress-Strength and Renewal Models with Environmental Applications *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Amlan DEY, National Institute of Technology Rourkela
Organizer: SPC IISA

09:20 Statistical Inference of a Chen Lifetime Competing Risks Model Based on Improved Adaptive Type-II Progressive Censored Data
Amlan DEY, *National Institute of Technology Rourkela*

09:35 Estimating Stress-Strength Reliability in a Multi-Stress System Based on Lower Records.
Avishek GHORAI, *Indian Institute of Technology Kharagpur*

09:50 Sequential Order Statistics Used for Reliability Analysis of Dynamic System
Kaushik GUPTA, *National Institute of Technology Rourkela*

10:05 A Generalized Lindley Framework for S-Out-of-K Stress-Strength Reliability Estimation Using Upper Records and Inter-Record Times: Application to Global Earth Temperature Data
Aragaja MISHRA, *Jaypee Institute of Information Technology, Noida*

10:20 On Further Properties of Renewal Processes with Mittag- Leffler Waiting Times
Bratati PAL, *Research Scholar, IIIT Guwahati*

10:35 Bayesian Accelerated Failure Time Regression Model for Informative Current Status Survival Data
Akanksha KUMARI, *Banaras Hindu University, Varanasi*

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29.M1.8.S074 INVITED-TOPICAL: Spatial AI: A New Era in Spatial Statistics *Venue:* TBA

Time : **09:20 - 10:35**
Chair: Shiv Kumar YADAV, Indian Statistical Institute, Delhi (ISI D)
Organizer: Debjoy THAKUR

09:20 Causal Inference with Large-Scale and Multimodal Geospatial Data: Evidence from 2 Million Farm Ponds Built under Mgnrega during 2006-2023
Gaurav ARORA, *Indraprastha Institute of Information Technology Delhi*

09:45 On Focussed Variable Selection in Spatial Regression Models.
Divya KAPPARA, *Department of Mathematics, IIT Jodhpur*

10:10 TBA
Debjoy THAKUR, *TBA*

Parallel sessions *(M2)* *Time :* **11:15 - 12:30**

29.M2.1.S071 INVITED-TOPICAL: Adaptive Randomization in Clinical Trials: Methodological Advances and Emerging Challenges *Venue:* TBA

Time : **11:15 - 12:30**
Chair: Aloka CHAKRAVARTY, Reglytics LLC
Organizer: Ayon MUKHERJEE

11:15 Covariate-Adaptive Randomization in the Era of an Evolving Regulatory Landscape
Arunava CHAKRAVARTTY, *Eli Lilly*

11:40 Impact of Missing Data Handling on Response Adaptive Randomisation in Rare Disease Trials
Rajenki DAS, *MRC Biostatistics Unit*

12:05 Covariate-Adjusted Response Adaptive Designs for Semiparametric Survival Models
Ayon MUKHERJEE, *Newcastle University*

29.M2.2.S072 INVITED-TOPICAL: Recent Advances in Random Matrix Theory *Venue:* TBA

Time : **11:15 - 12:30**
Chair: Priyanka SEN, IIT Palakkad
Organizer: Monika BHATTACHARJEE

11:15 Convergence and Asymptotic Freeness of Missing Data Matrices
Kartick ADHIKARI, *IISER Bhopal*

11:40 Spectrum of Random Matrices with Exploding Moments
Indrajit JANA, *Indian Institute of Technology Bhubaneswar*

12:05 Large Sample Behaviour of High-Dimensional Kendall's Correlation Matrices with Dependence
Priyanka SEN, *IIT Palakkad*

29.M2.3.S073 INVITED-TOPICAL: Statistical Methods in Machine Learning and AI *Venue:* TBA

Time : **11:15 - 12:30**
Chair: Subhrajyoty ROY, Washington University in St. Louis, USA
Organizer: Subho MAJUMDAR

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11:15 Optimal Adaptive Sampling for Active Learning and Applications to Prompt Routing
Subhrajyoty ROY, *Washington University in St. Louis, USA*

11:40 A Tale of Paired Comparison Models
Rahul SINGH, *IIT Delhi*

12:05 Fundamental Limits on Adversarial Robustness via Optimal Transport
Arjun BHAGOJI, *Indian Institute of Technology Bombay*

29.M2.4.S026 INVITED-TOPICAL: From Foundations to Frontiers: Celebrating C.R. Rao's Blueprints for Modern Data Science *Venue:* TBA

Time : **11:15 - 12:30**
Chair: Ravindra KHATTREE, Oakland University
Organizer: Akanksha KASHIKAR

11:15 Supervised Learning and Collective Classification for a Group of Observations: An Eigen-Structure Approach
Ravindra KHATTREE, *Oakland University*

11:40 Exploring the In-Built Scope of Professor C.R. Rao's Concept of Weighted Distribution Through the Analysis of Size-Biased Data Arising in Oil Field Exploration Experiments
Uttara NAIK-NIMBALKAR, *Savitribai Phule Pune University*

12:05 The Damaged Random Variable Model by Professor C.R. Rao(1963) Revisited: An Ontological View of Partial Damage, Ascertainment, Characterization
Akanksha KASHIKAR, *Dept of Statistics, Savitribai Phule Pune University*

29.M2.5.S075 INVITED-TOPICAL: Contemporary Topics in Sequential, Survival and Dependence Modelling *Venue:* TBA

Time : **11:15 - 12:30**
Chair: Sudeep BAPAT, Indian Institute of Technology Bombay
Organizer: Sayantee JANA

11:15 Sequential Estimation under Competing Risks with Asymmetric Loss
Sudeep BAPAT, *Indian Institute of Technology Bombay*

11:40 Likelihood-Based Regression for Weibull Accelerated Life Testing Model Under Censored Data
Raghu Nandan SEN, *IIT Kanpur*

12:05 Integration of Probability and Non-Probability Sampling for Adaptive Cluster Sampling
Pal SANGHAMITRA, *Department of Statistics, West Bengal State University, West Bengal, India*

29.M2.6.S076 INVITED-TOPICAL: A Bayesian Perspective on Modern Problems *Venue:* TBA

Time : **11:15 - 12:30**
Chair: Debdeep PATI, University of Wisconsin-Madison
Organizer: SPC IISA

11:15 Probabilistic Symbolic Regression for Equation Discovery via Operator-Induced and Regularized Symbolic Forests
Debdeep PATI, *University of Wisconsin-Madison*

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11:40 TBA
Steffen VENTZ, *TBA*

12:05 Bayesian Graphical Models under Positivity Constraints: A Scalable Generalized Likelihood Approach
Kshitij KHARE, *University of Florida*

29.M2.7.S077 INVITED-TOPICAL: Modern Statistical Methods for Regression and Missing Data *Venue:* TBA

Time : **11:15 - 12:30**
Chair and Organizer: *Paromita DUBEY, University of Southern California*

11:15 TBA
Kabir VERCHAND, *TBA*

11:40 Curvature-Based Anomaly Detection on Learned Statistical Geometries
Lekha PATEL, *Sandia National Laboratories*

12:05 Neyman-Orthogonal Comparison of Regression Functions
Paromita DUBEY, *University of Southern California*

29.M2.8.S118 INVITED-SPECIAL: Special Lectures *Venue:* TBA

Time : **11:15 - 12:25**

11:15 A Research Journey in Partial Orderings and Statistical Inference: Applications in Bivariate Settings
Isha DEWAN, *Indian Statistical Institute, New Delhi*

11:50 Artificially Intelligent BioSpatial Modeling: Decoding Tumor Geography
Veera BALADANDAYUTHAPANI, *University of Michigan*

29.M2.9.S130 SHORT-COURSE: Singular Spectrum Analysis and Time Series Analysis Across Domains *Venue:* TBA

Time : **11:15 - 12:30**
Short Course: *5*

11:15 Syamala KRISHNANNAIR

Time : **12:30 - 14:00 Lunch** *Venue:* TBA

29.A1.1.S119 PLENARY: Bahadur Lecture *Venue:* TBA

Time : **14:00 - 15:00**

14:00 James M. ROBINS

Parallel sessions *(A2)* *Time :* **15:10 - 16:30**

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29.A2.1.S078 INVITED-TOPICAL: ISI Session: Recent Advances in Official Statistics *Venue:* TBA

Time : **15:10 - 16:25**
Chair: Diganta MUKHERJEE, Indian Statistical Institute
Organizer: Nalini RAVISHANKER

15:10 Rethinking District-Level GDP Measurement in India: From Apportionment to Small Area Estimation
Santanu PRAMANIK, *Centre for Effective Governance of Indian States (CEGIS)*

15:35 Demand Analysis with a Thin Price Sample
Diganta MUKHERJEE, *Indian Statistical Institute*

16:00 Small Area Estimation in the Era of Alternative Data, Machine Learning and Artificial Intelligence
Monica PRATESI, *University of Pisa - Dept of Economics and Management*

29.A2.2.S079 INVITED-TOPICAL: Recent Advances in Methods for Genomic and Multi-Omics Data Analysis *Venue:* TBA

Time : **15:10 - 16:25**
Chair: Saonli BASU, TBA
Organizer: Swati BISWAS

15:10 TBA
Saonli BASU, *TBA*

15:35 asmbPLS: Adaptive Sparse Multi-Block PLS for Robust Survival Prediction in Multi-Omics Studies
Susmita DATTA, *University of Florida*

16:00 Validity and Efficiency of P-Values for Large-Scale Detection of Cross-Phenotype Associations in Genomics
Samsiddhi BHATTACHARJEE, *National Institute of Biomedical Genomics*

29.A2.3.S080 INVITED-TOPICAL: Recent Advances in Probabilistic Graphical Models *Venue:* TBA

Time : **15:10 - 16:25**
Chair: Acharyya SATWIK, TBA
Organizer: Anindya BHADRA

15:10 TBA
Acharyya SATWIK, *TBA*

15:35 Bayesian Graphical Models under Positivity Constraints: A Scalable Generalized Likelihood Approach
Partha SARKAR, *Florida State University*

16:00 Discrete Autoregressive Switching Processes with Cumulative Shrinkage Priors for Graphical Modeling of Multivariate Time Series Data
Beniamino HADJ-AMAR, *University of South Carolina*

29.A2.4.S081 INVITED-TOPICAL: Advanced Methods for Modeling Complex Dependencies in High-Dimensional Data *Venue:* TBA

Time : **15:10 - 16:25**
Chair: Anish MUKHERJEE, Rice University
Organizer: Sharmistha GUHA

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15:10 **Testing for Correlation between Network Structure and High-Dimensional Node Covariates**
Keith LEVIN, *University of Wisconsin-Madison*

15:35 **Capturing Nonstationarity in Spatio-Temporal Data via Bayesian Nonparametrics**
Anish MUKHERJEE, *Rice University*

16:00 **TBA**
Shreya SINHA ROY, *TBA*

29.A2.5.S082 INVITED-TOPICAL: Statistical Detection and Testing in Modern Machine Learning

Venue: TBA

Time : **15:10 - 16:25**
Chair: Shivam KUMAR, University of Chicago
Organizer: Arnab AUDDY

15:10 **TBA**
Soham BONNERJEE, *TBA*

15:35 **Statistical Limits and Efficient Algorithms for Differentially Private Federated Learning**
Arnab AUDDY, *The Ohio State University*

16:00 **Sample complexity bounds for categorical Markov random fields via Discrete Diffusion**
Shivam KUMAR, *University of Chicago*

29.A2.6.S083 INVITED-TOPICAL: Interpretable Statistical Learning for Spatial Omics and Cancer Data

Venue: TBA

Time : **15:10 - 16:25**
Chair: Moumita CHAKRABORTY, University of Texas Medical Branch at Galveston, TX
Organizer: Shariq MOHAMMED

15:10 **Gpvibes: Bayesian Gaussian Process-Based Varying Coefficient Models for Incorporating Tumor Heterogeneity in Clinicogenomic Studies**
Rupam BHATTACHARYYA, *Google LLC*

15:35 **ISPAT-3D: Spatially Varying Conditional Volumetric Network Estimation for 3D Tumor Imaging**
Sagnik BHADURY, *University of Pennsylvania*

16:00 **TBA**
Samriddha LAHIRY, *TBA*

29.A2.7.S084 INVITED-TOPICAL: Statistical Learning Theory and Application

Venue: TBA

Time : **15:10 - 16:25**
Chair and Organizer: Arka BANERJEE, Indian Institute of Science, Bengaluru

15:10 **Reliability Analysis of the General Class of Inverted Exponentiated Family Using Tampered Random Variable Model**
Farah SULTANA, *Indian Institute of Information Technology*

15:35 **Statistical Inference in High-Dimensional Poisson Regression with Applications to Mediation Analysis**
Prabrisha RAKSHIT, *Indian Institute of Management Udaipur*

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16:00 TBA
Amitabha TRIPATHI, *TBA*

29.A2.8.S086 INVITED-TOPICAL: Statistical Advances in Genetic Association and Causal Inference: From GWAS to Mendelian Randomization *Venue:* TBA

Time : **15:10 - 16:25**
Chair : Debashree RAY, Johns Hopkins University
Organizer : Suprateek KUNDU

15:10 Scalable Penalized Likelihood Inference in a Family-Based GWAS
Debashree RAY, *Johns Hopkins University*

15:35 TBA
Arunabha MAJUMDAR, *TBA*

16:00 TBA

Time : **16:30 - 17:00 Break** *Venue:* TBA

Parallel sessions *(A3)*

Time : **17:00 - 18:30**

29.A3.1.S085 INVITED-TOPICAL: Reliability and Survival Analysis *Venue:* TBA

Time : **17:00 - 18:15**
Chair : Prajamitra BHUYAN, Indian Institute of Management Calcutta
Organizer : Abhyuday MANDAL

17:00 TBA
M. Zafar ANIS, *TBA*

17:25 Stress Strength Analysis
Arnab KOLEY, *IIM Indore*

17:50 TBA
Tanmay SEN, *TBA*

29.A3.2.S087 INVITED-RAPID: Large-Scale Statistical Learning, Sequential Optimization and AI in Clinical Development *Venue:* TBA

Time : **17:00 - 18:30**
Chair : Avishek GHOSH, IIT Bombay
Organizers : Avishek GHOSH and Rasmita ARDU

17:00 Linear Models in the Quadratic Asymptotic Regime
Parthe PANDIT, *IIT Bombay*

17:15 Advances in Single and Multi Index Bandits
Avishek GHOSH, *IIT Bombay*

17:30 Anytime-Valid Stopping for Inference-Time Alignment
Sayak RAY CHOWDHURY, *IIT Kanpur*

17:45 From Design Questions to Simulation-Ready Code: Grounded AI Assistants for Clinical Trial Design
Subhajit SENGUPTA, *Cytel Inc.*

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18:00 **Generative AI in Optimising Clinical Reporting Workflows**
Rasmita ARDU, *Pfizer*

18:15 **A Nonparametric Bayesian Local–Global Model for Enhanced Adverse Event Signal Detection in Spontaneous Reporting System Data**
Saptarshi CHAKRABORTY, *Heriot-Watt University, Edinburgh, United Kingdom*

29.A3.3.S088 INVITED-RAPID: Lifetime Modelling, Reliability and Bayesian Methods for Censored, Imaging and Time-Indexed Data *Venue:* TBA

Time : **17:00 - 18:30**
Chair : Leena KULKARNI, NMIMS University
Organizers : Leena KULKARNI and Shariq MOHAMMED

17:00 **TBA**
Savitri JOSHI, *TBA*

17:15 **A Novel Approach to Random Censoring under Competing Risk Model**
Rashmi BUNDEL, *Department of Statistics, University of Rajasthan, Jaipur, Rajasthan, India*

17:30 **Deep Weibull Proportional Hazards Model for Competing Risks with Masked Causes**
Himanshu RAI, *Department of Statistics, University of Delhi, India*

17:45 **Objective Bayesian Inference for Recall-Based Time-to-Event Data: Applications to Survey Studies**
Vikas BARNWAL, *Pfizer Healthcare India Pvt Ltd*

18:00 **TBA**
Soumya SAHU, *TBA*

18:15 **TBA**

29.A3.4.S089 CONTRIBUTED: Spatio-Temporal Modelling and Extremes: Rainfall, Groundwater and Housing *Venue:* TBA

Time : **17:00 - 18:30**
Chair : Shreyasi CHATTERJEE, Presidency University, Kolkata
Organizer : SPC IISA

17:00 **A Mutual Information Approach for Measuring Spatial Dependence**
Shreyasi CHATTERJEE, *Presidency University, Kolkata*

17:15 **Spatio-Temporal Rainfall Modelling and Forecasting for the Cauvery Delta Zone of Tamil Nadu**
Gowthami K, *PSG College of Arts & Science, Coimbatore*

17:30 **Predictive Modeling of Zero Inflated Count Data with Spatio-Temporal Effects**
Shaishavi SABNIS, *NSOMASA, NMIMS University, Mumbai*

17:45 **A Scalable Spatio-Temporal Nearest-Neighbor Gaussian Process Approach for Modeling the Green Premium in House Prices**
Shagun SRIVASTAVA, *Indian Institute of Management Bangalore*

18:00 **Extreme Value Theory-Driven Characterization of Extreme Monsoon Rainfall in the Northwest Himalaya: 1984-2024**
Vedant VIBHOR, *IIT Mandi*

18:15 **Statistical Challenges and Modeling of Spatio-Temporal Groundwater Data in India**
Shiv Kumar YADAV, *Indian Statistical Institute, Delhi (ISI D)*

DRAFT

29.A3.5.S090 CONTRIBUTED: Bootstrap, Testing and Prediction Methods for Biomedical and Sports Data *Venue:* TBA

Time : **17:00 - 18:30**
Chair: Shreyashi BASAK, BITS Pilani K K Birla Goa Campus
Organizer: SPC IISA

17:00 Asymptotic Accuracy of a Bootstrap Test of Homogeneity in Fisher-von Mises-Langevin Populations
Shreyashi BASAK, *BITS Pilani K K Birla Goa Campus*

17:15 A Likelihood Ratio Test for Treatments Better than Control in a Heteroscedastic Two-Way ANOVA
Susmita CHAWLIA, *IIT Kharagpur*

17:30 Fusion: Sample-Size-Adaptive Multi-Omics Integration for Cancer Subtype Classification
Mahesh DIVAKARAN, *Amity University, Uttar Pradesh, Lucknow*

17:45 Beyond the Scoreboard: Understanding Batting Styles in T20 Cricket through Commentary-Derived Analytics
Shobhit GUPTA, *IIM Bangalore*

18:00 DAG-Informed Prediction Under Small Sample Sizes: Stability and Parsimony in Preeclampsia Risk Prediction
Sneha KUMARI, *Indian Institute of Technology Roorkee*

18:15 Spatial Risk Prediction: A Generalized Linear Model Approach
Shubham Sanjay NIPHADKAR, *University of Haifa*

29.A3.6.S091 CONTRIBUTED: Design of Experiments and Survey Sampling Methods *Venue:* TBA

Time : **17:00 - 18:30**
Chair: Archana A, ICAR-Indian Agricultural Research Institute
Organizer: SPC IISA

17:00 Efficient Designs for Asymmetrical Factorial Experiments in Small Blocks
Archana A, *ICAR-Indian Agricultural Research Institute*

17:15 Construction and Algorithmic Implementation of Orthogonal Screening Design for $s_1^a \times s_2^b$
Vyshna I C, *ICAR- Indian Agricultural Research Institute*

17:30 Efficient Three Level Factorial Designs for Large Run Size Experiments
Vankudoth KUMAR, *Indian Agricultural Research Institute*

17:45 Neutrosophic Model Assisted Estimator for Finite Population Parameters under Probability Proportional to Size Sampling Design
Neha PURWAR, *ICAR- Indian Agricultural Research Institute, New Delhi*

18:00 On Asymptotic Optimality of Sequential Gini Index Estimation Under Complex Survey Design with Sub-Stratification
Shivam SHIVAM, *Department of Mathematics, Indian Institute of Technology Jodhpur*

18:15 TBA

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29.A3.7.S126 INVITED-RAPID: Advances in Complex Data Modeling and Inference *Venue:* TBA

Time : **17:00 - 18:20**
Chair: S K UPADHYAY, Banaras Hindu University
Organizer: Manoj Kumar CHAUDHARY

17:00 A Three-Stage Drop-the-Losers Design with Early Futility Stopping for Estimation of the Selected Treatment Effect
Neeraj MISRA, *Indian Institute of Technology Kanpur, Uttar Pradesh*

17:20 Improved Eigen-Decomposition Estimation for Dynamic Space-Time Panels
Anoop CHATURVEDI, *University of Allahabad, Prayagraj, India*

17:40 Bivariate Current Status Data with Competing Risks: Parametric Hazards and Nonparametric Frailty
Anup DEWANJI, *Indian Statistical Institute, Kolkata*

18:00 A Bayesian Model Averaging Approach: Application to Forecasting Food Inflation in India
Arvind SHRIVASTAVA, *Reserve Bank of India*

29.A3.8.S128 INVITED-RAPID: Modern Statistical Process Monitoring: Theory, Applications and Paradigms *Venue:* TBA

Time : **17:00 - 18:20**
Chair: Umesh SINGH, Banaras Hindu University
Organizer: Nirpeksh KUMAR

17:00 Modern Statistical Process Monitoring: Some Developments
Subhabrata CHAKRABORTI, *The University of Alabama, USA*

17:20 The Bayesian Control Chart with -Contaminated Priors: A Robust Performance
Nirpeksh KUMAR, *Banaras Hindu University, Varanasi*

17:40 ARL-Unbiased Bayesian Control Charts Using Various Loss Functions
Amita BARANWAL, *Amity University, Lucknow, India*

18:00 Time-Between-Events Control Charts: A Robust Bayesian Approach with E-Contaminated Priors
Tribhuvan SINGH, *SHUATS, Prayagraj, India*

DRAFT

Wednesday December 30

Time : **08:00 - 09:15 Breakfast** *Venue:* TBA

Parallel sessions *(M1)* *Time :* **09:20 - 11:00**

30.M1.1.S092 INVITED-TOPICAL: Innovations in Methods for Complex Time-to-Event Data *Venue:* TBA

Time : **09:20 - 10:35**
Chair: Somnath DATTA, Univ of Florida
Organizer: Sanjib BASU

09:20 A Comparative Review of Survival Analysis in the AI Era Along 2 with a Novel Model Based on Multiple Imputation
Somnath DATTA, *Univ of Florida*

09:45 A Promotion Time Cure Rate Frailty Model for Clustered Interval Censored Data
Sandip BARUI, *Indian Statistical Institute*

10:10 On Estimating and Exploiting Data Intrinsic Dimension under the Manifold Hypothesis
Antonietta MIRA, *Università della Svizzera Italiana and Insubria University*

30.M1.2.S093 INVITED-TOPICAL: Modern Statistical Methods for Functional, Semiparametric, and Dependent Data *Venue:* TBA

Time : **09:20 - 10:35**
Chair and Organizer: Sanvesh SRIVASTAVA, The University of Iowa

09:20 Residential Real Estate Market Dynamics in Bengaluru: Do Residuals Hold the Key?
Kapil GUPTA, *Indian Institute of Management Kozhikode*

09:45 Two-Stage Ensemble Clustering of Functional Data Using Random Projections
Anirvan CHAKRABORTY, *IISER Kolkata*

10:10 TBA

30.M1.3.S094 INVITED-TOPICAL: Foundations of Experimental Design *Venue:* TBA

Time : **09:20 - 10:35**
Chair: Cini VARGHESE, ICAR-Indian Agricultural Statistics Research Institute
Organizer: Abhyuday MANDAL

09:20 Tri-Hierarchical Incomplete Block Design
Nehatai AGASHE, *Junagadh Agricultural University, Junagadh Gujarat*

09:45 Algorithmic Construction and Generation of Uniform Designs for Computer Experiments
Ashutosh DALAL, *Research Associate, ICAR-CMFRI*

10:10 Response Surface Designs
Ankita VERMA, *ICAR - Indian Agricultural Statistics Research Institute*

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30.M1.4.S095 INVITED-RAPID: Evidence-Based Statistical Modelling, Reliability and Statistical Process Control *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Bhattacharjee ABHISHEK, TBA
Organizers: Sayantee JANA and Shovan CHOWDHURY

09:20 TBA
Bhattacharjee ABHISHEK, *TBA*

09:35 TBA
Kaushik JANA, *TBA*

09:50 TBA
Dipali MESTRY, *TBA*

10:05 Comparisons Between Coherent Systems of Dependent Components Having Redundancy Allocations at System and Component Level
Amarjit KUNDU, *Professor, Department of Mathematics, Raiganj University, Raiganj, West Bengal, India*

10:20 A Studentized Bootstrap Control Chart for Monitoring Truncated Beta Process Percentiles
Bidhan MODOK, *Department of Statistics and Data Science, Indian Institute of Technology Kanpur*

10:35 TBA

30.M1.5.S096 INVITED-RAPID: Time-Changed Stochastic Processes, Stochastic Frontiers and Survival Analysis *Venue:* TBA

Time : **09:20 - 10:50**
Chair: Mostafizar KHANDAKAR, Indian Institute of Information Technology Guwahati
Organizers: Mostafizar KHANDAKAR and Asha GOPALAKRISHNAN

09:20 Extension of Fractional Poisson Process, Birth Process and Death Process
Mostafizar KHANDAKAR, *Indian Institute of Information Technology Guwahati*

09:35 Time-Changed Compound Poisson Process
Sayan GHOSH, *BITS Pilani, Hyderabad Campus*

09:50 Transient Probabilities of a Fractional Birth-Death Process
Pradeep VISHWAKARMA, *Indian Statistical Institute*

10:05 Cost Efficiency of Commercial Banks in Guyana: A Stochastic Frontier Analysis
Vincent RAJA A, *University of Guyana*

10:20 Bayesian Estimation of Cure Rate in Non-Homogeneous Poisson Process Cure Rate Model
Soorya SURENDRAN, *Novartis Healthcare Private Limited*

10:35 Estimation of P(X<Y) Using Copula Models with Burr XII Marginal Distributions
Prakash CHANDRA, *Birla Institute of Technology, Mesra*

30.M1.6.S097 INVITED-RAPID: Reliability Theory and Applications *Venue:* TBA

Time : **09:20 - 10:50**
Chair and Organizer: Farha SULTANA, Indian Institute of Information Technology

09:20 Determinants of Infant Mortality in Madhya Pradesh: Evidence from NFHS-5
Tamalika KOLEY, *Indian Institute of Management Lucknow*

DRAFT

09:35 Inference of the Recursive Stage Life Testing Model with and without Order Restrictions
Raj Kamal MAURYA, *Sardar Vallabhbhai National Institute of Technology Surat*

09:50 A Semiparametric Step-Stress Competing Risk Model Assuming Piecewise Monotone Hazard Function
Debashis SAMANTA, *Aliah University, Newtown, Kolkata, India*

10:05 TBA

10:20 TBA

10:35 TBA

30.M1.7.S098 CONTRIBUTED: Machine Learning Applications: Imaging, Sequences, Remote Sensing and Language

Venue: TBA

Time : **09:20 - 10:50**
Chair : Shatrughna CHAURASIA, Center for Applied Research in Data Science, IIT ROPAR (Punjab)
Organizer : SPC IISA

09:20 Two-Dimensional Functional Linear Discriminant Analysis for Brain MRI Classification
Shatrughna CHAURASIA, *Center for Applied Research in Data Science, IIT ROPAR (Punjab)*

09:35 A Sequence Based Deep Learning Model for Protein Protein Interaction Prediction
Sheetal DAGAR, *ICAR Indian Agricultural Statistics Research Institute*

09:50 Statistical and Sequence-Based Modeling of Inflectional Stem Allomorphy in Marathi Nouns
Rutuja KORE, *Department of Statistics, Savitribai Phule Pune University*

10:05 Performance Evaluation of Prithvi-EO-2.0 for Flood Mapping in Low-Elevation Areas of the North-Western Himalayas
Navdeep KUMAR, *Indian Institute of Technology, Mandi*

10:20 Efficient Multiclass Classification with Paired Comparisons
Arshi RIZVI, *Indian Institute of Technology Delhi*

10:35 TBA

30.M1.8.S129 INVITED-RAPID: Bayesian Analysis of Reliability and Lifetime Models Through Recent MCMC Approaches

Venue: TBA

Time : **09:20 - 10:40**
Chair : K K SINGH, Banaras Hindu University
Organizer : Rakesh RANJAN

09:20 A Semiparametric Bayesian Regression Framework for Analysing Dependent Current Status Data and Applications to Survival Data
Vikas Kumar SHARMA, *Banaras Hindu University, Varanasi*

09:40 Product Spacing Based Inferences on Stress-Strength Reliability Parameter From X-Gamma Exponential Distribution Using Doubly Censored
Abhimanyu Singh YADAV, *Banaras Hindu University, Varanasi*

10:00 Parametric Bayesian Analysis of AFT Models for Left-Truncated and Interval-Censored Data Using HMC Algorithm
Rakesh RANJAN, *Banaras Hindu University, Varanasi*

10:20 Bayesian Estimation of Generalised Eyring Models
Rijji SEN, *Department of Statistics, Behala College, Kolkata*

DRAFT

Parallel sessions *(M2)*

Time : **11:15 - 13:00**

30.M2.1.S099 INVITED-TOPICAL: Emerging Statistical Methods and Applications

Venue: TBA

Time : **11:15 - 12:30**
Chair : Arnab KOLEY, IIM Indore
Organizer : Abhyuday MANDAL

11:15 **A Novel Characterization of Structures in Smooth Regression Curves: From a Viewpoint of Persistent Homology**
Subhra Sankar DHAR, *IIT Kanpur, India*

11:40 **Optimizing Offgrid Microgrid Utilizing K-Medoids Clustering for Cost Reliability Trade off**
Aritra GHOSH, *B.P.Poddar Institute of Management and Technology*

12:05 **Optimal Row Column Designs for Three Level Factorial Experiments in Three Rows**
Sukanta DASH, *ICAR-Indian Agricultural Statistics Research Institute*

30.M2.2.S042 INVITED-TOPICAL: AI Adoption Trends Among Statisticians in the Industry and Social Sciences

Venue: TBA

Time : **11:15 - 12:30**
Chair and Organizer : Jyotirmoy DEY, TBA

11:15 **TBA**
Suparna DHAR, *TBA*

11:40 **Issues and Challenges in AI Adoption: Evidence from Indian Enterprises and Global Trends among Firms and Central Banks**
Pratik MITRA, *RBI*

12:05 **Agentic AI as a Working Partner to the Clinical Trial Statistician: Opportunities and Guardrails**
Nabanita MUKHERJEE, *AbbVie Inc.*

30.M2.3.S101 INVITED-TOPICAL: Recent Advances in Inference for Dependent Data

Venue: TBA

Time : **11:15 - 12:30**
Chair and Organizer : Arkajyoti SAHA, University of California, Irvine

11:15 **TBA**
Sumanta BASU, *TBA*

11:40 **Doubly-Unlinked Regression for Dependent Data**
Debangan DEY, *Texas A&M University*

12:05 **Some Results on the Limiting Distribution of the Empirical Degree Distribution Function for Sparse Networks**
Arindam CHATTERJEE, *Indian Statistical Institute, Delhi*

30.M2.4.S127 INVITED-RAPID: Bayesian Modeling and Copula Methods in Design and Reliability

Venue: TBA

Time : **11:15 - 12:30**
Chair : Rajesh SINGH, Banaras Hindu University
Organizer : Alok KUMAR

DRAFT

11:15 **Online Variational Bayesian Inference for Degradation Modelling and Remaining Useful Life Prediction**
Ankush SHARMA, *St. Joseph's University, Bengaluru, India*

11:30 **Bayesian Modeling of Dependent Competing Risks Using BB1 Copula**
Ankita GUPTA, *Mahila Mahavidyalaya Banaras Hindu University, Varanasi*

11:45 **Expert-Informed Bayesian STARMA Modeling Using Quantile-Based Prior Elicitation**
Reema SHARMA, *Banaras Hindu University, Varanasi*

12:00 **Optimal Experimental Designs for the Conway–Maxwell–Poisson Regression Model**
Ashok KUMAR, *University of Lucknow, Lucknow, Uttar Pradesh*

12:15 **Modern Approaches to Copula-Based Regression Models**
Ashok Kumar PATHAK, *Central University of Punjab, Bathinda, India*

30.M2.5.S103 CONTRIBUTED: Functional, Spatial and Genomic Data: Clustering, Gaussian Processes and Joint Models

Venue: TBA

Time : **11:15 - 12:45**
Chair: Kalins BANERJEE, University of Michigan
Organizer: SPC IISA

11:15 **A Robust Computational Framework for Identifying Copy Number Variations in Spatial Transcriptomics**
Kalins BANERJEE, *University of Michigan*

11:30 **Two-Stage Ensemble Clustering of Functional Data Using Random Projections**
Sourav CHAKRABARTY, *Indian Statistical Institute*

11:45 **Multiple Systems Estimation for Sparse Multi-State Data with Spatial Heterogeneity: Applications to HIV Surveillance**
Anusha CHAUDHURY, *University of Bath*

12:00 **A Study on Quasi-Periodic Gaussian Processes with Applications in Predictive Control and Generative Models**
Unnati NIGAM, *IIT Bombay*

12:15 **Bayesian Modeling of Tail Persistence under Extreme Value Models**
Nikita RAWAT, *University of Delhi*

12:30 **Joint Modelling of Longitudinal and Time-to-Event Data with a Non-Zero-Mean Gaussian Process and a Current-Value Association**
Shubham UPADHYAY, *Banaras Hindu University*

30.M2.6.S104 CONTRIBUTED: Lifetime Data, Competing Risks and Heavy-Tailed Distributions

Venue: TBA

Time : **11:15 - 12:45**
Chair: Abhiraj BHATTACHARYA, Banaras Hindu University
Organizer: SPC IISA

11:15 **Study of Statistical Properties of a Non-Monotonic Hazard Model: An Application to Real-Life Data from Engineering and Medical Sciences**
Abhiraj BHATTACHARYA, *Banaras Hindu University*

11:30 **Analysis of Partially Observed Dependent Competing Risks Model Using Marshall-Olkin Bivariate Distribution**
Chandan Kumar GUPTA, *Indian Institute of Technology Patna*

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11:45 **Estimating Heavy-Tailed Financial Distributions: An SNPE Approach to Parameter Estimation of Univariate Geometric Stable Distributions**
Chitturi NARESH, *VIT-AP University, Amaravati, Andhra Pradesh, India.*

12:00 **Semiparametric Approach for Multiple Step-Stress Competing Risks Model under Progressive Censoring**
Aman PRAKASH, *NIT Surat*

12:15 **Bivariate Power Function Distributions and Its Robust Estimation Techniques**
Sachin SACHDEVA, *School of Mathematics and Statistics, University of Hyderabad*

12:30 **A Semiparametric Analysis of Bivariate Left Truncated Right Censored Data**
Sourav SAHA, *IIT Guwahati*

30.M2.7.S105 CONTRIBUTED: Reliability, Sampling Plans and Degradation Modelling

Venue: TBA

Time : **11:15 - 12:45**
Chair : *Sakshi, Department of Statistics*
Organizer : *SPC IISA*

11:15 **Quantifying Uncertainty in Reliability-Based Shelf-Life Prediction of Fresh Fruits Under Variable Retail Storage Conditions**
Sakshi, *Department of Statistics*

11:30 **Testing Equality of Lower Partial Moments for Two-Sample and Paired Data**
Sumangal BHATTACHARYA, *Indian Statistical Institute, Delhi Centre*

11:45 **An Optimum Stage-Independent Multiple Sampling Plan Based on the Process Capability Index C_{py} Under Hybrid Censoring**
Rajat DAS, *Indian Institute of Technology Patna*

12:00 **Optimal Sequential Censoring for One-Shot Devices**
Sukanya DAS, *Oakland University*

12:15 **Degradation Analysis Based on Geometric Brownian Motion with Random Drift and Diffusion**
Barin KARMAKAR, *Indian Statistical Institute, Kolkata*

12:30 **Flexible Nonlinear Degradation Model with a Time-Scaled Wiener Process and Random Effects**
Subhadra KUMARI, *IIT Patna*

Time : **13:00 - 14:00 Lunch** *Venue:* TBA

DRAFT

Student Poster Competition

Date and time will be announced later

TBA.S122 STUDENT POSTER COMPETITION (Date and time will be announced later) *Venue:* TBA

Time : **To be announced**
Organizer : *SPC IISA*
Participants : *23*

1 **Bayesian Asymptotics and Related Variational Inference for CAR Copula Models with Spatially Varying Coefficients**
Sayan BHOWMIK, *IIT Kanpur*

2 **Latent Network on Network Bayesian Regression for Functional Neuroconnectivity**
Rishav CHAKRABARTI, *North Carolina State University*

3 **Universal Optimal Design**
Adarsh DUBEY, *IIT-Kanpur*

4 **Fast Searches for Signals in High Dimensional Data: Two Stage Selection Procedures and Their Statistical Operating Characteristics.**
Rajanya DUTTA, *Medical College of Wisconsin*

5 **On Multidimensional Elephant Random Walk with Stops and Random Step Sizes**
Shyan GHOSH, *Indian Institute of Technology Bhilai*

6 **Modeling Zero-Inflated Longitudinal Circular Data Using Bayesian Methods: Application to Ophthalmology**
Soutik HALDER, *Indian Statistical Institute, Kolkata*

7 **A Geometric Framework for Stochastic Interventions**
Debarghya JANA, *Iowa State University*

8 **Shape-Constrained Transfer Estimation for Matched Networks**
Arpan KUMAR, *North Carolina State University*

9 **A Network View of Geopolitical Alignment: Covariate-Assisted Community Detection in Multi-Modal UNGA Voting Networks**
Chirayata KUSARI, *Indian Statistical Institute, Kolkata*

10 **A Robust Persistent Homology: Trimming Approach**
Tuhin S MAHATO, *Indian Institute of Technology Kanpur*

11 **Monitoring the Weibull Shape Parameter with Estimated Parameters: Design and Performance Analysis**
Tanuja NEGI, *Banaras Hindu University*

12 **Robust Modeling of Extremes in the Presence of Inliers with Enhanced Tail Estimation**
Shivshankar Chandrakant NILA, *Indian Institute of Technology Tirupati*

13 **Combining Deep Learning and Gaussian Processes for Calibrating a Water Balance Model**
Anis PAKRASHI, *The Pennsylvania State University*

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14 On the Geometry of Distributional Treatment Effect Heterogeneity
Debartha PAUL, *Iowa State University*

15 A Scalable Neural Network Generalized Least Squares Framework for Multivariate Spatial Modeling
Debjit PAUL, *Indian Institute of Technology Kanpur*

16 On Telegraph Process with Generalized Mittag-Leffler Waiting Times and Velocity Driven by Random Trials
Rohini B POTE, *Indian Institute of Technology Bhilai*

17 Decision Influence and Authority in Large Language Models
Spandan ROY, *IIM Bangalore*

18 Robust Response-Adaptive Allocation in Multi-Arm Clinical Trials: A Minimum Density Power Divergence Approach
Sayoni ROYCHOWDHURY, *University of Florida*

19 Learning Preferences from the Past: Shape-Constrained Inference for Reinforced Binary Choice
Tamojit SADHUKHAN, *Indian Statistical Institute, Kolkata*

20 Quantile-Based Nonparametric Approaches to Mathai–Haubold Entropy Estimation
Bighneswar SAHOO, *National Institute of Technology Rourkela*

21 Stochastic Ordering Results between Two Finite Alpha-Mixture Models with Resilience-Scaled Components
Supriya SAHOO, *National Institute of Technology Rourkela*

22 Copula-Based Dependent Competing-Risk Analysis with Generalized Lifetime Marginals: An Application to Ice Hockey Data
Akshat SRIVASTAVA, *Shiv Nadar Institution of Eminence*

23 Multi-Ancestry Fine-Mapping of the TERT/CLPTM1L Locus and Its Pleiotropic Effects on Telomere Length, Blood Cells, Clonal Hematopoiesis, and Epigenetic Aging
Sarbani THAKUR, *Department of Public Health Sciences, University of Chicago*

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