

INTERNATIONAL INDIAN STATISTICAL ASSOCIATION

2024 IISA CONFERENCE



DEC 27 - DEC 31

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

KOCHI, KERALA, INDIA

Scientific Program



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Johnson & Johnson
Innovative Medicine



International Indian Statistical Association
Annual Conference
Cochin University of Science and Technology
Kochi, Kerala, India
27th - 31st December, 2024



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ASA Biopharmaceutical Section



From The President, India Chapter



Dear Delegates,

It is my privilege to welcome you to the 2024 Annual Conference of the International Indian Statistical Association (IISA) being held at the Cochin University of Science and Technology, a state government-owned autonomous university. This year's event is in the historic coastal city of Cochin, also known as Kochi, located in the beautiful state of Kerala, India.

The IISA 2024 conference promises to be a landmark event to close out the year as the Scientific Program Committee and the Local and International Organizing Committees have put in a lot of effort over the past several months to design the agenda and plan event logistics. The conference program will consist of four plenary talks, 3 special invited talks, over 120 invited and contributed sessions, poster sessions, and a student paper competition. This year, we expect over 500 participants and about 450 talks across plenary, invited and contributed sessions.

Beyond the formal agenda, the IISA conference provides ample opportunities for networking...reconnecting with friends and colleagues, initiating collaborations, and just for catching up. I also hope that you will be able to make some time to visit places of historical interest in this port city that was an important destination on the Spice Route and was visited by many nationalities over the last 600 years, including the Chinese, Portuguese, Dutch and the British. The city's rich historical legacy can be seen at Fort Kochi, which still retains the ambience of its colonial past. Here one can see ancient temples, churches and synagogues standing in complete harmony.

Once again, welcome to Cochin/Kochi. Enjoy the event and the city!

Debjit Biswas
President, India Chapter
International Indian Statistical Association



December 21, 2024

Dear Conference Participants and Committee Members,

I bring greetings and best wishes on behalf of the Board of Directors and the membership of the American Statistical Association as you convene for the 2024 International Indian Statistical Association (IISA) Conference in Kochi, Kerala. We value our collaborations with the IISA and are delighted to support the outstanding conferences that IISA hosts.

I am impressed by the comprehensive program you have organized, featuring four distinguished plenary speakers including the R. R. Bahadur Memorial Lecture, six special invited talks, and over 100 invited sessions. The addition of two innovative short courses and the student paper and poster competition demonstrates a commitment to nurturing the next generation of statisticians. The conference, including speakers who are leaders from academia and industry, reflects the breadth and depth of our field.

Your conference's structure encourages collaboration and knowledge exchange across different sectors of our profession – academia, industry, and research institutions. With over 400 anticipated attendees from around the world, this conference will provide an excellent opportunity for fostering new connections and strengthening existing ones in our global statistical community.

Congratulations on creating a program that celebrates the importance and diversity of statistical science.

With best wishes,

A handwritten signature in black ink that reads 'M. Ghosh Dastidar'. The signature is written in a cursive, slightly slanted style.

Madhumita Ghosh Dastidar
2024 President, American Statistical Association

At a Glance

Friday December 27

Time: 9:00 - 10:20

Conference Inauguration

SC Main Hall

Coffee Break 10:20 - 10:40

Time: 10:40 - 12:00

01.M2.I1	Exploring Spatial Frontiers: Unraveling Insights Through Theory and Applications	SC Main Hall
01.M2.I2	Cutting-Edge Computational Methods for Diverse Scientific Challenges	SC Seminar Hall
01.M2.I3	Causal Inference in Drug Development	SC Executive Hall
01.M2.I4	Advances in predictive modelling techniques and applications	DOE Auditorium
01.M2.I5	Topics in network analysis	DOE CL 1
01.M2.I6	Data Science in Fintech and Insurtech	DOE CL 2
01.M2.I7	Advances in Survey Methods and Designing of Experiments	DOE CL 3
01.M2.I8	Recent advances in analyzing complex data structures	DOE CL 4
01.M2.I9	Recent Advances in Statistical Prediction Problems	DSC Seminar Hall

Lunch 12:00 - 13:30

Time: 13:30 - 14:30

Plenary Lecture 1 Pandurang Kulkarni

SC Main Hall

Short Break 14:30 - 14:40

Time: 14:40 - 16:00

01.A1.I10	High and infinite dimensional inference	SC Seminar Hall
01.A1.I11	Statistics in Pediatric Drug Development	SC Executive Hall
01.A1.I12	Recent Advances in Time Series and Network Statistics	DOE Auditorium
01.A1.I13	Modern statistical methods for passively collected data from wearables/smartphones	DOE CL 1
01.A1.I14	Sustainability and Multi-Criteria Decision Making	DOE CL 2
01.A1.I15	Recent Advances in Random Matrix Theory	DOE CL 3
01.A1.I16	Advances in Machine Learning Methods	DOE CL 4

01.A1.I17 Recent Developments in Applied Probability DSC Seminar Hall

Coffee Break 16:00 - 16:30

Time: 16:30 - 17:50

Special Session 1 Felicitation Session Professor P. G. Sankaran SC Main Hall

01.E1.I18 Bayesian Structure Learning SC Seminar Hall

01.E1.I19 Statistical Methods in Health and Related Areas: Opportunities and Challenges SC Executive Hall

01.E1.I20 Topics in high dimensional and network data DOE Auditorium

01.E1.C1 Contributed Session 1 DOE CL 1

01.E1.C2 Contributed Session 2 DOE CL 2

01.E1.C3 Contributed Session 3 DOE CL 3

01.E1.C4 Contributed Session 4 DOE CL 4

01.E1.C5 Contributed Session 5 DSC Seminar Hall

Saturday December 28

Time: 9:00 - 10:20

Special Invited Session 1 Bhaswar Bhattacharyya, Madhu Mazumdar SC Main Hall

02.M1.I21 Random Matrices and Multivariate Distributions and their applications SC Seminar Hall

02.M1.I22 Innovations in spatial studies SC Executive Hall

Student Paper Competition 1 Application of Statistics and Data Sciences DOE Auditorium

02.M1.I23 Modern advances in statistical learning DOE CL 1

02.M1.I24 Advances in Cure Rate Modeling DOE CL 2

02.M1.I25 High-dimensional statistics, statistical signal processing, extreme value theory DOE CL 3

Coffee Break 10:20 - 10:40

Time: 10:40 - 12:00

Panel Discussion 1 CWS sponsored session on professional development at IISA 2024 SC Main Hall

02.M2.I26 Bayesian Methods for Survey Sampling and Macroeconomic Forecasting SC Seminar Hall

02.M2.I27 Cutting-Edge Approaches to Statistical Analysis: Insights from High-Dimensional Data, Clinical Studies, and Marketing Dynamics SC Executive Hall

Student Paper Competition 2 Probability and Theory of Statistics and Data Sciences DOE Auditorium

02.M2.I28 Statistical Methods for Business DOE CL 1

02.M2.I29 Statistical learning and quantification of ocean and climate signals DOE CL 2

02.M2.I30 Methodology for the Analysis of Structured Data DOE CL 3

02.M2.I31 Discrete probability, probabilistic methods, random graphs DOE CL 4

Lunch 12:00 - 13:30

Time: 13:30 - 14:30

Plenary Lecture 2 Sudipto Banerjee SC Main Hall

Short Break 14:30 - 14:40

Time: 14:40 - 18:00

Poster Session Students' Poster Competition Lobby

Time: 14:40 - 16:00

02.A1.I32 Recent advances in Machine Learning for Spatial Data Analysis SC Main Hall

02.A1.I33 Applications of Reliability Theory SC Seminar Hall

02.A1.I34 Recent Developments in Bayesian Modeling for Biostatistics and Health Data Science SC
Executive Hall

02.A1.I35 Advances in Statistical and Data Science Pedagogy DOE Auditorium

02.A1.I36 Interpretable Models for Omics Data Science and their Diverse Applications DOE CL 1

02.A1.I37 Statistical Applications in Management DOE CL 2

02.A1.I38 Recent Advances in Survival Analysis and Biostatistics DOE CL 3

02.A1.I39 Statistical Methods for High-Dimensional Complex Data DOE CL 4

02.A1.I40 Geometry and dynamics of random networks DSC Seminar Hall

Coffee Break 16:00 - 16:30

Time: 16:30 - 17:50

Memorial Session 1 In Memorium: Professor P. K. Sen SC Main Hall

02.E1.I41 Statistics and Machine Learning for Climate Extreme SC Seminar Hall

02.E1.I42 Statistical Methods for Complex Health data SC Executive Hall

02.E1.C6 Contributed Session 6 DOE Auditorium

02.E1.C7 Contributed Session 7 DOE CL 1

02.E1.C8 Contributed Session 8 DOE CL 2

02.E1.C9 Contributed Session 9 DOE CL 3

02.E1.C10 Contributed Session 10 DOE CL 4

Time: 18:30 - 20:00

Meeting 1 IISA General Body Meeting SC Seminar Hall

Sunday December 29

Time: 9:00 - 12:30

Short Course 1	Omics Data Science Workshop	DSC Seminar Hall
Time: 9:00 - 10:20		
Special Invited Session 2	Jennifer Clarke, Debashree Ray	SC Main Hall
03.M1.I43	Health Data Sciences	SC Seminar Hall
03.M1.I44	Application of empirical process theory in non-standard problems with independent and dependent data	SC Executive Hall
03.M1.I45	Modern regression methods with applications in various fields of science	DOE Auditorium
03.M1.I46	Reliability & Survival Analysis	DOE CL 1
03.M1.I47	Beyond the Noise: Collaborative Statistical Learning and Regularized Multivariate Regression for High-Dimensional Data Inference	DOE CL 2
03.M1.C11	Contributed Session 11	DOE CL 3

Coffee Break 10:20 - 10:40

Time: 10:40 - 12:00

Panel Discussion 2	Opportunities for Statisticians and other Data/AI/ML Scientists in the U.S. and India - A Panel Discussion	SC Main Hall
03.M2.I48	Topics in spatial statistics	SC Seminar Hall
03.M2.I49	Innovative Methods for Complex Statistical Problems	SC Executive Hall
03.M2.I50	Recent trends in statistical inference	DOE Auditorium
03.M2.I51	Advanced Bayesian multivariate methods	DOE CL 1
03.M2.I52	Test for Independence	DOE CL 2
03.M2.I53	Inference for high-dimensional data	DOE CL 3

Lunch 12:00 - 13:30

Time: 13:30 - 14:30

Behadur memorial lecture	Probal Chaudhuri	SC Main Hall
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Short Break 14:30 - 14:40

Time: 14:40 - 16:00

03.A1.I54	Recent advances in time series Analysis	SC Main Hall
03.A1.I55	Design and Learning	SC Seminar Hall
03.A1.I56	Statistical Methods in Child Health and Development Studies	SC Executive Hall
03.A1.I57	Advancements in Applied Probability and Statistical Modeling	DOE Auditorium
03.A1.I58	Recent Advancements in Theoretical Statistics and Machine Learning	DOE CL 1
03.A1.I59	Data Science in Sports	DOE CL 2

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| 03.A1.I60 | New Directions in Statistical Modeling and Inference: Predictive Inference, Likelihood-Based Inference, and Nonparametric Bayes | DOE CL 3 |
| 03.A1.C12 | Contributed Session 12 | DOE CL 4 |

Coffee Break 16:00 - 16:30

Time: 16:30 - 17:50

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| 03.E1.I61 | Recent Advances in Causal Inference and Observational Studies | SC Main Hall |
| 03.E1.I62 | Analysis of Statistical Methods for Complex Data | SC Seminar Hall |
| 03.E1.C13 | Contributed Session 13 | SC Executive Hall |
| 03.E1.C14 | Contributed Session 14 | DOE Auditorium |
| 03.E1.C15 | Contributed Session 15 | DOE CL 1 |
| 03.E1.C16 | Contributed Session 16 | DOE CL 2 |
| 03.E1.C17 | Contributed Session 17 | DOE CL 3 |
| 03.E1.C18 | Contributed Session 18 | DOE CL 4 |

Banquet and Awards Ceremony 19:00 - 22:00 Venue: J. W. Marriott Hotel, Kochi

Monday December 30

Time: 9:00 - 12:30

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| Short Course 2 | Interpretable and Interactive Machine Learning | DSC Seminar Hall |
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Time: 9:00 - 10:20

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| Special Invited Session 3 | Debashis Paul, Anish Sarkar | SC Main Hall |
| 04.M1.I63 | Bayesian methods in genetics and privacy | SC Seminar Hall |
| 04.M1.I64 | Theory and Computational Designs | SC Executive Hall |
| 04.M1.I65 | Advances in statistical machine learning | DOE Auditorium |
| 04.M1.I66 | Pushing the Boundaries of Statistical Analysis: New Methods for Complex Data | DOE CL 1 |
| 04.M1.I67 | Modeling the Untangling Threads: Unveiling Spatial, Behavioral, and Cure Rate Effects in Survival Data | DOE CL 2 |
| 04.M1.I68 | Models for Count Time series | DOE CL 3 |

Coffee Break 10:20 - 10:40

Time: 10:40 - 12:00

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|-----------|--|-------------------|
| 04.M2.I69 | Statistical Inverse Problems | SC Main Hall |
| 04.M2.I70 | Bayesian non-parametrics | SC Seminar Hall |
| 04.M2.I71 | Modeling Complex Biological and Medical Data | SC Executive Hall |
| 04.M2.I72 | Empirical Likelihood Inference for inequality measures | DOE Auditorium |
| 04.M2.I73 | Recent Advances in Sequential Methodologies | DOE CL 1 |

04.M2.I74	Statistical Modeling	DOE CL 2
04.M2.I75	Recent Advances in Quantile Regression and Applications	DOE CL 3
04.M2.I76	Statistical learning theory	DOE CL 4

Lunch 12:00 - 13:30

Time: 13:30 - 14:30

Special Session 2	P. Unnikrishnan Nair	SC Main Hall
04.L1.C19	Contributed Session 19	SC Seminar Hall
04.L1.C20	Contributed Session 20	SC Executive Hall

Short Break 14:30 - 14:40

Time: 14:40 - 16:00

Panel Discussion 3	Breaking Down Barriers and Cultivating a Culture of Collaboration and Leadership in Statistical Sciences: Enhancing Synergy for Collective Growth	SC Main Hall
04.A1.I77	Statistics in clinical research I	SC Seminar Hall
04.A1.I78	Theory and Computational Designs	SC Executive Hall
04.A1.I79	Recent Developments in Sequential Analysis and Statistical Reliability	DOE Auditorium
04.A1.I80	Bayesian computational advances	DOE CL 1
04.A1.I81	Frontiers of Statistical and Machine Learning	DOE CL 2
04.A1.I82	Semiparametric regression analysis of lifetime data	DOE CL 3
04.A1.C21	Contributed Session 21	DOE CL 4
04.A1.C22	Contributed Session 22	DSC Seminar Hall

Coffee Break 16:00 - 16:30

Time: 16:30 - 17:50

04.E1.I83	Topics in non-parametric statistics	SC Main Hall
04.E1.I84	Statistics in clinical research II	SC Seminar Hall
04.E1.I85	Recent developments in Design of Experiments	SC Executive Hall
04.E1.C23	Contributed Session 23	DOE Auditorium
04.E1.C24	Contributed Session 24	DOE CL 1
04.E1.C25	Contributed Session 25	DOE CL 2
04.E1.C26	Contributed Session 26	DOE CL 3
04.E1.C27	Contributed Session 27	DOE CL 4
04.E1.C28	Contributed Session 28	DSC Seminar Hall

Tuesday December 31

Time: 9:00 - 10:20

05.M1.I86	Diverse Applications of Statistics in Real-World Problems	SC Seminar Hall
05.M1.I87	Recent Advances in Time Series Analysis	SC Executive Hall
05.M1.I88	Recent Advances in Shape-Constrained Inference	DOE Auditorium
05.M1.I89	Statistics and the tech industry: some examples	DOE CL 1
05.M1.I90	Advanced Statistical Modeling Techniques for Time Series and Cross-Sectional Data with Dependence Structures	DOE CL 2
05.M1.I91	Statistical Methods for High-dimensional and Complex Datasets	DOE CL 3
05.M1.C29	Contributed Session 29	DOE CL 4
05.M1.C30	Contributed Session 30	DSC Seminar Hall

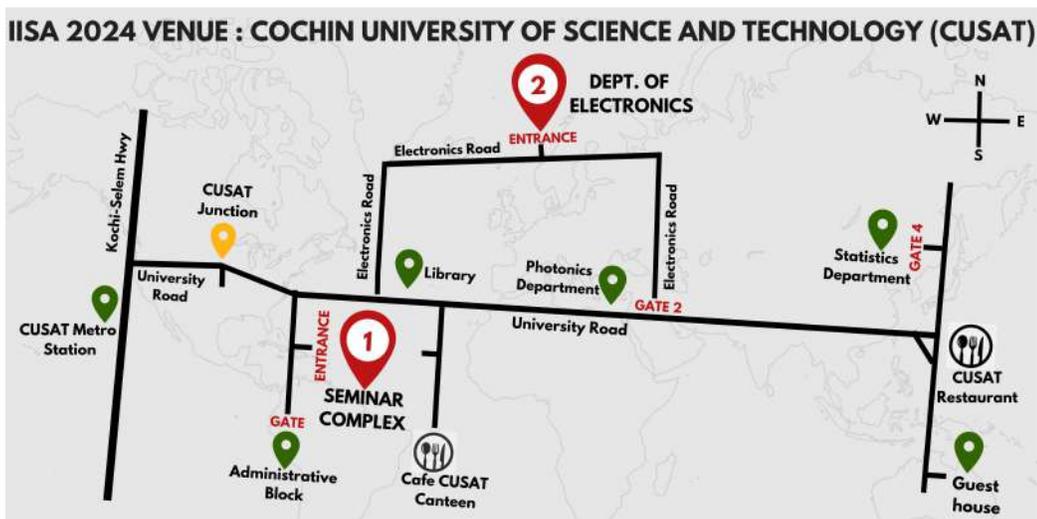
Coffee Break 10:20 - 10:40

Time: 10:40 - 11:40

Plenary Lecture 3	Bhramar Mukherjee	SC Main Hall
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Lunch 11:40 -

Venue Map:



Lecture Theatres:

Seminar Complex	Room Name	Abbreviation
	Main Hall	SC Main Hall
	Seminar Hall	SC Seminar Hall
	Executive Hall	SC Executive Hall
Department of Electronics Building	Room Names	Abbreviation
	Auditorium	DOE Auditorium
	Class Room 1	DOE CL 1
	Class Room 2	DOE CL 2
	Class Room 3	DOE CL 3
	Class Room 4	DOE CL 4
	Department of Computer Science Seminar Hall (2nd Floor)	DSC Seminar Hall