

# International Statistics Conference 2024

28 - 29 December, 2024

@ Cinnamon Lakeside Colombo, Sri Lanka



**Invited Group Sessions**



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with Applications

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Session 7: Data Science and Machine Learning Insights  
for Data Classification



Session Number: 01

Session Title: Biostatistics and Bioinformatics

- Day: Day 1
- Time: 1.30pm - 3.00pm
- Venue: King's Court
- Session Chair: Dr. Anurika De Silva

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- Speakers

1. Dr. Anurika De Silva

University of Melbourne, Australia



Abstract Title:

Demystifying estimands in non-inferiority trials in anaesthesia: Insights from the CHEWY trial

2. Dr. Rushani Wijesuriya

Murdoch Children's Research Institute and University of Melbourne, Australia



Abstract Title:

A roadmap for systematic identification and analysis of multiple biases in causal inference

3. Dr. Saritha Kodikara

University of Melbourne, Australia



Abstract Title:

Microbial network inference for longitudinal microbiome studies with LUPINE



Session Number: 02

Session Title: Time Series Analysis and Forecasting

- Day: Day 1
- Time: 1.30pm - 3.00pm
- Venue: Goodies Meeting Room 1
- Session Chair: Dr. Priyanga Talagala

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- Speakers

1. Prof. Choo Wei Chong

Universiti Putra Malaysia, Malaysia



Abstract Title:

Forecasting stock volatility using a robust GARCH-MIDAS model



## 2. Dr. Chaturangi Wickramaratne

International Water Management Institute (Global Headquarters), Sri Lanka



Abstract Title:

Modelling water quality in small scale aquaculture ponds using machine learning techniques

### 3. Dr. Li Li

University of Science & Technology Beijing, China



Abstract Title:

Feature-based intermittent demand forecast combinations: accuracy and inventory implications



Session Number: 03

Session Title: Bayesian and Machine Learning Methods  
with Applications

- Day: Day 1
- Time: 1.30pm - 3.00pm
- Venue: Duke's Court 1
- Session Chair: Prof. Saman Muthukumarana

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- Speakers

1. Ms. Nayanthi Karunanayake

University of Manitoba, Canada



Abstract Title:

A bayesian kalman filter model for estimating the actual sea surface level using the upward-looking sonar measurements

2. Dr. Shruti Kaushik

Syneos Health, India



Abstract Title:

Harnessing AI for transformative healthcare and pharmaceutical applications

3. Prof. Saman Muthukumarana  
University of Manitoba, Canada



Abstract Title:

Addressing class imbalance in classification tasks with applications

#### 4. Dr. Surani Matharaarachchi

University of Manitoba, Canada



Abstract Title:

Deep-ExtSMOTE: Integrating autoencoders for advanced mitigation of class imbalance in high-dimensional and big data classification



Session Number: 04

Session Title: Official Statistics and Data Ethics

- Day: Day 1
- Time: 1.30pm - 3.00pm
- Venue: Duke's Court 2
- Session Chair: Prof. Luca Di Gennaro Splendore

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- Speakers

1. Prof. Luca Di Gennaro Splendore

University of Malta, Malta



Abstract Title:

Democracy dies in darkness without official statistics

2. Mr. Kumafan S. Dzaan

Central Bank of Nigeria, Nigeria



Abstract Title:

Unleashing the power of data: Harnessing the synergy between official statistics and data science in Nigeria



Session Number: 05

Session Title: Blockchain and Omics Data Analytics

- Day: Day 2
- Time: 9.40am - 10.40am
- Venue: Duke's Court 1
- Session Chair: Associate Prof. Cuneyt Akcora

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- **Speakers**

1. Associate Prof. Cuneyt Akcora  
University of Central Florida, USA



Abstract Title:

Machine learning for blockchain data analysis: progress and opportunities

2. Associate Prof. Pratyaydipta Rudra  
Oklahoma State University, USA



Abstract Title:

Partitioning variance in generalized linear mixed models



Session Number: 06

Session Title: Statistics in Sports

- Day: Day 2
- Time: 11.00am - 1.00pm
- Venue: Goodies Meeting Room 1
- Session Chair: Dr. Harsha Perera

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- Speakers

1. Dr. Nirodha Epasinghe

Simon Fraser University, Canada



Abstract Title:

What does rally length tell us about player characteristics in tennis?

2. Mr. Hashan Pieris

Simon Fraser University, Canada



Abstract Title:

Analysis of the impact of unforced errors in tennis





### 3. Prof. Tim Swartz

Simon Fraser University, Canada



Abstract Title:

Identify soccer styles

4. Prof. Saman Muthukumarana  
University of Manitoba, Canada



Abstract Title:

Statistical modeling for estimating baseball batting metrics



Session Number: 07

Session Title: Data Science and Machine Learning Insights  
for Data Classification

- Day: Day 2
- Time: 11.00am - 1.00pm
- Venue: Duke's Court 1
- Session Chair: Dr. Surani Matharaarachchi

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- **Speakers**

1. Associate Prof. Dixon Vimalajeewa  
University of Nebraska Lincoln, USA



Abstract Title:

Unveiling new dimensions in gait dynamics through an advanced self-similar measure

2. Dr. Surani Matharaarachchi

University of Manitoba, Canada



Abstract Title:

Uncovering symptoms and predicting long COVID using social media tweets and clinical notes data: A machine learning approach

3. Associate Prof. Ritambhara Singh  
Brown University, USA



Abstract Title:

Single-cell data integration using optimal transport.

#### 4. Prof. Ashok Singh

University of Nevada, USA



Abstract Title:

Bayes Estimation of Prevalence of AIH in females in the Las Vegas Metropolitan Area

