

Thambawita Maddumage Sajith Priyankara

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Education

- **Ph.D. Candidate in Mathematics Concentration in Statistics**, Texas Tech University
Dissertation: *Structural and Compositional Statistical Analysis of Protein Binding Sites*
Committee: Dr. Leif Ellingson (Chair), Dr. Alexandre Trindade, Dr. Fangyuan Zhang
- **M.S. in Statistics**, Texas Tech University, 2021–2023
- **B.Sc. in Statistics**, University of Peradeniya, Sri Lanka, 2015–2019

Research Interests

Functional data analysis, object data analysis, statistics on manifolds, multivariate analysis, biostatistics

Research Projects

- **Ph.D. Dissertation:** Functional data analysis of protein binding sites using geometric statistics and high-dimensional modeling techniques.
- **An Analysis of the Decomposition of Distances Between Covariance Matrices of Protein Binding Sites:** First-author paper submitted to the *Journal of Applied Statistics* as part of Ph.D. dissertation research.
- **Air Pollution and Hospitalization:** Published first-author paper analyzing short-term effects of PM_{2.5}/PM₁₀ on respiratory disease hospitalizations in Kandy, Sri Lanka.
- **National Burden of Disease Study (Sri Lanka):** Estimating YLL from 1997 to 2014 using national civil registration data. (First author; manuscript in final draft stage)
- **BMI Trajectories and Asthma Risk:** Published second-author paper based on longitudinal analysis of parental BMI trajectories and asthma risk in offspring using Tasmanian Longitudinal Health Study data.

Professional and Teaching Experience

- **Graduate Part-Time Instructor (Instructor of Record)**, Department of Mathematics and Statistics, Texas Tech University, Aug. 2022 – Present
Responsible for full course delivery, exam preparation, grading, and student support for 80–120 undergraduate students per section. Courses taught:
 - MATH 2300 – Statistical Methods
 - MATH 1330 – Introductory Mathematical Analysis I
 - MATH 1331 – Introductory Mathematical Analysis II
- **Graduate Teaching Assistant**, Texas Tech University, Aug. 2021 – Aug. 2022
- **Research Assistant**, National Institute of Fundamental Studies, Sri Lanka, 2019 – Aug. 2021

Publications

Journal Articles

1. Priyankara, S., et al. (2021). Ambient PM_{2.5} and PM₁₀ Exposure and Respiratory Disease Hospitalization in Kandy, Sri Lanka. *Int. J. Environ. Res. Public Health*. (First author)
2. Bowatte, G., Bui, D.S., Priyankara, S., et al. (2022). Parental preconception BMI trajectories and asthma in offspring. *J. Allergy Clin. Immunol.* (Second author; equal contribution by first two authors)
3. Senarathna, M., Priyankara, S., et al. (2022). Measuring Traffic-Related Air Pollution Using Smart Sensors in Sri Lanka. *Geography, Environment, Sustainability*. (Second author)
4. Dalugama, C., Medagama, A., Wickramasinghe, A.S., Priyankara, S., Bowatte, G. (2023). Maternal and neonatal outcomes of symptomatic dengue infection. *Sri Lanka J. Child Health*. (Fourth author)

Selected Abstracts and Conference Presentations

1. Priyankara, S., Ellingson, L. (2024). Analysis of Covariance Matrix Distances in Protein Binding Sites. *Conference of Texas Statisticians*. (First author)
2. Priyankara, S., et al. (2021). PM_{2.5} Exposure and Respiratory Disease Hospitalization in Sri Lanka. *Lung Science Conference – European Respiratory Society*. (First author)
3. Priyankara, S., Abeysundara, S.P. (2020). Early Recognition of Premature Birth. *International Conf. on Environmental and Medical Statistics*. (First author)
4. Bowatte, G., Bui, D., Priyankara, S., et al. (2020). Parental BMI Trajectories and Offspring Asthma Risk. *TSANZ Annual Scientific Meeting*. (Third author)
5. Yasaratne, D., Priyankara, S., et al. (2021). Asthma in Pregnancy: A Case-Control Study. *European Respiratory Journal*. (Co-author)

Technical Skills

R Studio, MATLAB, STATA, Python, C, LaTeX,

Leadership and Community Involvement

- Volunteer, Refugee Services, Lubbock, Texas (June–July 2023)
- Committee Member, Sri Lankan Students Association, Texas Tech University (2022–2023)

Referees

- **Dr. Leif Ellingson**, Professor, Dept. of Mathematics and Statistics, Texas Tech University
Email: leif.ellingson@ttu.edu
- **Dr. Alexandre Trindade**, Professor, Dept. of Mathematics and Statistics, Texas Tech University
Email: alex.trindade@ttu.edu
- **Dr. Fangyuan Zhang**, Assistant Professor, Dept. of Mathematics and Statistics, Texas Tech University
Email: fangyuan.zhang@ttu.edu