

Aruni Jayathilaka, PhD

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Education and Research Experience

Doctor of Philosophy Degree in Applied Statistics

The University of Texas at San Antonio, San Antonio, TX

Supervisor: Dr. David Han

GPA 3.79, May 2022

Dissertation Title: Contributions to Modeling and Inference for k-level Step Stress Accelerated Life Tests Under Progressive Type-I Censoring with Lifetimes for a Log-location Scale Family.

Research Area: Reliability Engineering and Survival Analysis.

Master of Science Degree in Statistics

University of Texas at Dallas, Dallas, TX

GPA 3.694, August 2018

Master of Science Degree in Applied Statistics

Post Graduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka

GPA 3.89, July 2016

Research project: Analysis of Drought Using Trivariate Copulas in Hambanthota, Sri Lanka

Bachelor of Science Degree in Mathematics and Physics

Faculty of Science, University of Peradeniya, Peradeniya, Sri Lanka

GPA 3.38, December 2013

Career History

Assistant Professor of Instruction, *University of Rochester*, Rochester, NY, July 2022 - present

- Applied Statistics I, STA212, Fall 2022
- Computational Introduction to Statistics - DSCC 262, Fall 2022

Graduate Research/Teaching Assistant, *The University of Texas at San Antonio*, San Antonio, TX, September 2018 - May 2022

- Instructed Basic Statistics, STA1053, Summer 2021
- Graded homework, exams, and held office hours for Probability and Statistics, STA3513, Fall 2019 - May 2022
- Graded homework, exams, and held office hours for Applied Probability and Statistics for Engineers, STA2303, Fall 2019 - May 2022
- Graded homework and exams for master's level data algorithms courses, DA6213, Fall 2020 - May 2022
- Graded homework for Introduction to Statistical Inference, STA 5093, Fall 2018 - Fall 2019
- Composed lecture materials for Data Analytics Applications, DA 6813, Spring 2019

Graduate Teaching Assistant, *University of Texas at Dallas*, Dallas, TX, August 2016-August 2018

- Teaching problem sections, grading homework, quizzes and exams for Differential Calculus, Calculus I and Calculus II, and College algebra
- Answering students' problems, helping students to succeed for Statistics and Mathematics.

Teaching Assistant, *University of Peradeniya*, Peradeniya, Sri Lanka, June 2015 - June 2016

- Teaching Minitab, R, SAS practical classes.
- Teaching problem sections, grading homework, quizzes and exams for Mathematics and Statistics
- Answering students' problems, helping students to succeed for Statistics for Computer Science and Engineering.

Publications/Presentations/ Awards & Scholarships

Publications

- Jayathilaka, A. and Han, D. (2021). “Cost and time constrained design optimization for progressively Type-I censored simple step-stress accelerated life tests with the lifetimes from a log-location-scale family,” (under preparation for journal submission)
- Jayathilaka, A. and Han, D. (2021). “Inference with data augmentation for the progressively Type-I censored step-stress ALT under interval monitoring with the lifetimes from a log-location-scale family: comparison with continuous monitoring” (under preparation for journal submission)
- Jayathilaka, A. and Han, D. (2021). “Design optimization for progressively Type-I censored step-stress accelerated life tests with the lifetimes from a log-location-scale family,” (under preparation for journal submission)
- Jayathilaka, A. and Han, D. (2021). “Statistical inference for progressively Type-I censored step-stress accelerated life tests with the lifetimes from a log-location-scale family,” *Computational Statistics* (under review).
- Jayathilaka, A. and Han, D. (2021). “Inference for the progressively Type-I censored k-level step-stress ALT under interval monitoring with the lifetimes from a log-location-scale family,” in *JSM Proceedings – Quality and Productivity Section*. Alexandria, VA: American Statistical Association (in print).
- Jayathilaka, A. and Han, D. (2021). “Statistical inference for progressively censored step-stress ALT with log-location-scale distributions,” in *Proceedings of V Latin American Conference on Statistical Computing for Intelligent Decision Making*. Mexico City, Mexico: Instituto Tecnológico Autónomo de México, 169–178.
- Jayathilaka, A. and Han, D. (2020). “Inference for k-level Step-stress accelerated life tests under progressive type-I censoring with the lifetimes from a log-location-scale family,” in *JSM Proceedings – Quality and Productivity Section*. Alexandria, VA: American Statistical Association, 515–551.

Presentations

- Jayathilaka, A. and Han, D. (2021). Inference for the progressively Type-I censored k -level step-stress ALT under interval monitoring with the lifetimes from a log-location-scale family, *European Network for Business and Industrial Statistics (ENBIS) Conference*.
- Jayathilaka, A. and Han, D. (2021). Parameter estimation for progressively Type-I censored step-stress accelerated life tests under interval monitoring with the lifetimes from a log-location-scale family, *Joint Statistical Meetings of American Statistical Association*.
- Jayathilaka, A. and Han, D. (2021). Inference and design optimization for step-stress accelerated life tests with the lifetimes from a log-location-scale family, *Conference on Applied Statistics in Agriculture and Natural Resources*.
- Jayathilaka, A. and Han, D. (2021). Inference and design optimization for a step-stress ALT under a log-location-scale family, *European Network for Business and Industrial Statistics (ENBIS) Conference on Data Science in Process Industries*.
- Jayathilaka, A. and Han, D. (2021). Inference and design optimization for step-stress accelerated life tests with the lifetimes from a log-location-scale family, *Annual Conference of the Upstate New York Chapters of the American Statistical Association*.
- Jayathilaka, A. and Han, D. (2021). Statistical inference for progressively censored step-stress ALT with log-location-scale distributions, *ITAM-LASC-ISI Latin American Conference on Statistical Computing*.
- Jayathilaka, A. and Han, D. (2020). Statistical inference and design optimization for step-stress accelerated life tests under progressive Type-I censoring with the lifetimes from a log-location-scale family, *Joint Statistical Meetings of American Statistical Association*.

Awards & Scholarships

- Appointed as Graduate Research Assistant II, fall 2021
- Silver Award in the Application Category at *Annual Conference of the Upstate New York Chapters of the American Statistical Association* in Rochester, 2021, New York.
- Graduate School Professional development (GSPD) Award 2021, Graduate School, UTSA
- Graduate School Professional development (GSPD) Award 2020, Graduate School, UTSA
- PhD Student Excellence Fund 2020- Travel Fund, College of Business, UTSA

Selected Courses & Projects

- Multivariate Analysis
- Time Series Analysis, Modeling and Filtering
- Categorical Analysis
- Linear Statistical Models
- Probability Theory
- Statistical Inference
- Statistical and Machine Learning
- Simulation and Statistical Computing
- Bayesian Statistics

Computer/Software Skills

Proficiency: Microsoft Office, R, SAS, Minitab and LaTeX.

Familiarity: MATLAB, SPSS, STATA

Extracurricular activities & volunteering

- Food photography, styling & e-journalism
- Recipe development & cooking
- Volunteer with San Antonio Food Bank
- Hiking, forest walks, waterfall rappelling, travelling

References:

- Dr. David Han, PhD, Associate professor
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- Dr. Ram Tripathi, PhD, Professor
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