

EDUCATION

- 2019–2022 **Ph.D. in Mathematics, major in Statistics**, School of Mathematical and Statistical Sciences, Southern Illinois University, Carbondale, Illinois, USA.
Minors: Computational Mathematics and Applied Mathematics,
Dissertation Title: “Dimension Reduction in Multivariate Time Series via Envelope Methods”,
- 2017–2019 **M.S. in Mathematics, major in Statistics**, School of Mathematical and Statistical Sciences, Southern Illinois University, Carbondale, Illinois, USA.
Thesis Title: “Tensor Regression and Tensor Time Series Analyses for High Dimensional Data”.
- 2011–2015 **B.S. in Statistics and Operations Research**, University of Peradeniya, Peradeniya, Sri Lanka.
Minors: Mathematics and Computer Science

RESEARCH INTERESTS

Time series analysis, regression analysis, matrix and tensor data analysis, envelope models, dimension reduction, and reduced-rank models.

TEACHING EXPERIENCE

- Aug 2022 - **Assistant Professor of Statistics**, Department of Information Management and Business Analytics, Drake University, Des Moines, Iowa, USA.
To present

Courses Taught

- Introduction to R and SAS (Stat 40) - Fall 22, 23
- Statistics I (Stat 71) - Spring 2023
- Modern Regression (Stat 108) - Spring 23, 24
- Statistics II (Stat 72) - Fall 23 & Spring 24

- Aug 2017 - **Graduate Teaching Assistant**, School of Mathematical and Statistical Sciences, Southern Illinois University, Carbondale, Illinois, USA.
May 2022

Courses Taught

- Precalculus (Math 111) - Spring 2022
- Short Course in Calculus (Math 140) - Fall 2021 & Spring 2020
- Introduction to Statistics (Math 282) - Fall 2020
- Introduction to Statistics online (Math 282 online) - Summer 2021
- Contemporary Mathematics (Math 101) - Spring 2021 & Fall 2017
- Finite Mathematics online (Math 139 online) - Summer 2020 & 2019
- Finite Mathematics (Math 139) - Spring 2019 & Fall 2019

Courses Graded

- Mathematical Statistics in Engineering and Sciences (Math 483)
- Calculus II (Math 250)
- Calculus I (Math 151)
- Trig & Analytic Geometry (Math 109)
- College Algebra Enhanced (Math 106)

Other duties

- Tutoring undergraduate students, conducting proactive intervention sessions, and maintaining online grade book via D2L according to the guidelines of Center for Teaching Excellence at SIU.

June 2016 – June 2017 **Lecturer**, Department of Mathematics, Faculty of Science, University of Peradeniya, Sri Lanka.

Classes Taught

- Mathematics for Operations Research (MT 107)
- Integer Programming (MT 211)

Classes Graded

- Operations Research III (MT 315)

Other duties

- Prepare assignments and assist in conducting examinations for undergraduate students.

Jan 2016 - June 2016 **Instructor**, Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka.

- Duties covered conducting computer engineering lab classes and grading assignments for undergraduate students.

AWARDS and HONORS

- 2024 **Research Achievement Award**, Awarded by Drake University.
- 2024 **Social Impact Research Award**, Awarded by Drake University.
- 2022 **Dissertation Research Assistantship Award (DRA)**, Southern Illinois University.
- 2020 **Outstanding Graduate Teacher Award**, Southern Illinois University.
- 2016 **University Award for Academic Excellence**, University of Peradeniya.
- 2015 **First Class Honors**, University of Peradeniya.

PUBLICATIONS and WORKING PAPERS

- September 2023 S. Yaser Samadi & **H. M. Wiranthe B. Herath** (2023), Reduced-rank envelope vector autoregressive model, *Journal of Business & Economic Statistics*, 42(3), 918–932. DOI: 10.1080/07350015.2023.2260862. [ABDC - ranked **A***]
- In progress **Herath, H.M.W.B.**, & Samadi, S.Y., Scaled envelope models for multivariate time series. *Submitted*.
- In progress **Herath, H.M.W.B.**, Dimension reduction in vector autoregressive models for macroeconomic applications. *Submitted*.
- In progress **Herath, H.M.W.B.**, & Samadi, S.Y., Partial Envelope and Reduced-Rank Partial Envelope Vector Autoregressive Models. *Submitted*.

RESEARCH GRANTS AWARDED

- 2024 **Summer Research Grant**, Awarded by Zimpleman College of Business, Drake University.
- 2023 **Summer Research Grant**, Awarded by Zimpleman College of Business, Drake University.
- 2023 **NSF (DMS: 2310950) Travel Award**, DSCO 2023 Conference, University of San Francisco, USA; Funded by NSF (National Science Foundation).
- 2021 **NSF/CBMS Travel Award**, NSF/CBMS Conference, University of Alabama in Huntsville, USA; Funded by NSF (National Science Foundation).
- 2019 **Career Development Reimbursement Award**, Southern Illinois University; Funded by Southern Illinois University.

2019 **STATMOS Travel Award**, STATMOS workshop for Spatial Statistics, the University of Iowa, USA; Funded by NSF (National Science Foundation).

RESEARCH EXPERIENCE

7/1/22 - **Graduate Research Assistant**, Southern Illinois University.

8/15/22 Conducted dissertation research projects under the supervision of Dr. S. Yaser Samadi.

Spring 2021 - **Time series research Group**, Southern Illinois University.

Summer 2022 Conducted presentations and worked on group projects under the supervision of Dr. S. Yaser Samadi.

Spring 2021 **Symbolic Data Analysis Working Group IV**, Statistical and Applied Mathematical Sciences Institute (SAMSI).

Learned a new topic and new research ideas while participating in talks and presentations.

Fall 2020 **Dimension Reduction in Time Series Working Group V**, Statistical and Applied Mathematical Sciences Institute (SAMSI).

Conducted presentations, Learned new research ideas, and worked on group projects under the supervision of Dr. S. Yaser Samadi and Dr. David Banks.

INDUSTRIAL EXPERIENCE

Sep 2015 – **Intern**, Department of Quality Assurance, MAS Active Linea Intimo, Biyagama, Sri Lanka.

Dec 2015 Engaged in five statistical projects which supported the smooth functioning of the department.

WORKSHOPS and CONFERENCES

08/04/24 Contributed paper presentation at the Joint Statistical Meetings (JSM) 2024, Portland, OR, "Scaled Envelope Models for Multivariate Time Series".

02/29/24 Refereed presentation at the 2024 Conference on Statistical Practice, New Orleans, LA, "Scaled Envelope Models for Multivariate Time Series".

02/12/24 Invited research talk at Iowa State University, Statistics Seminar, "Reduced-rank envelope vector autoregressive models".

11/04/23 Participated in Academic Writing Skills Workshop, ACE learning excellence and innovation.

10/04/23 Invited research talk at Worcester Polytechnic Institute (WPI), Statistics Seminar, "Reduced-rank envelope vector autoregressive models".

09/29/2023 Contributed poster presentation at Iowa State University, 75th Anniversary Research Conference, "Dimension Reduction in Vector Autoregressive Models for Macroeconomic Applications".

08/31/23 Participated in Big Data Virtual Conference 2023, Harvard University.

05/24/23 Refereed presentation at the Symposium on Data Science and Statistics 2023, St. Louis, MO, "Dimension Reduction in Vector Autoregressive Models for Macroeconomic Applications".

05/22/23 Participated Iowa SAS Users Group The 13th One-Day Conference, Des Moines, Iowa.

03/13/23 Contributed talk at the University of San Francisco, Data Science Conference 2023, "Dimension Reduction for Vector Autoregressive Models".

12/02/22 Invited research seminar talk at Drake University, "Scaled Envelope Models for Multivariate Time Series".

26/11/22 Participated in Writing & Publishing a High Impact (Q1) Journal Article Workshop, ACE learning excellence and innovation.

29/10/22 Invited talk at Southern Illinois University Carbondale, 2022 Langenhop Lecture & SIU Probability and Statistics Conference, "Scaled Envelope Models for Multivariate Time Series".

23/09/2022 Participated in 2022 NBER-NSF Time Series Virtual Conference, Department of Economics, Boston University.

- March 2022 Contributed talk at Millikin University, 2022 Annual Meeting of the Illinois Section of the MAA, "Partial envelope models for multivariate time series".
- March 2022 Invited research seminar talk at Southern Illinois University Carbondale, "Partial envelope models for multivariate time series".
- December 2021 Invited research seminar talk at Drake University, "Reduced-rank envelope vector autoregressive models".
- August 2021 Participated in Joint Statistical Meetings (JSM), Virtual Conference.
- August 2021 Participated NSF/CBMS Conference on Gaussian Random Fields, Fractals, SPDEs, and Extremes at University of Alabama in Huntsville.
- May 2021 Invited conference talk at Statistical and Applied Mathematical Sciences Institute (SAMSI) Numerical Analysis in Data Science Transition Virtual Workshop, "Dimension Reduction for Vector Autoregressive Models".
- April 2021 Presented paper (online), Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, North Carolina, USA, "Robust Reduced-Rank Models".
- Feb 2021 Presented paper (online), Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, North Carolina, USA, "Tensor Regression Analysis for High Dimensional Data".
- Dec 2020 Presented paper (online), Dimension Reduction in Time Series, Working Group V, Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, North Carolina, USA, "Partial Envelopes for Multivariate Regression and Multivariate Time Series".
- Nov 2020 Presented paper (online), Dimension Reduction in Time Series, Working Group V, Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, North Carolina, USA, "Reduced-Rank Time Series Models".
- Oct 2020 Presented paper (online), Dimension Reduction in Time Series, Working Group V, Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, North Carolina, USA, "Multilinear Low-Rank Time Series Analysis".
- August 2020 Participated in Numerical Analysis in Data Science Virtual Statistical and Applied Mathematical Sciences Institute (SAMSI) Virtual Workshop.
- August 2020 Participated in NBER-NSF SBIES Virtual Conference on Bayesian Inference in Econometrics and Statistics at Washington University in St. Louis.
- March 2020 Contributed poster presentation at Michigan State University, SSP 2020 Conference, "Tensor Data Analyses for High Dimensional Data".
- Nov 2019 Participated in Big Data Summit at the University of Illinois Research Park, Champaign, Illinois.
- Nov 2019 Invited conference talk at Southern Illinois University Carbondale, IL-MO Conference, "Tensor Regression Analysis for High Dimensional Data".
- Sep 2019 Participated in STATMOS Workshop for Spatial Statistics at the University of Iowa.
- April 2019 Invited poster presentation at Southern Illinois University, Graduate Research Conference, "Tensor Regression and Tensor Time Series Analyses for High Dimensional Data".

LEADERSHIP and COMMUNICATION SKILLS

- 2018 – 2019 **President**, Sri Lankan Student Association (RSO), Southern Illinois University Carbondale.
- 2017 – 2018 **Vice President**, Sri Lankan Student Association (RSO), Southern Illinois University Carbondale.
- 2014 **Secretary**, Operations Research Society, University of Peradeniya.
- 2013 **Assistant Secretary**, Operations Research Society, University of Peradeniya.
- 2013 **Member**, Rotaract club, University of Peradeniya.

PROFESSIONAL and ACADEMIC MEMBERSHIPS

2017-Present **Member**, American Mathematical Society.

2017-Present **Member**, American Statistical Association.

PROFESSIONAL SERVICES

University Services

2023 **Coordinator**, First Friday Brown Bag Research Seminar, Zimpleman College of Business.

2022 – 2023 **Member**, Mentoring Cohort, Drake University.

Editorial Review Activities

2024 – **Journal Reviewer**, Statistics.

Present

VOLUNTEERING WORKS

2022 Integration Bee, Southern Illinois University Carbondale.

2018 International Student Orientation, Southern Illinois University Carbondale.

2018 Expanding Your Horizons Conference, Southern Illinois University Carbondale.

2016 Faculty of Science Industry Day (FOSID), University of Peradeniya.

2016 Statistics and Operations Research Day, University of Peradeniya.

SKILLS & ABILITIES

Languages ENGLISH, SINHALA.

Coding R, SAS, MATLAB.

Software L^AT_EX, MS OFFICE, BLACKBOARD, D2L, PEARSON'S MYLABSPLUS, BANNER.