

Tharshanna Nadarajah

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Personal Profile

My academic experience, working as an Assistant Professor with a solid research background and teaching various online and face to face courses. I am interested in developing a career that combines teaching and research while maintaining my research interest in health data analysis and data science with computer application and the broader STEM field.

Academic Background

2011-2016 PhD in Statistics - Memorial University of Newfoundland

Thesis Title: *Empirical Likelihood Based Longitudinal Studies*

Supervisors: Dr. A. M. Variyath and Prof. J Concepción Loredo-Osti

2009-2011 Master of Science in Statistics - Memorial University of Newfoundland

GPA 4/4

Thesis Title: *Penalized Empirical Likelihood Based Variable Selection*

Supervisor: Dr. A. M. Variyath

2005-2007 Master of Science in Applied Statistics - University of Peradeniya, Sri Lanka

GPA 3.89/4

Thesis Title: *Time Series Regression Modeling of Economic Development and Carbon Dioxide Emissions*

Supervisors: Drs. Kanthi Perera and R.Shanthini

2001-2004 Bachelor of Science (Hons) - Eastern University, Sri Lanka

Major Subjects: *Statistics, Computer Science, and Pure Mathematics*

Professional Experience

Sept 2020 - University of Toronto, Toronto, ON M5S 3G3

Present *Assistant Professor, Teaching Stream*

- Preparing for classes, record lectures, create slides, hold office hours, create homework, quizzes and exams, and respond to student questions in person, through email or discussion forum
 - Coordination of teaching assistants to discuss assignment marking and guide them to help students in the discussion forum.
 - Assess students' progress by grading assignments, quizzes, labs, exams, and other work
 - Maintenance and ongoing development of the course website. Posting of materials including course outlines, schedules, and recorded lectures.
 - Coordinating the development of examination materials, and all aspects of examination delivery
 - Designing new courses at the undergraduate level
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Aug 2016 - St. Francis Xavier University Antigonish, NS B2G 2W5

Aug 2020 *Assistant Professor*

- Taught six face to face and three online Statistics and Mathematics courses per year for undergraduate students
 - Prepared for classes, wrote lectures, created slides, hold office hours, created homework, quizzes and exams, and responded to student questions in person, through email or discussion forum
 - Assessed students' progress by grading assignments, quizzes, labs, exams, and other work
 - Service/administrative work within the University
 - Engaged in student recruiting, program development, and program assessment
 - Supervised labs, coordinated statistics courses, mentored teaching assistants, and supervised BSc Hons degree students in their major research projects
 - Designed a course at the undergraduate level
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Sept 2015 - Fisheries and Marine Institute of Memorial University of Newfoundland

Apr 2016 *Research Assistant*

- Research at Centre for Fisheries Ecosystems Research involved modelling the growth of fish

Sept 2015 - Memorial University of Newfoundland, St. John's, NL

Dec 2015 *Instructor*

- Organized and delivered lectures for Life Science Students
- Prepared, administered and graded students examinations

Sept 2009 - Memorial University of Newfoundland, St. John's, NL

Dec 2015 *Teaching Assistant*

- Developed and implemented a set of web-based statistical applets to introductory statistics courses
- Conducted seminars, discussion groups, and help center
- Conducted laboratory sessions to supplement lectures using R, Rstudio, and Minitab
- Assisted in preparation and administration of examinations
- Graded examinations, term papers, and laboratory reports
- Compiled research results and assisted professor in analysis of results and preparation of journal articles or papers

Sept 2011 - Memorial University of Newfoundland, St. John's, NL

Dec 2015 *Provided Consulting Services*

- Helped with both quantitative and qualitative projects requiring data analysis for faculty, students and companies
- Statistical help including thesis projects (both graduate and undergraduate) and statistics homework tutoring
- Assisted students in the development of appropriate study skills
- Maintained consistent communication with students
- I successfully completed in short-term external project "Statistical Analysis of the Vessel Movement" sponsored by Suncore Energy Inc. under the supervision of Dr. Variyath and Dr. Oyet

Nov 2007 - Eastern University, Sri Lanka

July 2009 *Assistant Lecturer*

- Prepared and delivered lectures to students and conducted laboratory sessions or discussion groups
 - Prepared, administered and graded students examinations, laboratory assignments and reports
 - Advised students on course and academic matters and career advice
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Aug 2004 - Eastern University, Sri Lanka

Oct 2007 *Instructor*

- Organized and delivered student discussion groups to supplement lectures
 - Conducted laboratory sessions to supplement lectures using Minitab and SPSS
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Computer Proficiencies

■ Programming

- C/C++
- Python
- Java
- HTML
- Visual Basic

■ Statistical Packages:

- R/R Studio
- SAS
- Minitab
- SPSS
- Latex

■ Miscellaneous

- MS Office
 - Mac OS, Windows XP, Linux, and Windows Vista
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Conferences and Workshops

■ The Impact and Effectiveness of On-line Homework in an Introductory Statistics Course

Statistical Society of Canada Annual Meeting, May 31-June 3, 2020 at Carleton University, Ottawa, Ontario (Conference canceled).

■ A systematic approach for effective assignment problem solving

Statistical Society of Canada Annual Meeting, May 26-29, 2019 at University of Calgary, Calgary, AB

■ Penalized Generalized Quasi-Likelihood based Variable Selection for Longitudinal Data

International Symposium in Statistics (ISS) July 6 to 8, 2015 at St. John's, NL

■ Variable Selection for Longitudinal Data Analysis

Statistical Society of Canada Annual Meeting, June 14-17, 2015 at Dalhousie University, Halifax, NS

■ Penalized Empirical Likelihood and Generalized Estimating Equations

Aldrich Interdisciplinary Conference 2015, Memorial University of NL, St. John's

■ Invited Speaker: Penalized Empirical Likelihood Based Longitudinal Studies

An International conference organized by the Institute of Applied Statistics, Sri Lanka, December 28-30, 2014 at Galadari Hotel, Colombo, Sri Lanka

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- **Empirical Likelihood Based Longitudinal Studies**
2014 Student Conference, May 24, 2014 at the University Toronto, Toronto, ON.
 - **Empirical Likelihood Based Longitudinal Studies**
Statistical Society of Canada Annual Meeting, May 25-28, 2014 at the University Toronto, Toronto, ON.
 - **Attended Conference (July, 2012): International Symposium in Statistics (ISS)**
Memorial University of Newfoundland, St. John's, NL
 - **Penalized Empirical Likelihood Based Variable Selection For Cox's Proportional Hazards Model**
Statistical Society of Canada Annual Meeting, June 3-6, 2012 at the University of Guelph, Guelph, ON.
 - **Workshop on Computational Statistical Methods for Genomics and Systems Biology (April, 2011)**
CRM, Universite de Montreal
 - **Penalized Empirical Likelihood Based Variable Selection**
Statistical Society of Canada Annual Meeting, June 12-15, 2011 at Acadia University, Wolfville, NS.
 - **Summer School in Statistics and Probability (June, 2010)**
The Department of Mathematics and Statistics, McGill University
 - **Statistical Modeling of Non-Stationary Carbon Dioxide Emmissions versus Income Data**
N. Tharshanna, K. Perera, and R. Shanthini, 6th Annual Research Session, Eastern University, Sri Lanka, 2007
 - **Workshop on "Actuarial Statistics: Mathematical and Computational Applications" (April, 2006)**
Post Graduate Institute of Science, University of Peradeniya, Sri Lanka
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Publications

- **Penalized Empirical Likelihood based Variable Selection for Longitudinal Data Analysis**
Tharshanna Nadarajah, Asokan Mulayath Variyath, & J Concepción Loredó-Ostí, American Journal of Mathematical and Management Sciences, 2020 (Accepted).
 - **Subject-Wise Empirical-Likelihood-Based Longitudinal Modelling.**
Tharshanna Nadarajah, Asokan Mulayath Variyath, & J Concepción Loredó-Ostí, Open Journal of Statistics, 2020, 10, 611-639.
 - **Penalized Generalized Quasi-Likelihood based Variable Selection for Longitudinal Data**
Tharshanna Nadarajah, Asokan Mulayath Variyath, & J Concepción Loredó-Ostí, Springer Lecture Notes in Statistics, 2016.
 - **Improving the Students' Learning Process Through the Use of Statistical Applets**
Asokan Mulayath Variyath & Tharshanna Nadarajah, Under Review.
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Professional Qualifications

- **Professional Skills Development Program (Winter, 2015)**
Memorial University of Newfoundland, St. John's, NL
 - **Graduate Program in Teaching (Winter, 2012)**
Memorial University of Newfoundland, St. John's, NL
 - **Diploma in National Certificate in English for Commerce, Industry and Further Education (2000)**
Department of Technical Education and Training Provincial, Sri Lanka
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Professional Membership

- **Statistical Society of Canada (SSC)**
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Scholarships Received

- **School of Graduate Studies, Memorial University of NL, scholarship awarded 2009-2015.**
 - **Statistical Society of Canada (SSC) Student Travel Award. Awarded 2012 and 2014.**
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Volunteer Experience

- **Library representative for the department of Math. & Stats.**
St. Francis Xavier University for the Academic Year 2018 - 2020
 - **Health and Safety committee for the department of Math. & Stats.**
St. Francis Xavier University for the Academic Year 2016 - 2018
 - **Helping students at the free tutorial given by department of Math & Stats student society**
St. Francis Xavier University for the Academic Year 2016 - 2020
 - **Organizing Open house for the Academic Discipline by Department of Math. & Stats.**
St. Francis Xavier University for the Academic Year 2016 - 2020
 - **Participated for Make Mid-term Matter, Feb. 17, 2015-Eastern Health**
*Helped to run an afternoon program with residents
Helped residents get to the program and back to their room
General interaction with the residents*
 - **Group Leader, Fall Orientation, Sept. 2014, Memorial Student Affairs and Services.**
Organized activities for first year students and their parents
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■ **Blood Drive Volunteer**

I played a part in the community blood drive

■ **Secretary of the students' Union, Faculty of Science**

Eastern University Sri Lanka for the Academic Year 2001/2002

■ **Students' Representative to the Faculty Board of Science**

Eastern University Sri Lanka for the Academic Year 2002/2003

Referees

Name Dr. Asokan Variyath
Company Memorial University
Position Associate Professor and
Dy. Head (Grad. Studies)
Contact variyath@mun.ca
Office Phone (709) 864-6104

Name Prof. Joseph Apaloo
Company St. Francis Xavier University
Position Professor
Contact japaloo@stfx.ca
Office Phone (902) 867-5274

Name Prof. J.C. Loredó-Osti
Company Memorial University
Position Professor and Chair
Contact jcloredosti@mun.ca
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Name Dr. Ryan Lukeman
Company St. Francis Xavier University
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