Miraj Chamara Samarakkody

"Dedicated to advancing research and academic excellence in differential geometry, committed to contributing to the growth of both the institute and society with my full potential."

S Rajakaruna Samarakkodige Miraj Chamara Samarakkody
Graduate Student,
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Education

Texas Tech University, Department of Mathematics & Statistics.
Ph.D. in Mathematics, May, 2025.
Dissertation: "***On Some Variational Problems in Curves and Surfaces***"
Committee: Dr. Hung Tran (Chair), Dr. Álvaro Pámpano (Co-chair), Dr. Magdalena Toda.

University of Peradeniya, Faculty of Science, Sri Lanka.
B.Sc. (Honors) Special in Mathematics.
Project: "***Geometric Behavior of a Certain Class of Quotients of Finite Blaschke Products.***"
Advisor: Dr. Shelton Perera.

Research Interest

Minimal surfaces, generalized elastic curves, and applications of differential geometry in mathematical physics, biology, and data science.

Positions

- **Assistant Professor**   **Spring, 2025**
  Department of Mathematics and Computer Science, Tougaloo College.

- **Graduate Part-Time Instructor**   **Fall, 2024**
  Department of Mathematics & Statistics, Texas Tech University.

- **Research Assistant**   **Spring, 2022 - Summer, 2024**
  Advisors: Dr. Hung Tran and Dr. Álvaro Pámpano.
  Department of Mathematics & Statistics, Texas Tech University.

- **Lecturer (Probationary)**   **November, 2019 - July, 2021**
  Faculty of Engineering, University of Moratuwa, Sri Lanka.

- **Visiting Lecturer**   **January, 2021 - June, 2021**
  Faculty of Humanities and Sciences, Sri Lanka Institute of Information Technology, Sri Lanka.

- **Visiting Lecturer**   **February, 2021 - May, 2021**
  Faculty of Engineering, University of Sri Jayewardenepura, Sri Lanka.

- **Visiting Lecturer**   **January, 2019 - July, 2019**
  General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka.

- **Temporary Assistant Lecturer**   **December, 2018 - February, 2019**
  Faculty of Science, University of Peradeniya, Sri Lanka.

- **Temporary Tutor**   **January, 2018 - December, 2018**
  Faculty of Science, University of Peradeniya, Sri Lanka.

Experiences

Research

- **Research Assistant**   **Spring, 2022-Summer, 2024**
  Advisors: Dr. Hung Tran and Dr. Álvaro Pámpano.
  Research focused on Morse index of minimal surfaces and generalized elastic curves.

Teaching

- **Instructor**   **Spring, 2025**
  Calculus II (MAT222)
  Advanced Calculus (MAT426)
  Modern Algebra (MAT414)
  Theory of Mathematical Statistics (MAT434)
  Department of Mathematics and Computer Science, Tougaloo College.

- **Graduate Part-Time Instructor (Instructor of Records)**   **Fall, 2024**
  Calculus II with Applications (MATH 1452-122)
  Department of Mathematics & Statistics, Texas Tech University.

- **Graduate Teaching Assistant**   **Fall, 2021**
  Calculus II with Applications (MATH 1452)
  Department of Mathematics & Statistics, Texas Tech University.

- **Lecturer**   **Semester II, 2021**
  Neural Networks & Fuzzy Logic (MA4144)
  Faculty of Engineering, University of Moratuwa, Sri Lanka.

- **Lecturer**   **Semester II, 2021**
  Ordinary Differential Equations (MA3013)
  History of Mathematics (MA3022)
  Faculty of Humanities and Sciences, Sri Lanka Institute of Information Technology, Sri Lanka.

- **Lecturer**   **Semester II, 2021**
  Discrete Mathematics (IS 3202)
  Faculty of Engineering, University of Sri Jayewardenepura, Sri Lanka.

- **Lecturer**   **Semester I, 2020**
  Calculus (MA2024)
  Faculty of Engineering, University of Moratuwa, Sri Lanka.

- **Lecturer**   **Semester II, 2019**
  Mathematics for IT
  General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka.

- **Teaching Assistant**   **Semester II, 2018**
  Group Theory (MAT3013), Complex Analysis I (MAT3122)
  University of Peradeniya, Sri Lanka.

- **Teaching Assistant**   **Semester I, 2018**
  Real Analysis III (MAT3023), Functional Analysis (MAT4033)
  University of Peradeniya, Sri Lanka.

Languages

- **English** - Excellent Proficiency.

- **Sinhala** - Native Proficiency.

Technical Skills

LaTeX, python, Mathematica, Matlab, Lingo, Maple, Microsoft Office, Adobe Illustrator and Adobe Premier Pro.

Fellowships

- **Dr. Shelby Hildebrand Graduate Math Fellowship** - Texas Tech University. 2023-2024
  Amount: $10,000

- **AT & T Graduate Fellowship** - Texas Tech University   2021-2025
  Amount: $16,000

Awards and Honors

- **Create Possible Scholarship** - Texas Tech University.   2022

- **University Prize for Academic Excellence** - University of Peradeniya   2018

- **Peradeniya University Alumni Australia Victoria Chapter Scholarship for Academic Excellence in Mathematics**   2015

Presentations

Conference Talks

- "*Closed $p-$Elastic Curves in 2-Space Forms,*" AMS Sectional Meeting (Meeting No: 1198), University of Texas, San Antonio, September 14-15, 2024.

- "*Closed p-Elastic Curves in Spheres of Lorentz-Minkowski Space.*", Texas Analysis and Mathematical Physics Symposium, Texas A&M University, February 10, 2024.

- "*Geometric Behavior of a Certain Class of Quotients of Finite Blaschke Products*", ICMME, Post Graduate Institute of Science, University of Peradeniya, March, 2019

Posters

- "*Closed $p-$Elastic Curves in 2-Space Forms,*" Texas Geometry and Topology Conference (68th Meeting), Texas A&M University, College Station, November 8-10, 2024.

Seminars

- "*On Some Variational Problems in Curves and Surfaces*"- Probability, Differential Geometry and Mathematical Physics Seminar, Texas Tech University (January 21st, 2025).

- "*On Some Variational Problems in Differential Geometry*"- Probability, Differential Geometry and Mathematical Physics Seminar, Texas Tech University (November 01st, 2023).

- "*Minimal Surfaces*"-Probability, Differential Geometry and Mathematical Physics Seminar, Texas Tech University (November 02nd, 2022)

Outreach Programs

- "*Brainstorming Math Questions IV*" Math Circle, Department of Mathematics & Statistics, Texas Tech University. (March 28th, 2024).

- "*Brainstorming Math Questions III*" Math Circle, Department of Mathematics & Statistics, Texas Tech University. (March 21th, 2024).

- "*Brainstorming Math Questions II*" Math Circle, Department of Mathematics & Statistics, Texas Tech University. (November 29th, 2023).

- "*Brainstorming Math Questions I*" Math Circle, Department of Mathematics & Statistics, Texas Tech University. (November 8th, 2023).

- "*Some Geometric Problems*" Math Circle, Department of Mathematics & Statistics, Texas Tech University. (October 11th, 2023)

- "*Minimal Surfaces and Generalized Elastic Curves*" - 3MT, Texas Tech University (October 6th, 2023).

Publications

- A. Pámpano, M. Samarakkody, H. Tran, "*Closed $p-$Elastic Curves in Spheres of $\mathbb{L}^3$,*" JMAA, 542(2):129147, 2025.

- S.R.S.M.C. Samarakkody, P.G.R.S. Ranasinghe, A.A.S. Perera, "*Geometric Behavior of a Certain Class of Quotients of Finite Blaschke Products*," ICMME, Post Graduate Institute of Science, University of Peradeniya, Vol. 1. (2019).

Leadership and Community Involvement

- "**Summer Chess Camp 2024**," *Counselor*, Texas Tech University.

- "**Art & Humanities Conference 2023**," *Judge*, Texas Tech University.

- "**Math Circle 2023-2024**,"*Mentor*, Department of Mathematics & Statistics, Texas Tech University.

- *Lubbock Library Volunteer*, Lubbock.

Memberships in Professional Societies

- Member of **American Mathematical Society**.   2021-2025

- Member of **SIAM TTU Chapter**.   2021-2025