# 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**

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## Research Interest

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

## Professional Experiences

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

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

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

- **Graduate Teaching Assistant** **Fall, 2021**
  Department of Mathematics & Statistics, Texas Tech University.

## Short Visits

- **Research Mentor** **Summer 2025**
  Virtual Math Circle, Department of Mathematics, Louisiana State University.

# Education

**Texas Tech University, TX.** **Fall 2021 - Spring 2024**
Ph.D. in Mathematics, May, 2025.
Advisors: Dr. Hung Tran (Chair), Dr. Álvaro Pámpano (Co-chair).

**University of Peradeniya, Sri Lanka.** **2014-2018**
B.Sc. (Honors) Special in Mathematics.
Advisor: Dr. Shelton Perera.

# Languages

- **English** - Excellent Proficiency.
- **Sinhala** - Native Proficiency.

# Technical Skills

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

# Teaching

## Tougaloo College

- **MAT221 - Calculus I**; Fall 2025
- **MAT222 - Calculus II**; Spring 2025
- **MAT316 - Differential Equations**; Fall 2025
- **MAT326 - Introduction to Probability**; Fall 2025
- **MAT414 - Modern Algebra**; Spring 2025
- **MAT426 - Advanced Calculus**; Spring 2025, Fall 2025
- **MAT434 - Theory of Mathematical Statistics**; Spring 2025

## Texas Tech University

- **MATH 1452 - Calculus II with Applications**; Fall 2024

# Grants

- **PI**, SCALE Program (Partenership with Purdue University), $\$73,094.77$.
  **Project:** Microelectronic Workforce Development Project for Radiation-Hardening.

# 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 $21^{st}$, 2025).
- "***On Some Variational Problems in Differential Geometry***"- Probability, Differential Geometry and Mathematical Physics Seminar, Texas Tech University (November $01^{st}$, 2023).
- "***Minimal Surfaces***"-Probability, Differential Geometry and Mathematical Physics Seminar, Texas Tech University (November $02^{nd}$, 2022)

## 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.

## Memberships in Professional Societies

- Member of **American Mathematical Society**. 2021-2025
- Member of **SIAM TTU Chapter.** 2021-2025