



Centre for Research & Development

Research Supervisor (Guide) Profiles

Discipline of Supervision: **Mathematics**



Dr. Saradha M

Associate Professor
Institute of Technology
Kristu Jayanti Institute of Technology

Areas of Specialisation:

Fractional Differential Equations, Numerical Analysis, Linear Algebra, Computational Mathematics and Machine Learning

Dr. Sharadha M. earned her Doctorate from Bharathidasan University, Tiruchirappalli, in 2017 and has since been actively involved in interdisciplinary research. Her primary areas of interest include Fractional Differential Equations, Numerical Analysis, Fuzzy Logic, and Machine Learning. To date, she has published over 37 research articles in reputed national and international journals, with her work indexed in databases such as Scopus, Clarivate, and Google Scholar. In addition, she holds 10 patents and has contributed 10 book chapters to internationally recognized publishers. She serves as a reviewer for several SCI-indexed Q1 journals, including Nonlinear Science and Numerical Simulation (Elsevier), Journal of Intelligent & Fuzzy Systems (JIFS), and Journal of Supercomputing (Springer Nature), among others. She is a life member of several professional societies, including the Indian Society for Technical Education (ISTE), the International Association for Engineers (IAENG), and the Ramanujan Mathematical Society (RMS). Under her mentorship, one research scholar has been awarded a Doctorate in 2025. Additionally, she has guided 18 postgraduate students in completing their minor research projects. She has also been invited to deliver talks at various national and international conferences and academic events.

Selected Publications:

1. Hariharan, R., **Saradha, M.**, Kumar, M. S., & Udhayakumar, R. (2025). Existence and Uniqueness of Hilfer-Katugampola Fractional Differential Equations with Almost Sectorial Operators. Complex Analysis and Operator Theory, 19(8). <https://doi.org/10.1007/s11785-025-01850-z>
2. Pavithra, C., & **Saradha, M.** (2024). A Comprehensive Classification Approach by Integrating Principal Component Analysis and Support Vector Machines for Advanced Intrusion Detection Systems. SN Computer Science, 5(8). <https://doi.org/10.1007/s42979-024-03308-z>
3. Vanitha, K., **Saradha, M.**, Antline Nisha, B., & Udhayakumar, R. (2024). An Approach to Solve Gas Dynamic Equation by Fuzzy Hilfer Fractional Differential Equation. Contemporary Mathematics, 2709–2723. <https://doi.org/10.37256/cm.5320245035>