Dr. Jasinth Sylvia
Assistant Professor
M. Sc., Ph. D.

Enthusiastic and dedicated Mathematics faculty member with a strong academic background and a passion for teaching. Skilled in explaining mathematical concepts in a simple and understandable manner. Interested in teaching and research in areas of Mathematics, Differential Equations, Numerical Analysis, and Applied Mathematics. Eager to contribute to students academic growth and develop professionally through teaching and research.

Awards: 2023-25: Raman Research Award – 5-time recipient, in recognition of consistent academic excellence and research contributions.

Teaching and Research Interest:
Calculus, Differential Equations, Numerical Analysis, Linear Algebra, Fractional Differential Equations, Wavelet Methods, Mathematical Modeling of Chemical, Environmental, and Social Dynamics.

Publications

1. Sylvia, J., & Ghosh, S. A Laguerre Wavelet-Based Numerical Framework for Modeling and Analysis of Water Scarcity Dynamics with Real-World Validation. Mathematical Methods in the Applied Sciences, Wiley.
2. Sylvia, J., & Ghosh, S. A Fractional-Order Hermite Wavelet Framework for Modeling and Analysis of Smoking Dynamics. Nonlinear Science, Elsevier.
3. Sylvia, J., & Ghosh, S. A Fractional-Order Mathematical Model for Obesity Dynamics: Analysis via Hermite Wavelets and Comparative Numerical Methods. Advanced Theory and Simulations, Wiley.
4. Sylvia, J., & Ghosh, S. Analysis of Tax Evasion Dynamics Using the Genocchi Wavelet Method. Computational Economics, Springer.
5. Sylvia, J., & Ghosh, S. Numerical Study of a Chemical Clock Reaction Framework Utilizing the Haar Wavelet Approach. Journal of Mathematical Chemistry, Springer.
6. Sylvia, J., & Ghosh, S. Solution of Chemical Reaction Model Using Haar Wavelet Method with Caputo Derivative. Journal of Mathematical Chemistry, Springer.

Conference Paper Presentations

2025: ICMMAAC 2025, JECRC University, Jaipur — International Conference
2024: NCETCMS 2024, SRM University, Chennai — National Conference

Technical Expertise

Programming: MATLAB, LaTeX