KRISTU JAYANTI
(DEEMED TO BE UNIVERSITY)
Under Section 3 of UGC Act 1956
A CMI INSTITUTION | BENGALURU | INDIA

Centre for Research & Development

Research Supervisor (Guide) Profiles
Discipline of Supervision: Mathematics

Dr. Soya Mathew
Associate Professor
Department of Physical Science
School of Computational, & Physical Sciences

Areas of Specialisation:
Ferrofluid Dynamics, Magneto-fluid Mechanics, Heat Transfer in Porous Media, Analytical and Perturbation Methods in Stability Analysis

Dr. Soya Mathew is an Associate Professor in the Department of Physical Sciences at Kristu Jayanti (Deemed to be University), Bengaluru, and an active member of the Internal Quality Assurance Cell (IQAC), contributing to academic quality enhancement and institutional development. She holds a Ph.D. in Mathematics from Christ University, Bengaluru, and brings significant experience in teaching, research, and academic guidance. Her research areas include applied mathematics, fluid dynamics, and numerical methods, with particular emphasis on ferrofluid dynamics and heat transfer in porous media. Her doctoral work examined the convective instability of ferromagnetic fluids, highlighting the role of magnetic forces and non-classical heat transport in influencing convection behaviour. Beyond research, She is committed to innovative teaching and mathematics education, fostering critical thinking and strong problem-solving skills among students. Through her academic and professional contributions, she continues to advance mathematical sciences while mentoring and inspiring aspiring scholars.

Selected Publications:

1. **Mathew, S.**, & Maruthamanikandan, S. (2018). Darcy-Brinkman Ferro convection with temperature dependent viscosity. Journal of Physics: Conference Series, 1139, 012023. https://doi.org/10.1088/1742-6596/1139/1/012023

2. Maruthamanikandan, S., Mary Thomas, N., & **Mathew, S.** (2018). Thermorheological and magnetorheological effects on Marangoni-Ferroconvection with internal heat generation. Journal of Physics: Conference Series, 1139, 012024. https://doi.org/10.1088/1742-6596/1139/1/012024

3. **Mathew, S.**, & Maruthamanikandan, S. (2021). Oscillatory porous medium ferroconvection with Maxwell-Cattaneo law of heat conduction. Journal of Physics: Conference Series, 1850(1), 012024. https://doi.org/10.1088/1742-6596/1850/1/012024