



Dr. Ajay Singh

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PROFILE

I am Dr. Ajay Singh, currently working as an Assistant Professor of Mathematics at The ICFAI University, Jaipur, where I have been serving since August 2024. I hold a Ph.D. in Mathematics from Malaviya National Institute of Technology (MNIT), Jaipur, and an M.Sc. in Mathematics from IIT Bombay. My academic background has provided me with a strong foundation in applied mathematics, computational mathematics, and mathematical modelling.

My research interests are primarily in Applied Mathematics, Partial Differential Equations, Fluid Dynamics, Mathematical Modelling, and Numerical Methods. My doctoral and subsequent research work has focused particularly on computational and mathematical analysis of MHD and blood-based nanofluid flows. I have published research work in areas including MHD blood-nanofluid flow, heat transfer, viscous dissipation, Ohmic heating, thermal radiation, and related computational studies.

Along with my research experience, I have a strong interest in developing my expertise in numerical methods for partial differential equations and scientific computing. I am currently strengthening my knowledge of computational mathematics and programming tools such as Python, MATLAB and LaTeX, with the objective of developing reliable computational approaches for challenging mathematical and fluid-flow problems.

I have also actively participated in academic conferences, faculty development programmes, workshops and short-term courses related to computational techniques, numerical methods, Python, nonlinear dynamical systems, modelling and simulation, finite element methods, and technical writing. These activities reflect my continued effort towards professional development and towards expanding my research capabilities.

My academic achievements include AIR-123 in CSIR-UGC NET Mathematical Sciences, AIR-434 in GATE Mathematics, and AIR-65 in IIT JAM Mathematics. I was also a recipient of the CSIR NET-JRF Fellowship and the INSPIRE-SHE Scholarship awarded by the Department of Science and Technology. I am a Life Member of both the Indian Mathematical Society and the Indian Society of Theoretical and Applied Mechanics.

At this stage of my academic career, I am particularly interested in strengthening my research profile, developing independent research capabilities, and contributing meaningfully to the University's academic and research environment. My long-term objective is to build a sustained research programme in computational and applied mathematics, particularly involving numerical methods for partial differential equations and mathematical modelling, while continuing to contribute effectively to teaching and academic development.