Pritish Karmakar

Curriculum Vitae

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Research Interests

The pursuit of unravelling the ultimate truth stands as a fundamental aim of humankind. My research interests centre on the fascinating realms of quantum physics, statistical mechanics, and field theory. I aim to explore fundamental phenomena, unravel the mysteries of quantum physics, investigate the applications of these principles in statistical mechanics and field theories etc, and advance our understanding of the truth of the universe.

Education

2021–present **BS-MS Degree (3rd year) at Indian Institute of Science Education & Research, Kolkata**, *Campus Road, Mohanpur, West Bengal, India 741246*
Major: Physics, **Minor:** Mathematics
Pre-major: Physics, Mathematics, Chemistry
Current CGPA: 9.2/10

2019–2021 **Higher secondary education from Ramakrishna Mission Vidyapith**, *Purulia, W.B., India 723147*
Subjects: Bengali, English, Mathematics, Physics, Chemistry, Biology
XII Exam percentage: 97.0%

2013–2019 **Secondary education from Ramakrishna Mission High School**, *Ramharipur, W.B., India 722203*
Subjects: Bengali, English, Mathematics, Physical science, History, Geography, Life science
X Exam percentage: 97.6%

Projects & internships

May – July 2023 **On Polarization Properties of Light, Gaussian Beams and Spin-Orbit Interaction of Light**, *Under Prof. Ayan Banerjee (Light-Matter Lab, Department of Physical Sciences, IISER Kolkata, India, 741246)*
I engaged in comprehensive research within the domain of optics and polarization, exploring a range of topics including Jones and Stokes-Muller formalisms, characteristics of Gaussian beams, and the principles governing the momentum of light. My research extended to an in-depth investigation of the intricate dynamics of the spin-orbit interaction of light, exploring geometric phases, and the diverse manifestations of spin-orbit interaction, with a particular focus on its behaviour within anisotropic media. (Open report)

Scholarships

2021–present **INSPIRE-SHE scholarship**, Financed by DST, Govt. of India

2019–2021 **Swami Vivekananda merit-cum-means scholarship**, Financed by W.B. state govt

Computation skills

Programming	Proficient in Python (with Numpy, Scipy, Matplotlib and Pandas). Familiar with C, R programming, Git, LaTeX.
OS	Windows, Linux

Language

Bengali, English & Hindi.

Extracurricular activities

Football & athletics, painting, reading.