

Sayandeep Sarkar

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I am a 2nd year Graduate student (PhD) supervised by Prof. Andrei Tarfulea, Department of Mathematics, Louisiana State University.

Interests

Boltzmann Equation, Kinetic theory, Elliptic and Parabolic Differential Equations, Mathematical Physics

Education

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| Louisiana State University Ph.D. in Mathematics | 2024- 4.17 |
| Indian Institute of Technology, Kanpur Masters of Science (2-yr) in Mathematics | 2022-2024 8.8/10 |
| Ramakrishna Mission Vidyamandira Bachelor of Science in Mathematics | 2019-2022 9.34/10 |

Experience

Teaching

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| <i>Math 1020/21 (College Algebra)</i> | <i>S 2025</i> |
| <i>Math 1020/21 (College Algebra)</i> | <i>F 2025</i> |

Grading/Tutoring

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| <i>Math 1552 (Analytic Geometry and Calculus II)</i> | <i>S 2025</i> |
| <i>Math 1550-5 (Differential and Integral Calculus)</i> | <i>F 2024</i> |
| <i>Math 1552 (Analytic Geometry and Calculus II)</i> | |

Subject matter expert at Chegg Inc. *2022-2024*

Dissertations, Projects

Indian Institute of Technology, Kanpur

- * Integral solution for electromagnetic scattering problem Prof. Akash Anand
- * Schauder Estimate of Elliptic PDEs Prof. Adi Adimurthi

Ramakrishna Mission Vidyamandira

- * Wormhole solution on $f(R)$ gravity theory Prof. Saugata Mitra

Technical Skills

Familiar with the programming languages Matlab, Python, C++(GSL).

Talks

- * Fractional Laplacian on water wave model and crystal dislocation model IIT Kanpur
- * Density of $C_0^\infty(\mathbb{R}^n)$ in $W^{s,p}(\mathbb{R}^n)$ IIT Kanpur

Conferences, Workshops, Seminars, Summer Schools

- * Attended workshop on "Kinetic Theory: Novel Statistical, Stochastic and Analytical Methods" held at SLmath University of California, Berkeley, from 20th Oct to 24th August, 2025
- * Attended workshop on "Geometry, Analysis, Mathematical Physics" held at NISER Bhubaneswar, from 24th July to 2nd August, 2023
- * Presented paper entitled "Tensor Calculus and its Application in Wormhole Geome- try", in Department of Mathematics , Ramakrishna Mission Vidyamandira, on 4th June, 2022.
- * Participated in presentation competition in Ramakrishna Mission Vidyamandira, held in 2022 on applied mathematics (topic : wormhole), organized by department of mathematics, Ramakrishna Mission Vidyamandira.
- * Participated in the Mathematical Training and Talent Search Program in 2021, held online.

Awards, Achievements

- * INSPIRE scholar since 2019 to 2024.
 - * Qualified GATE (2024) with AIR 418.
 - * Qualified CSIR-NET JRF (June 2022) with AIR 159.
 - * Awarded with Aryabhata silver medal from Ramakrishna Mission Vidyamandira for securing 2nd rank in B.Sc.
 - * Qualified JAM 2022, with AIR 1164.
 - * Qualified JEE mains, WBJEE in 2019.
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