

# 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

<b>Louisiana State University</b> Ph.D. in Mathematics	<b>2024-</b> 4.18
<b>Indian Institute of Technology, Kanpur</b> Masters of Science (2-yr) in Mathematics	<b>2022-2024</b> 8.8/10
<b>Ramakrishna Mission Vidyamandira</b> Bachelor of Science in Mathematics	<b>2019-2022</b> 9.34/10

## Experience

<b>Teaching</b> <i>Math 1020/21 (College Algebra)</i>	<i>F 2025</i>
<b>Grading/Tutoring</b> <i>Math Lab</i> <i>Math 1552 (Analytic Geometry and Calculus II)</i> <i>Math 1550-5 (Differential and Integral Calculus)</i> <i>Math 1552 (Analytic Geometry and Calculus II)</i>	<i>F 2025</i> <i>Sp 2025</i> <i>F 2024</i>
<i>Subject matter expert at Chegg Inc.</i>	<i>2022-2024</i>

## Dissertations, Projects

<b>Indian Institute of Technology, Kanpur</b>	
✧ Integral solution for electromagnetic scattering problem	Prof. Akash Anand
✧ Schauder Estimate of Elliptic PDEs	Prof. Adi Adimurthi
<b>Ramakrishna Mission Vidyamandira</b>	
✧ 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

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- ✧ Attended workshop on “Kinetic Theory: Novel Statistical, Stochastic and Analytical Methods” held at SLmath University of California, 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 Geometry”, 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

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- ✧ 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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