

# Atrajit Sarkar

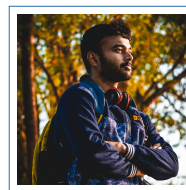
PhD Aspirant in Mathematics

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## Research Interests

Number Theory, Algebra, Real and Complex Analysis, Topology  
Currently exploring Multiple Zeta Values and their analytical structure

## Education

- 2022–2024 **MSc in Mathematics**, Indian Institute of Technology (IIT), Delhi
- Completed rigorous coursework in Algebraic Number Theory, Galois Theory, Commutative Algebra, Functional Analysis, Measure Theory, Algebraic Topology, Complex Analysis.
  - **MSc Project:** Reading-based project on 3D manifolds and Morse Theory, under supervision of Dr. Biplab Basak.
  - Independently explored introductory Knot Theory (via The Knot Book by Colin C. Adams and online lectures).
- 2019–2022 **BSc in Mathematics (Honours)**, Belur RamkrishnaMission Vidyamandira
- Studied foundational topics in Number Theory (Burton), Complex Analysis,  $L^p$  Spaces, Group Theory, and Topology.
  - **BSc Project:** Reading-based project on  $L^p$  Spaces under Dr. ArnabJyoti Dasgupta.

## Projects and Independent Study

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|----------------------|--|
| Multiple Zeta Values | Explored lecture notes and coursework by Prof. Henrik Bachmann. Deep interest in developing research in this area. |
| Knot Theory          | Self-studied from Colin Adams' The Knot Book, supplemented with YouTube lectures.                                  |
| Morse Theory         | Engaged in a structured study of Morse functions and 3D manifolds through a semester-long guided reading project.  |

## Programming & Technical Skills

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|-------------|--|
| Languages   | Python, C  |
| Development | Android App Development using Jetpack Compose                                |
| Projects    | Developed a WhatsApp-style messaging app myChattingApp as a personal project |

## Statement

I am deeply passionate about the beauty and depth of mathematics, particularly in number theory and analysis. I aim to pursue research that bridges classical problems with modern methods. With a solid foundation and a keen interest in independent exploration, I am looking forward to contributing to your group and the broader mathematical community.

## Languages

English Fluent (Academic and Conversational)  
Bengali Native  
Hindi Proficient  
Japanese (日本語) Learning Currently

## Personal Information

Full Name Atrajit Sarkar  
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Current Location Kolkata, West Bengal, India  
Available for PhD April 2026 Session