

Aditya Ghosh

Curriculum Vitae

Personal Details

Name Aditya Ghosh
Date of Birth 15 June, 2001 — Kolkata, India
Nationality Indian
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Education

2023– **PhD Mathematics**, *Columbia University, USA*
2019–2023 **MMath Mathematics**, *University of Oxford, UK*
Part A (2nd year) and B (3rd year) Result – First Class, 81% weighted average, Rank 11/132
Part C (4th year) Result – First Class, 82%, Rank 13/94
2010–2018 **High School Qualifications**, *Garden High, Kolkata, India*
ISC examinations (A-Level equivalent) - Weighted average 96.5%, Mathematics 100%

Papers/Reports/Books

2026 **Paper**, *Author: A Ghosh*
Title: Shifted Convolution Sums in congruence subgroups
Preprint to be published soon
2026 **Paper**, *Author: E Breuillard, A Ghosh*
Title: Counting prime ideals of a given degree in number fields
Preprint to be published soon
2024 **Paper**, *Authors: A Ghosh, K Kremnizer, SW Noor, C Santos*
Title: Zero-free half-planes of the ζ -function via spaces of analytic functions,
Advances in Mathematics, Volume 455
<https://www.sciencedirect.com/science/article/pii/S0001870824003876>
2022 **Report**, *Author: A Ghosh*
Title: Report: Statistics of approximations to zeroes of ζ -function via truncated symmetrized Euler products
<https://arxiv.org/abs/2211.11042>

Conferences/Workshops

- 17-19 Sept, **Analytic Number Theory and Automorphic Forms** , *University of Lille*, France
2025 • Website: <https://www.mathconf.org/antaf2025>
- 30 Apr - 4 May, **37th Automorphic Forms Workshop** , *University of North Texas*, Denton, USA
2025 • Website: <https://www.mathconf.org/antaf2025>
- 2-13 Sept, **Summer School and Workshop on Automorphic Forms and Related Topics (BB6)**, *CIRM*, Marseille, France
2024 • Website: <https://conferences.cirm-math.fr/3134.html>
- 8-12 July, **The Mordell conjecture 100 years later**, *MIT*, Boston, US
2024 • Website: <https://mordell.org>
- 18-21 June, **Modular Forms, L-functions, and Eigenvarieties**, *ENS*, Paris, France
2024 • Website: <https://www.eventcreate.com/e/bellaiche/>
- 30 Sept - 1 October, **Maine-Quebec Number Theory Conference**, *University of Maine*, Orono, US
2023 • Website: <https://mainequbecnt.github.io>
- 26-28 October, **Early Number Theory Researchers Workshop**, Darmstadt, Germany
2022 • Website: https://www.mathematik.tu-darmstadt.de/algebra/forschung_algebra/forschungsseminare/grad_seminars/entr_workshop.en.jsp
- 15-26 August, **LMS Undergraduate Summer School**, Edinburgh, UK
2022 • Website: <http://www.lms.macs.hw.ac.uk/>

Talks/Posters

- 2 Dec 2024 Talk: Student Seminar in Automorphic Forms, Columbia University. Title: Spectral Theory of Automorphic Forms
- 30 Sept 2024 Talk: Student Seminar in Automorphic Forms, Columbia University. Title: Hilbert Modular Forms, Maass Forms and Base Change
- 23 Sept 2024 Talk: Student Seminar in Automorphic Forms, Columbia University Title: Rankin-Selberg Method, Converse Theorems, Langlands Functoriality
- 16 Sept 2024 Talk: Student Seminar in Automorphic Forms, Columbia University. Title: Modular Forms, Hecke Operators and Twisting
- Sept 2024 Speed Talk: Building Bridges 6: Conference on Automorphic Forms, CIRM, France. Title: Hilbert space approaches to the Riemann Hypothesis
- Sept 2024 Talk: Building Bridges 6: Conference on Automorphic Forms. Title: Counting prime ideals of a given degree in number fields
- June 2024 Poster: Modular Forms, L-functions, and Eigenvarieties Conference at ENS Paris. Title: Counting Prime Ideals of a given degree in Number Fields
- Apr 2024 Talk: Student Seminar at Columbia University: Sieving Techniques in Number Theory. Title: Small gaps between primes
- Sept 2023 Talk: Maine-Quebec Number Theory Conference. Title: Counting prime ideals of a given degree in number fields

Awards

- 2022 Scholar of Oriel College, Oxford - based on Part B results
- 2021 Scholar of Oriel College, Oxford - based on Part A results
- 2018 Bronze for Third Rank, Mathematical Talent Reward Programme - organized by students of Indian Statistical Institute, Kolkata

Teaching/Seminars organised

- Spring 2026 Student Seminar in Orbit Method and Subconvexity of L-functions, Columbia University
- Spring 2026 Teaching Assistant for Undergraduate Seminar II, Columbia University
- Fall 2025 Student Seminar in Orbit Method and Subconvexity of L-functions, Columbia University
- Fall 2025 Teaching Assistant for Modern Analysis 1, Columbia University
- Summer 2025 Teaching Assistant for Calculus 2
- Spring 2025 Learning Seminar in Automorphic Forms, Columbia University
- Spring 2025 Teaching Assistant for Calculus 2
- Fall 2024 Learning Seminar in Automorphic Forms, Columbia University
- Fall 2024 Teaching Assistant for Modern Analysis 2 - also substituted in for 1 lecture.
- 2023-24 Mentor for Directed Reading Program at Columbia - supervised two undergraduates to learn the theory of Elliptic Curves and Modular Forms
- 2023-24 Help Room Tutor at Columbia - Calculus I to III