

ANISH RAY

*PhD Student in Mathematics, University of Houston
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PERSONAL DETAILS

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Date of Birth May 27, 2000
Nationality Indian
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EDUCATION

Ph.D. in Mathematics **August 2025 – Present**
University of Houston, USA

Current GPA: 3.778

M2 Mathématiques et Applications, Spécialité Analyse, Arithmétique, Géométrie **2024 – 2025**
Institut de mathématique d'Orsay, Université Paris-Saclay, France

Overall grade: 12.01 (*Assez Bien*)

M.Sc. in Mathematics **2020 – 2023**

Universität Münster, Germany

Overall grade: 1.8 (*Gut*)

B.Sc. (Hons.) in Mathematics and Computing **2017 – 2020**

Institute of Mathematics and Applications, Bhubaneswar (IMA), affiliated with Utkal University, Bhubaneswar, Odisha, India

Grade: First Class with Distinction

RESEARCH INTERESTS

Analytic Number Theory, L -functions, Spectral Theory of Automorphic Forms, Automorphic Representations, Arithmetic Statistics, Equidistribution Problems, and Homogeneous Dynamics.

PREPRINTS

1. *On the Constants of the Lang-Trotter Conjecture for CM Elliptic Curves.*

[arXiv:2309.09938](https://arxiv.org/abs/2309.09938) [math.NT]

RESEARCH AND READING PROJECTS

PIMS – First Year Interest Groups

October 2025 – May 2026

Group Reading Project on Primes and the Theory of the Riemann Zeta Function, Pacific Institute for the Mathematical Sciences

Supervisor: Dr. Nicol Leong, Postdoctoral Fellow, University of Lethbridge

M2 Thesis

December 2024 – June 2025

On Subconvexity of L -functions on $U(n) \times U(n+1)$ in the Depth Aspect

Supervisor: Prof. Farrell Brumley, IMJ-PRG, Sorbonne Université, France Grade: 14.5/20 (*Bien*)

- Master's Thesis** **September 2022 – March 2023**
On the Constants of the Lang-Trotter Conjecture for CM Elliptic Curves
Supervisor: Prof. Dr. Christopher Deninger, Mathematisches Institut, Universität Münster, Germany Grade: 1.0 (Highest Grade)
- Research Project** **April 2023 – April 2024**
Asymptotics of the Number of Solutions of Forms Having Prime Coordinates via the Hardy-Littlewood Circle Method
Supervisor: Prof. Julia Brandes, Chalmers University of Technology, Gothenburg, Sweden
- Research Project** **November 2022 – October 2023**
Developed a New Large Sieve Inequality by Introducing Suitable Weight Functions
Supervisor: Prof. Dr. Jan-Christoph Schlage-Puchta, Universität Rostock, Germany
- Bachelor's Project** **February 2020 – May 2020**
Some Problems on Elementary Number Theory
Supervisor: Dr. Sudhansu Sekhar Rout (currently Asst. Prof., NIT Calicut, Kerala, India)
- Summer Project (Visiting Summer Research Programme)** **June 2019 – July 2019**
Reading Project on the Spectral Theory of Unbounded Operators
Supervisor: Dr. Shyam Ghoshal, TIFR Centre for Applicable Mathematics (CAM), Bengaluru, India

ACADEMIC AWARDS

- AMS–NSF ICM 2026 Graduate Student Travel Grant** **2026**
Awarded by the American Mathematical Society supporting travel for poster presentation at ICM 2026 in Philadelphia.
- Presidential Fellowship** **2025 – 2027**
Awarded by the University of Houston to recruit doctoral students with outstanding credentials. The fellowship provides \$2,000 in addition to the Graduate Assistantship for the first two years of the PhD programme.
- Graduate Tuition Fellowship** **2025 – Present**
Competitive fellowship awarded by the University of Houston Graduate School covering in-state tuition and mandatory fees for PhD students.
- M2 Internship Allowance** **2025**
Awarded by the Institut de Mathématiques de Jussieu-Paris Rive Gauche (IMJ-PRG) to support thesis completion.
Monthly allowance of €660 for three months.
- IDEX Excellence Scholarship** **2024 – 2025**
Awarded by the Université Paris-Saclay to only 80 international students pursuing a master's degree.
Total of €10,000 for ten months, plus €850 in travel expenses.
- Graduation Scholarship** **2021 – 2022**
Awarded by the International Office, WWU Münster.
Total of €1,500 for three months.
- Merit Scholarship** **2015**
One-time merit scholarship of INR 5,000 awarded by the Kendriya Vidyalaya Sangathan (KVS) for securing 10 CGPA in AISSE 2015.

CONFERENCE AND SEMINAR TALKS

- International Congress of Mathematicians** **2026**
Philadelphia
Poster presentation: “A Computational Comparison of Lang-Trotter and Hardy-Littlewood Constants for CM Elliptic Curves” at the ICM in July 2026.

Graduate Student Paper Presentation	2026
<i>Organized by the UH-AMS Graduate Chapter, University of Houston</i>	
Probabilistic Number Theory: Law of Large Numbers and CLT in Number Theory	2022
<i>Universität Münster</i>	
Linear Algebraic Groups: Connected Solvable Groups and Maximal Tori	2022
<i>Universität Münster</i>	
Elliptic Curves, Tate Module and the Weil Pairing	2022
<i>Universität Münster</i>	
Class Field Theory	2021
<i>Universität Münster</i>	
Zeta and L-functions in Algebraic Number Theory	2021
<i>Universität Münster</i>	

CONFERENCES, SUMMER SCHOOLS, AND WORKSHOPS ATTENDED

ANTeater'26 (Upcoming)	2026
<i>University of California, Irvine</i>	
Recent Perspectives on Moments of L-functions	2026
<i>University of Texas at Dallas</i>	
Workshop on Automorphic Forms and Number Theory	2025
<i>IMJ-PRG, Sorbonne University, Paris</i>	
Summer School on Inclusive Paths in Explicit Number Theory	2023
<i>Banff International Research Station (BIRS) at the University of British Columbia – Okanagan, Canada</i>	
Summer School on Automorphic Forms	2022
<i>Alfréd Rényi Institute of Mathematics, Budapest</i>	

TEACHING

Teaching Assistant, University of Houston	Spring 2026
<i>MATH 2451 – Accelerated Calculus II</i>	
Teaching Assistant, University of Houston	Fall 2025, Spring 2026
<i>MATH 2305 – Discrete Mathematics</i>	
Associate Faculty, Cheenta Ganit Kendra (https://cheenta.com/)	2017 – 2018
<i>Online tutoring platform for aspirants of Mathematics Olympiads and national-level entrance examinations.</i>	
<i>Conducted lectures, problem-solving sessions, and created and graded assignments, quizzes, and examinations.</i>	

ACADEMIC SERVICE AND OUTREACH

Proofreader, University of Houston Mathematics Contest	2026
<i>The University of Houston hosts a major annual Mathematics Contest for high school and middle school students, featuring individual and team examinations across multiple tracks.</i>	
https://mathcontest.uh.edu/	
Head of Technical Affairs and Problem Selection Committee	2018
<i>Scholastic Aptitude Test in Mathematics (SATM), conducted by the student association of the Institute of Mathematics and Applications, Bhubaneswar, as part of its annual techno-cultural fest. The event focuses on spreading awareness about higher education in mathematics and organises training camps for selected high school students in Odisha, India.</i>	
https://sites.google.com/view/satm-ima	

SKILLS

<i>Programming</i>	C, C++, PYTHON, JAVASCRIPT, JAVA, VISUAL BASIC
<i>Typesetting</i>	L ^A T _E X
<i>Markup</i>	HTML
<i>Stylesheet</i>	CSS
<i>Office Software</i>	MS WORD, MS EXCEL, MS POWERPOINT, MS ACCESS
<i>Languages</i>	Bengali (mother tongue) English (professional) German (proficient, A2) French (proficient, A1) Hindi (native) Sanskrit (intermediate)