Curriculum Vitae

1 Personal Information

Name	Sayantan Santra
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	sayantan.santra@ou.edu
Address	Norman, Oklahoma, US, ZIP - 73071
Languages	Bangla (native), English (fluent), Hindi (fluent) and Sanskrit (intermediate)

2 Research Interests

I'm interested in Algebraic Number Theory, specifically L-functions of modular forms and elliptic curves.

3 Work Experience

2021-	Graduate Teaching Assistant at The University of Oklahoma, Norman, OK, US

4 Education

2021-	PhD in Mathematics from The University of Oklahoma, Norman, OK, US
2019-2021	M. Math. Mathematics (First Division with Distinction) from Indian Statistical Institute, Bengaluru, Karnataka, India
2016-2019	B.Sc. (Hons.) Mathematics (First Class) from Ramakrishna Mission Residential College, Narendrapur, Kolkata, WB, India
2016	Grade O in Higher Secondary examination
2014	Grade AA in Secondary Examination

5 Achievements

2021	I was among the 9 students selected for PhD at the prestigious TIFR (Tata Institute for Fundamental Research), Mumbai.
2019	I got into the top quartile in Simon Marais Mathematics Competition and received a special mention.
2019	I secured a nationwide rank 10 in CSIR-UGC NET, December 2019.
2019	I secured nationwide rank 2 in the M. Math. entrance test of ISI (Indian Statistical Institute).
2019	I was among the 15 students selected for interview at the prestigious CMI (Chennai Mathematical Institute) for M.Sc. in Mathematics.
2019	I secured nationwide rank 87 in JAM 2019 and was among the 5 students selected for admission in the prestigious IISc (Indian Institute of Science) for integrated PhD in Mathematics.
2016	I received the prestigious INSPIRE SHE scholarship (for the period 2016-2019).

6 Programming

I have experience with the languages SageMath, Lean 4, Rust, C++, C, Python, OCaml, JavaScript, HTML, LaTeX, and some SQL. I'm also familiar with Linux, Docker, and shell programming

7   Projects, Readings and Internships

2023	Formalization of Mathematics Summer School from 5-16 June in SLMath (formerly MSRI), Berkeley, CA [We learned about the Lean 4 proof assistant and I, as part of a team, did a project to prove a bunch of theorems related to Krull dimension to be put into Mathlib.]
2023	Reading course on Modular Forms and Hecke Operators (following the lecture notes by Ribet-Stein) under the guidance of Dr. Kimball Martin of the University of Oklahoma during January-May
2022	Reading course on Analytical Number Theory under the guidance of Dr. Ameya Pitale of the University of Oklahoma during August-December
2022	PAWS (Preliminary Arizona Winter School): Heights in Diophantine Geometry under the guidance of Dr. Padmavathi Srinivasan of ICERM during Oct.-Nov.
2022	Research project on statistical trends of coefficients of L-functions of elliptic curves under the guidance of Dr. Kimball Martin of the University of Oklahoma during May-August
2022	Reading course on Modular Forms under the guidance of Dr. Kimball Martin of the University of Oklahoma during January-May
2021	Project titled "Primes of the form $p = x^2 + ny^2$" under the guidance of Dr. Ramesh Sreekantan of ISI Bengaluru during January-May
2020	Category Theory course under Dr. Amit Kuber of IIT Kanpur in September
2017	NPTEL course in Graph Theory (2017) : Got 93% in the certification exam
2015	INSPIRE Internship during class XI

8   Presentations/Talks

2024	"A (very) Brief Introduction to Lean 4" in Student Algebra Seminar at the University of Oklahoma on 7th February
2023	"On Congruences of Coefficients of Modular Forms" in the ARTS (Algebra and Representation Theory Seminar) at the University of Oklahoma on 29th September
2023	"On Congruences of Coefficients of Modular Forms" in Student Presentation Seminar at the University of Oklahoma on 21st September
2023	"Elliptic Curves and Integer Factorization" in Student Presentation Seminar at the University of Oklahoma on 13th April
2022	"Motivations and Consequences of the Prime Number Theorem" in SPS (Student Presentation Seminar) at the University of Oklahoma on 15th November
2021	"Primes of the Form $p = x^2 + ny^2$" in Student Algebra Seminar at the University of Oklahoma in November
2021	"Primes of the Form $p = x^2 + ny^2$" for final semester project presentation at the Indian Statistical Institute in May
2019	"Planar Graphs and n-Holed Tori" at RKMRC Narendrapur in February

9   Conferences Attended

2024	Hybrid Conference on AI-Math on February 27-29 organized by UERJ, RJ, Brazil
2023	TORA (Texas-Oklahoma Representations and Automorphic forms) XII on October 14-15 at University of Oklahoma, Norman, OK, US
2023	SLAM (Southwest Local Algebra Meeting) 2023 on March 4-5 at University of North Texas, Denton, TX, US
2022	TORA (Texas-Oklahoma Representations and Automorphic forms) XI on April 1-3 at Oklahoma State University, Stillwater, OK, US
2016,17,18	Analytica at St. Xavier's College, Kolkata, India

10   Standardised Tests

- **TOEFL iBT (November 2019)**
  Reading (29), Listening (30), Speaking (25) and Writing (26)
  Total - **110/120**

11   Extracurricular Activities

11.1   Organization and Leadership

2024	Organized the Student Algebra Seminar in Spring
2020	Organized Mathletics (an online math event during the pandemic) with some like minded friends
2018	Organized Infinity (a two day inter-college math competition organized by the Department of Mathematics and the Department of Statistics) in Spring as a representative of the Department of Mathematics

11.2   Hobbies

(a) I'm a hobbyist programmer and an active supporter of the FOSS movement.

(b) I'm a coffee enthusiast. I love making and drinking coffee; and also have interest in learning about the science and history of coffee.

(c) I like to participate in Quizzes, having competed in state level competitions and won awards in district level competitions.

(d) I'm also interested in literature. I've published several poems in both my native language Bangla and English. Also, like most people, I love music and movies.

12   Declaration

I hereby declare that the details and information given above are complete and true to the best of my knowledge.

Date : March 13, 2024   [SAYANTAN SANTRA]
Place : Norman, OK, US   Signature