Curriculum Vitae

1 Personal Information

Name	Sayantan Santra
Email	sayantan.santra689@gmail.com
	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

3.1 The University of Oklahoma, Norman, OK, US (ongoing since 2021)

I currently work here as a Graduate Teaching Assistant. I've served as a discussion leader or grader in many semesters. Below are the classes that I taught as an Instructor of Record:

Summer 2024	Calculus and Analytic Geometry III (Math-2433)
Fall 2023	Precalculus and Trigonometry (Math-1523)
Summer 2022	Precalculus and Trigonometry (Math-1523)

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 Awards and Achievements

Spring 2024	I was the recipient of the 2024 C. Eugene Springer Scholarship.
Spring 2021	I was among the 9 students selected for PhD at the prestigious TIFR (Tata Institute for Fundamental Research), Mumbai.
Fall 2019	I got into the top quartile in Simon Marais Mathematics Competition and received a special mention.
Fall 2019	I secured a nationwide rank 10 in CSIR-UGC NET, December 2019.
Spring 2019	I secured nationwide rank 2 in the M. Math. entrance test of ISI (Indian Statistical Institute).
Spring 2019	I was among the 15 students selected for interview at the prestigious CMI (Chennai Mathematical Institute) for M.Sc. in Mathematics.
Spring 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, Haskell, C, Python, OCaml, JavaScript, C++, HTML, LaTeX, and some SQL. I'm also familiar with Linux, Docker, and shell programming.

7 Projects and Internships

Summer 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.]
Fall 2022	PAWS (Preliminary Arizona Winter School): Heights in Diophantine Geometry under the guidance of Dr. Padmavathi Srinivasan of ICERM
Summer 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
Spring 2021	Project titled "Primes of the form $p = x^2 + ny^2$" under the guidance of Dr. Ramesh Sreekantan of ISI Bengaluru
Fall 2020	Category Theory course under Dr. Amit Kuber of IIT Kanpur
Summer 2017	NPTEL course in Graph Theory (2017) : Got 93% in the certification exam
2015	INSPIRE Internship during class XI

8 Presentations/Talks

Spring 2024	"Proof Formalization in Lean, or: how to trick your computer into doing (even) more math" with Dr. Mario Morán Cañón in OU Math Club at the University of Oklahoma
Spring 2024	"Exceptional Primes and Where to Find Them" in MathFest at the University of Oklahoma
Spring 2024	"A (very) Brief Introduction to Lean 4" in Student Algebra Seminar at the University of Oklahoma
Fall 2023	"On Congruences of Coefficients of Modular Forms" in the ARTS (Algebra and Representation Theory Seminar) at the University of Oklahoma
Fall 2023	"On Congruences of Coefficients of Modular Forms" in Student Presentation Seminar at the University of Oklahoma
Spring 2023	"Elliptic Curves and Integer Factorization" in Student Presentation Seminar at the University of Oklahoma
Fall 2022	"Motivations and Consequences of the Prime Number Theorem" in SPS (Student Presentation Seminar) at the University of Oklahoma
Fall 2021	"Primes of the Form $p = x^2 + ny^2$" in Student Algebra Seminar at the University of Oklahoma
Spring 2021	"Primes of the Form $p = x^2 + ny^2$" for final semester project presentation at the Indian Statistical Institute
Spring 2019	"Planar Graphs and n-Holed Tori" at RKMRC Narendrapur

9 Conferences Attended

Fall 2024	Building Bridges: 6th EU/US Summer School & Workshop on Automorphic Forms and Related Topics at Centre International de Rencontres Mathématiques (CIRM), Marseille, France
Spring 2024	TORA (Texas-Oklahoma Representations and Automorphic forms) XIII at University of North Texas, Denton, TX, US
Spring 2024	Hybrid Conference on AI-Math organized by UERJ, RJ, Brazil
Fall 2023	TORA (Texas-Oklahoma Representations and Automorphic forms) XII at University of Oklahoma, Norman, OK, US
Spring 2023	SLAM (Southwest Local Algebra Meeting) 2023 at University of North Texas, Denton, TX, US
Fall 2022	TORA (Texas-Oklahoma Representations and Automorphic forms) XI 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

Spring 2024	Organized the Student Algebra Seminar
Fall 2020	Organized Mathletics (an online math event during the pandemic) with some like minded friends
Spring 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 a firm believer of the FOSS philosophy.

(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-making.

(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 : September 5, 2024
Place : Norman, OK, US

[SAYANTAN SANTRA]
Signature