

Sai Sanjeev Balakrishnan

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RESEARCH INTERESTS

Langlands program, specifically, cohomology of locally symmetric spaces and local-global compatibility.

EDUCATION

University of California, Berkeley PhD in Mathematics <u>Advisor:</u> Sug Woo Shin	Berkeley, California, USA August 2024-2029
Trinity College, University of Cambridge Master of Advanced Study(MASt) in Pure Mathematics (Tripos Part III) <u>Essay title:</u> Modular forms and representation theory	Cambridge, United Kingdom Oct 2023-Jun 2024
Indian Institute of Science B.S.(Research) in Mathematics <u>Thesis title:</u> Class field theory	Bengaluru, India Jul 2019-Jun 2023

PUBLICATIONS

1. **Sai Sanjeev Balakrishnan**, Antonio Lei, Bharathwaj Palvannan,
“On computing the Newton polygons of plus and minus p -adic L -functions”
Published in *Involve - a journal of mathematics*, 2025, 10.2140/involve.2025.18.401
2. **Sai Sanjeev Balakrishnan**, Felix Houde, Vahagn Hovhannisyan, Maryna Manskova, Yiqing Wang,
“Arbitrarily long strings of consecutive prime numbers in special sets”
Published in *Acta Arithmetica*, 2025, 10.4064/aa240201-25-5.

FELLOWSHIPS AND AWARDS

- **Ramanujan Research Studentship in Mathematics** Oct 2023-Jun 2024
This studentship supports one student from India every year to undertake the MASt course at the University of Cambridge.
- **Mitacs Globalink Research Fellowship** May-Aug 2022
Fellowship offered by the Mitacs organization to spend a summer doing research in Canada.
- **Kishore Vaigyanik Protsahan Yojana fellow** 2019-2023
This is a prestigious national fellowship in basic sciences, awarded by the Department of Science and Technology, Government of India. Placed 77th among more than 150000 students.

CONFERENCES AND WORKSHOPS ATTENDED

- **Arizona Winter School** March 7 - 11, 2026
A workshop on computational aspects of arithmetic geometry and cryptography
- **Automorphic forms and Bloch-Kato conjectures** May 19 - 30, 2025
A workshop on automorphic forms at International Centre for Theoretical Sciences, Bengaluru, India
- **37th Automorphic forms workshop** Apr 30 - May 4, 2025
A workshop on automorphic forms at University of North Texas, Denton, Texas

- **Modular forms, L-functions and Eigenvarieties** June 18-21, 2024
A conference in memoriam of Joel Bellaïche held at Paris, France
- **Young Researchers in Mathematics Program** Summer 2023
Summer workshop held at Bernoulli center, EPFL.
- **Elliptic Curves and special values of L -functions** Aug, 2022
Held at International Center for Theoretical Sciences, Bangalore

TEACHING AND MENTORING

- **Graduate Student Instructor for MATH 51** Fall 2025
University of California, Berkeley
Lower division first course on calculus for undergraduate students.
- **Graduate Student Instructor for MATH 54** Summer 2025
University of California, Berkeley
Lower division course on linear algebra for undergraduate students.
- **Graduate Student Instructor for MATH 53** Spring 2025, Spring 2026
University of California, Berkeley
Lower division course on Multivariable calculus for undergraduate students.
- **Graduate Student Instructor for MATH 1B** Fall 2024
University of California, Berkeley
Lower division second course on calculus for undergraduate students.
- **Directed Reading Program** Spring, Fall 2025, Spring 2026
University of California, Berkeley
Supervised reading courses for undergraduate students
- **MPS mentoring program** Summer, Fall 2025, Spring 2026
University of California, Berkeley
Mentored a group of freshmen students on academics, specifically on getting involved with mathematics research

EXTRACURRICULAR ACTIVITIES

- **Samasya Club Coordinator** 2020–2021
It is the undergraduate mathematics club of IISc. I arranged talks by students, alumni, and professors.
- **Enumeration (Pravega) coordinator** 2021
It is the mathematics event at the annual Undergraduate fest, Pravega at IISc. I led a team to design and conduct a multi-level competition and organized guest lectures.

SKILLS AND LANGUAGES

- Coding languages known: Magma, Sagemath and Python
- I am proficient in English, Hindi, Kannada, Telugu, Tamil (mother tongue)