Anubhav Nanavaty

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Ph.D Candidate in Mathematics - University of California, Irvine

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EDUCATION

University of California, Irvine — Sep 2020 - Present
Ph.D in Mathematics, GPA: 4.00 — Expected Jun 2025
Advisor: Jesse Wolfson

University of Chicago — Sep 2016 - Jun 2020
B.S. in Mathematics (with honors), GPA: 3.77

RESEARCH INTERESTS

I am interested in studying the topology of algebraic and analytic varieties and their applications to number theory, using concepts and tools such as motivic measures and algebraic K theory that have emerged from the philosophy of motives.

HONORS & AWARDS

University of California, Irvine

1. Howard M. Tucker Fellowship — Sept 2020 - 2021
2. COMP Fellow — Sept 2022 - Dec 2022

University of Chicago

1. Dean's List — 2016-2020

WRITING

Submitted

- O. Braunling, M. Groechenig, and A. Nanavaty "*The Standard Realizations for the K-Theory of Varieties*". [arXiv]

Expository Writings

1. A. Nanavaty, *Wall's Obstruction Theorem* [pdf]
2. A. Nanavaty, *An Introduction to Path Integral Formalism* [pdf]
3. A. Nanavaty, *The Fourier Operator and the Characteristic Function* [pdf]

In Preparation

- A. Nanavaty "*The Derived Gillet-Soulé and the Unstable A^1 Homotopy Measure*"
- A. Nanavaty "*A Concise Introduction to Categories*". To appear in the book in-progress: *Finite Spaces in Larger Contexts*, by Peter May. *In preparation.* [pdf]

TALKS

Invited Talks

1. *Understanding Weight Filtrations via Derived Motivic Measures*, Graduate Student Conference in Algebra, Geometry, and Topology GTA: Philadelphia, May 2022.
2. *Understanding Weight Filtrations via Derived Motivic Measures*, Michigan State Student Algebra Seminar, Zoom, Apr 2022.
3. *Understanding Weight Filtrations via Derived Motivic Measures*, Graduate Student Topology and Geometry Conference, Georgia Tech, Apr 2022.
4. *Understanding Wall's Finiteness Obstruction and its Equivariant Analogues*, UChicago Math REU, University of Chicago, Aug 2019.

SCHOOLS, WORKSHOPS, CONFERENCES

- Motives in Ratisbona (University of Regensburg) Sep 2022
- Crossing the bridge: New connections in number theory and physics (Netwon Institute) Aug 2022
- Mathematical physics: algebraic cycles, strings and amplitudes (Newton Institute) Jul 2022
- Homotopy Theory with Applications to Arithmetic and Geometry (Fields Institute) Jun 2022
- Anabelian Days Down in Georgia May 2022
- IAS PCMI Virtual Summer School Week 1: (virtual) Jul 2021
  "An Introduction to Motivic Homotopy Theory and its Applications"
- Online Workshop: K-theory and Related Topics (University of Toronto, virtual) May 2021
- Geometry & Topology RTG (Notre Dame) Jul 2020
- University of Chicago Analysis Bootcamp Jun-Aug 2018

TEACHING EXPERIENCE

Teaching Assistant, University of California, Irvine

- Math 2D, *Multivariable Calculus* - Fall 2020, Spring 2021
- Math 2E, *Multivariable Calculus* - Winter 2021, Spring 2022

SERVICE

UC Irvine Mathematics Department

Community Outreach and Mentoring Program, *Peer Metor* Fall 2021-

UC Irvine Math Community Educational Outreach (CEO)

Middle School Mentor Winter 2020-

The UCI Math CEO is an innovative comprehensive university-community partnership that links grade 6-12 Latinx youth and their families from underserved communities in Southern California with UC Irvine faculty, undergraduate and graduate student mentors.

University of Chicago Applied Mathematics Club

President and Founder — Winter 2018-Spring 2020

UCAMC is an undergraduate-led club that provides a platform for students interested in applications of mathematics. It hosts talks and workshops on a variety of topics including finance, economics, computer science, machine learning, physics, statistics, and computational biology.