

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

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 (Newton 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 May 2021
(University of Toronto, virtual)
- 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 Mentor* 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.