

# Anubhav Nanavaty: Curriculum Vitae

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Rowland Hall, Department of Mathematics, Ring Road, Irvine, CA 92697

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

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EDUCATION	<b>University of California, Irvine</b> Ph.D in Mathematics Advisor: Jesse Wolfson	Sep 2020 - Present Expected Jun 2025
	<b>University of Chicago</b> B.S. in Mathematics (with honors)	Sep 2016 - Jun 2020
RESEARCH INTERESTS	I am interested in studying the topology of algebraic/analytic varieties and their applications to number theory, using concepts and tools that have emerged from the philosophy of motives. I am also interested in topological phases of matter.	
HONORS & AWARDS	<b>University of California, Irvine</b>	
	1. UCI Graduate Dean's Dissertation Fellow	2024
	2. Howard M. Tucker Fellowship	Sept 2020 - 2021
	3. COMP Fellow	Sept 2022 - Dec 2022
WRITING	<b>University of Chicago</b>	
	1. Dean's List	2016-2020
	<b>Submitted</b>	
	<ul style="list-style-type: none"><li>• O. Braunling, M. Groechenig, and A. Nanavaty “<i>The Standard Realizations for the K-Theory of Varieties.</i>” [arXiv]</li><li>• A. Nanavaty “<i>Weight Filtrations and Derived Motivic Measures.</i>” [arXiv]</li></ul>	
	<b>Expository Writings</b>	
	1. A. Nanavaty, <i>Wall's Obstruction Theorem</i>	[pdf]
	2. A. Nanavaty, <i>An Introduction to Path Integral Formalism</i>	[pdf]
	3. A. Nanavaty, <i>The Fourier Operator and the Characteristic Function</i>	[pdf]
	<b>In Preparation</b>	
	<ul style="list-style-type: none"><li>• A. Nanavaty “<i>Promoting Point Counts to Motivic Decompositions: Symmetric Matrices</i>”</li></ul>	

## TALKS

## Invited Talks

1. *Weight Filtrations and Derived Motivic Measures (Upcoming)*, Duke Geometry/Topology Seminar, Nov 2024
2. *Weight Filtrations and Derived Motivic Measures (Upcoming)*, FSU Algebra Seminar, Sep 2024
3. *Weight Filtrations and the K Theory of Varieties*, UCLA Algebraic Topology Seminar, Oct 2023
4. *Weight Filtrations and the K Theory of Varieties*, Young Topologists Meeting: EPFL Lausanne, Jul 2023
5. *Understanding Weight Filtrations via Derived Motivic Measures*, Graduate Student Conference in Algebra, Geometry, and Topology GTA: Philadelphia, May 2022.
6. *Understanding Weight Filtrations via Derived Motivic Measures*, Michigan State Student Algebra Seminar, Zoom, Apr 2022.
7. *Understanding Weight Filtrations via Derived Motivic Measures*, Graduate Student Topology and Geometry Conference, Georgia Tech, Apr 2022.
8. *Understanding Wall's Finiteness Obstruction and its Equivariant Analogues*, UChicago Math REU, University of Chicago, Aug 2019.

## SCHOOLS, WORKSHOPS, CONFERENCES

- C\*-Algebraic Quantum Mechanics and Topological Phases of Matter Aug 2024
- IAS/PCMI Summer School in Motivic Homotopy Theory Jul 2024
- AIM Workshop on Scissors Congruences, Algebraic K-Theory and Steinberg Modules Jul 2024
- Regulators V Jun 2024
- IHES Summer School on Recent Advances in K Theory (IHES) Jul 2023
- MIT Talbot Conference "Computations in Stable Motivic Homotopy Theory" Jun 2023
- Motives in Ratisbona (University of Regensburg) Sep 2022
- Crossing the bridge: New connections in number theory and physics (Newton Institute) Aug 2022
- 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 2B, *Single Variable Calculus* - Winter 2024
- Math 2D, *Multivariable Calculus* - Fall 2020, Spring 2021, Fall 2023
- Math 2E, *Multivariable Calculus* - Winter 2021, Spring 2022
- Math 134 A, *Fixed Income* - Winter 2023
- Math 121 A, *Linear Algebra I* - Fall 2023
- Math 113 B, *Mathematical Modeling for the Biological Sciences* - Winter 2024

### Seminar Organizer, University of California, Irvine

- Condensed Matter and Topology Seminar Co-organizer- Fall/Winter/Spring 2022, Fall/Winter/Spring 2023

## SERVICE

### UC Irvine Mathematics Department

Community Outreach and Mentoring Program:

1. *Peer Mentor* Fall 2021-
2. *COMP Fellow* Fall 2023

### UC Irvine Math Community Educational Outreach (CEO)

Middle School Mentor Winter 2020-Spring 2021

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.