Anubhav Nanavaty: Curriculum Vitae

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H.C. Wang Assistant Professor of Mathematics - Cornell University

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EMPLOYMENT	**Cornell University** H.C. Wang Assistant Professor	Jul 2020 - Present
EDUCATION	**University of California, Irvine** Ph.D in Mathematics Advisor: Jesse Wolfson	Sep 2020 - Jun 2025
	University of Chicago 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

University of California, Irvine

1. UCI Graduate Dean's Dissertation Fellow	2024
2. Howard M. Tucker Fellowship	Sept 2020 - 2021
3. 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]
- A. Nanavaty "*Weight Filtrations and Derived Motivic Measures.*" [arXiv]
- A. Nanavaty "*Motivic Splittings for Symmetric Matrices.*" [arXiv]

Preprints

- A. Nanavaty "*Dehn-Sydler-Jessen via Homological Algebra*"[pdf]

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]

TALKS

Invited/Contributed Talks

1. *Feynman Integrals and Symmetric Matrices*, Arithmetic, K-Theory, and Algebraic Cycles Conference, May 2025

2. *Weight Filtrations and Derived Motivic Measures*, FSU Algebra Seminar, Mar 2025

3. *Weight Filtrations and Derived Motivic Measures*, BYU AG Seminar, Mar 2025

4. *Feynman Integrals and Symmetric Matrices*, Brown AG Seminar, Feb 2025

5. *Weight Filtrations and Derived Motivic Measures*, University of Utah NT Seminar, Jan 2025

6. *Weight Filtrations and Derived Motivic Measures*, JMM Seattle, Jan 2025

7. *Weight Filtrations and Derived Motivic Measures*, Duke Geometry/Topology Seminar, Nov 2024

8. *Weight Filtrations and Derived Motivic Measures*, Motives and Hochschild Theory Seminar, University of Nevada, Reno - Nov 2024

9. *Weight Filtrations and the K Theory of Varieties*, UCLA Algebraic Topology Seminar, Oct 2023

10. *Weight Filtrations and the K Theory of Varieties*, Young Topologists Meeting: EPFL Lausanne, Jul 2023

11. *Understanding Weight Filtrations via Derived Motivic Measures*, Graduate Student Conference in Algebra, Geometry, and Topology GTA: Philadelphia, May 2022.

12. *Understanding Weight Filtrations via Derived Motivic Measures*, Michigan State Student Algebra Seminar, Zoom, Apr 2022.

13. *Understanding Weight Filtrations via Derived Motivic Measures*, Graduate Student Topology and Geometry Conference, Georgia Tech, Apr 2022.

14. *Understanding Wall's Finiteness Obstruction and its Equivariant Analogues*, UChicago Math REU, University of Chicago, Aug 2019.

SCHOOLS, WORKSHOPS, CONFERENCES

- Scissors Congruence and K-theory   Jul 2025
- Arithmetic, K-Theory and Algebraic Cycles   May 2025
- 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: University of Pisa   Jun 2024
- Young Researchers School on Topological Aspects of Low-dimensional Quantum Physics: Maynooth   April 2024
- Young Topologists Meeting: EPFL Lausanne   Jul 2023
- 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 (Netwon Institute)   Aug 2022
- Algebraic cycles, Strings and Amplitudes (Newton Institute)
  Jul 2022
- Homotopy Theory with Applications to Arithmetic and Geometry   Jun 2022
  (Fields Institute)
- 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, Spring 2025
- 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 Metor*   Fall 2021-2025
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.