Chase Vogeli

Curriculum Vitae

Ithaca, NY USA
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Education

2020 – 2026 **Ph.D. in Mathematics**, *Cornell University*, Ithaca, NY
Advisor: Inna Zakharevich

2021 – 2023 **M.Sc. in Computer Science**, *Cornell University*, Ithaca, NY

2016 – 2020 **B.Sc. in Mathematics**, *Massachusetts Institute of Technology*, Cambridge, MA
Minor in German Studies

Research

Algebraic topology, particularly algebraic K-theory and equivariant stable homotopy theory; connections to homological stability and modular representation theory.

Publications

2025 **The Galois-equivariant K-theory of finite fields**, with David Chan.
Proceedings of the London Mathematical Society 130.1 (2025). Available at arXiv:2406.19481.

Preprints

2025 **Derived induction theory for the K-theory of modular group rings**
Available at arXiv:2510.25763.

2025 **C_p-Mackey functors in Macaulay2**, with Thomas Brazelton, David Chan, Benjamin Mudrak, Ben Spitz, Chenglu Wang, Michael Zeng, and Sasha Zotine.
Submitted. Available at arXiv:2509.05456.

2023 **Bredon homological stability for configuration spaces of G-manifolds**, with Eva Belmont and J.D. Quigley.
Submitted. Available at arXiv:2311.02459.

2019 **Uniformly vertex-transitive graphs**, with Simon Schmidt and Moritz Weber.
Available at arXiv:1912.00060.

Talks & Presentations

Invited talks

Oct 2025 *Galois descent and the K-theory of modular group rings*
AMS Fall Central Sectional Meeting. St. Louis, MO.

Oct 2025 *Galois descent and the K-theory of modular group rings*
Cornell University Topology Seminar. Ithaca, NY.

Apr 2025 *Derived induction theory for modular representations*
University of Pennsylvania Geometry–Topology Seminar. Philadelphia, PA.

Apr 2025 *Derived induction theory for modular representations*
University at Albany Algebra & Topology Seminar. Albany, NY.

Mar 2025 *Derived induction theory for modular representations*
University of Virginia Topology Seminar. Charlottesville, VA.

Oct 2024 *The Galois-equivariant K-theory of finite fields*
AMS Fall Eastern Sectional Meeting. Albany, NY.

Sep 2024 *The Galois-equivariant K-theory of finite fields*
Binghamton University Geometry and Topology Seminar. Binghamton, NY.

Mar 2024 *Equivariant homological stability*
"Trace Methods and Applications for Cut-and-Paste K-Theory" FRG Seminar. Online.

Jul 2019 *Some applications of graph theory to the study of quantum symmetry*
Research Seminar in Free Probability Theory. Saarbrücken, Germany.

Contributed talks

Jan 2026 *Galois descent and the K-theory of modular group rings*
Joint Mathematics Meetings. Washington, DC.

Mar 2025 *Derived induction theory for modular representations*
Upstate New York Topology Seminar. Binghamton, NY.

Apr 2024 *Equivariant homological stability*
Graduate Student Topology and Geometry Conference. East Lansing, MI.

Jan 2024 *Homological stability for equivariant configuration spaces*
Joint Mathematics Meetings. San Francisco, CA.

Nov 2023 *The K-theory of the stable module category*
Binghamton University Graduate Combinatorics, Algebra, & Topology (BUGCAT) Conference. Binghamton, NY.

Nov 2022 *Homological stability for equivariant configuration spaces*
BUGCAT Conference. Binghamton, NY.

Jan 2019 *On the Saxl graphs of a family of permutation groups*
Joint Mathematics Meetings. Baltimore, MD.

Awards & Scholarships

2024 **Russell Family Teaching Award**, *Cornell University, College of Arts & Sciences*
College-wide award which recognizes devotion to teaching.

2023 **Torng Prize**, *Cornell University, Department of Mathematics*
Awarded for outstanding contributions to the teaching mission of the department.

2021 **Olivetti Egg**, *Cornell University, Department of Mathematics*
Voted as the best speaker in the Cornell graduate student mathematics colloquium.

2020 **Phi Beta Kappa**, *MIT*

2020 **Teaching Award**, *MIT Experimental Study Group*
Awarded for outstanding work as an undergraduate teaching assistant.

2019 **RISE Scholarship**, *German Academic Exchange Service (DAAD)*
Provided funding for a summer research internship at Saarland University.

Teaching Experience

Cornell University Department of Mathematics

Fall 2025 **MATH 6310: Algebra I (Graduate)**, Teaching Assistant
Spring 2025 **MATH 1106: Calculus for the Life Sciences**, Teaching Assistant
Spring 2024 **MATH 2210: Linear Algebra**, Teaching Assistant
Fall 2023 **MATH 6310: Algebra I (Graduate)**, Teaching Assistant
Spring 2023 **MATH 2210: Linear Algebra**, Teaching Assistant
Fall 2022 **MATH 1110: Calculus I**, Instructor
Spring 2022 **MATH 2220: Multivariable Calculus**, Teaching Assistant
Fall 2021 **MATH 1110: Calculus I**, Instructor
Spring 2021 **MATH 2220: Multivariable Calculus**, Teaching Assistant
Fall 2020 **MATH 1910: Calculus for Engineers**, Teaching Assistant

MIT Experimental Study Group

Spring 2020 **18.02 Calculus II**, Undergraduate Teaching Assistant
Fall 2019 **18.01 Calculus I**, Undergraduate Teaching Assistant
Fall 2018 **18.01 Calculus I**, Undergraduate Teaching Assistant
Fall 2017 **8.012 Honors Physics I**, Undergraduate Teaching Assistant

Service

Cornell University

2023 – 2025 **Organizer**, *Cornell Directed Reading Program*

2022, 2024 **Organizer**, *Olivetti Club*
Organized the Olivetti Club, the Cornell graduate student mathematics colloquium.

2021 – 2023 **Mentor**, *Cornell Directed Reading Program*
Mentored four undergraduate reading projects on algebraic combinatorics and algebraic topology.

2021 **Organizer**, *"What is...?" Seminar*
Organized talks by faculty members aimed at graduate students seeking advisors.

Skills

Programming Python, C/C++, LaTeX, GAP, MAGMA, SageMath, Macaulay2
Languages English (native), German (level B2)