Kimball Strong

Curriculum Vitae

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Research Interests

Homotopy Theory, particularly models for higher categories and the relationship between weak and strict higher categories.

Education

2020–2026	**Ph.D. in Mathematics**, *Cornell University*, Ithaca, NY Advisor: Inna Zakharevich
2020–2023	**M.Sc. in Computer Science**, *Cornell University*, Ithaca, NY
2016–2020	**B.A. in Mathematics**, *University of California, Berkeley*, Berkeley, CA

Research Papers

	Strictifications of $(\infty, 1)$-categories, In preparation
2025	***Strictification of ∞-groupoids is Comonadic***, Theory and Applications of Categories, Volume 44
2020	***Structure of Spectra of Precompletions***, with Erica Barrett, Emil Graf, Susan Loepp, and Sharon Zhang, Rocky Mountain Journal of Mathematics, Volume 50
2020	***Cardinalities of Prime Spectra of Precompletions***, with Erica Barrett, Emil Graf, Susan Loepp, and Sharon Zhang, AMS CONM issue 773: "Commutative Algebra: 150 Years with Roger and Sylvia Wiegand"

Talks and Presentations

Invited

July 2025	*Oh, the (number (approximately) of) places you'll go!* MathILy-Er Daily Gather
November 2024	*Strictifications of higher categories* University of Virginia Topology Seminar.
October 2024	*Strictifications of higher categories* AMS Fall Northeastern Sectional Meeting, Special Session on Homotopy Theory and Algebraic K-Theory
September 2024	*Strictifications of higher categories* Binghamton University Topology Seminar.

Contributed

March 2025	*A strange (and surprising!) adjunction: $Set_*^\vee - Cat$ and $Set_*^\times - Cat$* Upstate New York Topology Seminar 2025 at Binghamton University
June 2024	*Strictification of ∞-groupoids and coalgebraic models for spaces* Algebraic Structures in Topology 2024. San Juan, PR.

April 2024	*Strictification of ∞-groupoids* Graduate Student Topology and Geometry Conference 2024. University of Michigan. East Lansing, MI
March 2024	*Strictification of ∞-groupoids* University at Buffalo Discourses of Grads.
Nov 2023	*Strictification of ∞-groupoids* Binghampton University Graduate Combinatorics, Algebra, & Topology (BUGCAT) Conference. Binghampton, NY
Nov 2022	*Computing π_1 of the free grouplike E_2-algebra on a point* BUGCAT Conference. Binghampton, NY

Awards & Scholarships

2023	**Teaching Award**, *Cornell University Department of Mathematics* Awarded for excellence in teaching.
Spring 2022	**Olivetti Egg**, *Cornell University Department of Mathematics* Voted as the best speaker in the Cornell graduate student mathematics colloquium.
2016	**Regents' and Chancellor's Scholar**, *University of California, Berkeley*.

Service

Cornell University

2021 – 2023	**Mentor**, *Directed Reading Program*
Spring 2022–Fall 2024	**Organizer**, *Homotopy Student Seminar* Co-organize the graduate student seminar on Homotopy Theory along with Chase Vogeli.
Spring 2024, Fall 2024, Spring 2025	**Facilitator**, *The Little Circle* Volunteered to run a mathematics circle for 3-5 graders at local elementary schools. Covered topics included game theory, probability, and graph theory.

Teaching Experience

Mathily-Er

Summer 2022, Summer 2023	**Assistant Instructor** Facilitated inquiry based learning of mathematics for high schoolers, at level ranging from undergraduate to early graduate level mathematics.

Cornell University Department of Mathematics

Fall 2025	**Instructor**, MATH 1120: Calculus II
Spring 2025	**Teaching Assistant**, MATH 3110: Intro to Analysis
Fall 2024	**Teaching Assistant**, MATH 3110: Intro to Analysis
Spring 2024	**Teaching Assistant**, MATH 6510: Graduate Algebraic Topology
Fall 2023	**Teaching Assistant**, MATH 3110: Intro to Analysis
Spring 2023	**Teaching Assistant**, MATH 2220: Multivariable Calculus
Fall 2022	**Teaching Assistant**, MATH 1920: Multivariable Calculus for Engineers
Spring 2022	**Teaching Assistant**, MATH 1920: Multivariable Calculus for Engineers

Fall 2021 **Teaching Assistant**, MATH 1920: Multivariable Calculus for Engineers
UC Berkeley

Spring 2020 **Undergraduate Student Instructor**, Math H110: Honors Abstract Linear Algebra