Connor Malin

cmalin@nd.edu

Research interests	algebraic & geometric topology, operads, homotopy calculus

Education

University of Notre Dame — South Bend, IN
PhD candidate in Mathematics — 2019 – Present
Adviser: Mark Behrens

University of Alabama — Tuscaloosa, AL
BA, MA in Mathematics — 2015 – 2019
Adviser: Lawrence Roberts

Papers

An elementary proof of the homotopy invariance of stabilized configuration spaces.
Connor Malin. to appear in *Proceedings of the AMS*. 2022. arxiv

Preprints

Koszul self duality of manifolds. Connor Malin. 2023. arxiv
The stable embedding tower and operadic structures on configuration spaces.
Connor Malin. 2022. arxiv

Seminars organized

Factorization Homology. Notre Dame Graduate Student Topology Seminar. Spring 2023.

Embedding Calculus. Notre Dame Graduate Student Topology Seminar. Spring 2021.

Invited talks

Embedding calculus of singular manifolds. March 2023. University of Lafayette Topology Seminar

The homotopy theory of configuration spaces. February 2023. University of Alabama Algebra and Topology Seminar

Koszul duality and the Lie bracket on the homology of configuration spaces. September 2022. European Autumn School in Topology

Duality in topology. August 2022. Notre Dame Math Orientation

Volunteered talks

An operadic proof of Poincaré-Koszul duality. March 2023. Notre Dame Graduate Topology Seminar

An introduction to factorization homology. February 2023. Notre Dame Graduate Topology Seminar

Nonabelian Poincaré Duality. February 2023. Notre Dame Graduate Topology Seminar

Resolutions of moduli spaces by moduli spaces. October 2022. Notre Dame Graduate Topology Seminar

Spectral Lie algebra models for unstable v_n-periodic homotopy theory. April 2022. Notre Dame Graduate Topology Seminar

Diff isomorphic implies diffeomorphic. September 2021. Notre Dame Graduate Topology Seminar

Demystifying buzzwords: real homotopy theory is derived algebra. September 2021. Notre Dame Graduate Seminar

Operads and manifold Calculus. March 2021. Notre Dame Graduate Topology Seminar

Homotopy sheaves and manifold calculus. March 2021. Notre Dame Graduate Topology Seminar

Funky manifolds. September 2020. Notre Dame Graduate Topology Seminar

Applications of the Poincaré conjecture. September 2020. Notre Dame Graduate Topology Seminar

Manifold up to homotopy = Poincaré duality + what?. August 2020. Notre Dame Graduate Seminar

Spaces of manifolds, cobordism categories, and the Madsen-Weiss theorem. July 2020. Notre Dame Oral Exam

The geometric model structure on categories. January 2020. Notre Dame Infinity Category Reading Seminar

The Hopf invariant 1 problem via Adams operations. November 2019. Notre Dame Graduate Topology Seminar

Homotopy and its application to the Brouwer fixed point theorem. April 2019. Troy MathFest

Games on groups. August 2018. University of Alabama Algebra & Topology seminar

On subsums of series with positive terms. April 2018. University of Tennessee Undergraduate Math Conference

Teaching experience	**Teaching assistant, Notre Dame Department of Mathematics:**
Fall 2020-Present	Calculus A, Calculus B, Calculus II, Calculus III
	Grader, Notre Dame Department of Mathematics:
	Topology I, Topology II

Scholarships	Bayer Fellowship (Notre Dame)	2022
and fellowships	Schmitt Fellowship (Notre Dame)	2019
	Thomas W. Palmer Scholarship (University of Alabama)	2019
	National Merit Scholarship	2015