

Jeremy Hahn

CONTACT INFORMATION Department of Mathematics jhahn01@mit.edu
Massachusetts Institute of Technology
182 Memorial Drive
Cambridge, MA 02142

EDUCATION **Harvard University**, Cambridge, MA
Ph.D. in Mathematics, May 2018
Advisor: Michael J. Hopkins
Massachusetts Institute of Technology, Cambridge, MA
B.S. in Mathematics, January 2013

EMPLOYMENT **Massachusetts Institute of Technology**, Cambridge, MA
NSF Postdoc and CLE Moore Instructor, August 2018-present

PAPERS AND ARXIV PREPRINTS *Redshift and multiplication for truncated Brown–Peterson spectra* with Dylan Wilson (2020). Preprint.

Inertia groups in the metastable range with Robert Burklund and Andrew Senger (2020). Preprint.

Galois reconstruction of Artin–Tate R -motivic spectra with Robert Burklund and Andrew Senger (2020). Preprint.

Odd primary analogs of Real orientations with Andrew Senger and Dylan Wilson (2020). Preprint.

Appendix to *Equivariant nonabelian Poincaré duality and equivariant factorization homology of Thom spectra* by Asaf Horev, Inbar Klang, and Foling Zou, with Dylan Wilson (2020). Preprint.

Real topological Hochschild homology and the Segal conjecture with Dylan Wilson (2019). Preprint.

On the boundaries of highly connected, almost closed manifolds with Robert Burklund and Andrew Senger (2019). Preprint.

Wilson Spaces, Snaith Constructions, and Elliptic Orientations with Hood Chatham and Allen Yuan (2019). Preprint.

The Lubin–Tate Theory of Configuration Spaces: I with Lukas Brantner and Ben Knudsen (2019). Preprint.

Nilpotence in normed MGL-modules with Tom Bachmann (2019). Preprint.

Exotic multiplications on periodic complex bordism with Allen Yuan (2019). To appear in **Journal of Topology**.

Quotients of even rings with Dylan Wilson (2018). Preprint.

Eilenberg-MacLane spectra as equivariant Thom spectra with Dylan Wilson (2018). To appear in **Geometry and Topology**.

Multiplicative structure in the stable splitting of $\Omega SU(n)$ with Allen Yuan. **Advances in Mathematics**. Volume 348, 25 May 2019, Pages 412-455.

Real Orientations of Lubin-Tate Spectra with Xiaolin Danny Shi (2017). **Inventiones Mathematicae**. Volume 221, 7 March 2020, Pages 731-776.

Nilpotence in E_n -algebras (2017). Preprint.

On the Bousfield classes of H_∞ -ring spectra (2016). Preprint.

Appendix to *Brown Peterson cohomology from Morava E-theory* by Tobias Barthel and Nathaniel Stapleton (2015). **Compositio Mathematica**. Volume 153, Issue 4 April 2017, pp. 780-819.

INVITED TALKS

TBA, Princeton Topology seminar. (April 2021)

More highly connected manifolds, Bonn Topology seminar. (December 2020)

Redshift for truncated Brown-Peterson spectra, MIT Topology seminar. (December 2020)

Manifolds in the metastable range, University of Toronto Topology Seminar. (November 2020)

Inertia groups in the metastable range, Cornell Topology and Geometric Group Theory Seminar. (October 2020)

Nishida Nilpotence, Online Algebraic Topology Seminar (OATS). (September 2020)

Higher algebra in the classification of highly connected manifolds, Berkeley Mathematics Department Colloquium. (September 2020)

Odd primary analogues of Real Orientations, Equivariant Stable Homotopy and p -adic Hodge Theory workshop, Banff International Research Station. (March 2020)

Series of three lectures on highly connected manifolds, Presented to the research group of Oscar Randal-Williams, University of Cambridge. (February 2020)

Highly connected manifolds in dimensions larger than 248, University of Cambridge Differential Geometry and Topology Seminar. (February 2020)

Using the Adams spectral sequence to make smooth structures on manifolds, University of Copenhagen Algebra/Topology Seminar. (February 2020)

Using the Adams Spectral Sequence to make smooth structures on manifolds, Wayne State Topology Seminar. (January 2020)

Highly connected manifolds in dimensions larger than 248, MIT Topology Seminar. (September 2019)

Even spaces and Snaithe constructions, Notre Dame Topology Seminar. (April 2019)

Even spaces and Snaitth constructions, University at Albany SUNY Algebra/Topology Seminar. (February 2019)

The spectrum of units of a height 2 theory, University of Minnesota Topology Seminar. (November 2018)

Even spaces old and new, University of Kentucky Topology Seminar. (November 2018)

The spectrum of units of a height 2 theory, Derived algebraic geometry and chromatic homotopy workshop, Newton Institute, Cambridge, England. (September 2018)

The spectrum of units of a height 2 theory, MIT Topology Seminar. (September 2018)

Eilenberg-MacLane Spectra as equivariant Thom spectra, Equivariant homotopy theory and K -theory workshop, Freie Universität, Berlin, Germany. (June 2018)

Dyer-Lashof operations in the Morava E -theory of n -fold loop spaces, International Workshop on Algebraic Topology, Southern University of Science and Technology, Shenzhen, China. (June 2018)

Toward the C_p -fixed points of Morava E -theory, Chromatic Homotopy Theory Journey to the Frontier, Colorado University Boulder (May 2018)

Even spaces and variants of periodic complex bordism, Purdue Topology Seminar. (February 2018)

Milnor Operations in Equivariant Homotopy Theory, University of Virginia Topology Seminar. (February 2018)

Milnor Operations in Equivariant Homotopy Theory, Johns Hopkins Topology Seminar. (February 2018)

Structure in the Stable Splitting of Affine Grassmannians, Northwestern University Topology Seminar. (November 2017)

Multiplicative structures in the Stable Splitting of Affine Grassmannians, University of Chicago Topology Seminar. (November 2017)

CONTRIBUTED
TALKS

Open problems in chromatic homotopy theory, Juvitop Seminar, Massachusetts Institute of Technology. (April 2020)

Framings and the recognition principle, Thursday Seminar, Harvard University. (November 2019)

The Construction of BO/I_n , Thursday Seminar, Harvard University. (Fall 2018)

More Deformations of p -Divisible Groups, Juvitop Seminar, Massachusetts Institute of Technology. (April 2018)

Schlessinger's Criterion and Deformation Theory, Juvitop Seminar, Massachusetts Institute of Technology. (March 2018)

The work of Arone and Mahowald, Thursday Seminar, Harvard University. (February 2018)

Chromatic Types of Structured Ring Spectra, Homotopy Theory: tools and applications, University of Illinois at Urbana-Champaign. (July 2017)

The Brauer Group of Morava E-theory, Juvitop Seminar, Massachusetts Institute of Technology. (May 2017)

Rezk's Logarithm, Juvitop Seminar, Massachusetts Institute of Technology. (November 2016)

Nilpotence and the Nishida Relations, Juvitop Seminar, Massachusetts Institute of Technology. (October 2016)

The Slice Filtration, Juvitop Seminar, Massachusetts Institute of Technology. (Feb 2016)

An Intro to p-adic Homotopy Theory, Juvitop Seminar, Massachusetts Institute of Technology. (April 2015)

Wilson Spaces as Atomic Even Spaces, Thursday Seminar, Harvard University. (March 2015)

A Reduction to the Reduction Theorem, Juvitop Seminar, Massachusetts Institute of Technology. (December 2014)

From n-fold Segal Spaces to n-fold Quasi-categories, Thursday Seminar, Harvard University. (March 2013)

HONORS AND
AWARDS

2018–Present NSF Postdoctoral Fellowship
2013–2018 NSF Graduate Research Fellowship
2013–2018 James Mills Peirce Fellowship
2016 Certificate of Distinction as TF for Math 21b.
2008 Putnam Competition Honorable Mention

SERVICE

Referee for *Advances in Mathematics*, *JAMS*, *Mathematische Zeitschrift*, *Selecta Mathematica*

Reviewer of PhD theses for The Hebrew University of Jerusalem and the Massachusetts Institute of Technology

Project assistant to Hopkins at the Arizona Winter School: Topology and Arithmetic (2019)

Academic advisor for MIT math majors

CONFERENCES AND
WORKSHOPS
ATTENDED

Equivariant Stable Homotopy and p -adic Hodge Theory workshop, Banff International Research Station. (March 2020)

Mayday 2019, University of Chicago. (October 2019)

Arbeitsgemeinschaften: Elliptic Cohomology according to Lurie, Oberwolfach, Germany. (April 2019)

MSRI Workshop: Derived algebraic geometry and its applications, Berkeley. (March

2019)

Arizona Winter School 2019: Topology and Arithmetic, University of Arizona Tucson. (March 2019)

Derived algebraic geometry and chromatic homotopy, Newton Institute, Cambridge, England. (September 2018)

Equivariant homotopy theory and K -theory workshop, Freie Universität, Berlin, Germany. (June 2018)

International Workshop on Algebraic Topology, Southern University of Science and Technology, Shenzhen, China. (June 2018)

Chromatic Homotopy Theory Journey to the Frontier, Colorado University Boulder (May 2018)

Homotopy theory: tools and applications, University of Illinois at Urbana-Champaign (July 2017)

Conference on invertible objects and duality in derived algebraic geometry and homotopy theory, University of Regensburg, Germany (April 2017)

USC K -theory Summer School, University of Southern California (August 2015)

Hausdorff Trimester Program: Homotopy theory, manifolds, and field theories, Bonn, Germany (May 2015)

Talbot 2014: Motivic Homotopy Theory, Pigeon Forge, Tennessee (March 2014)

Talbot 2013: Chromatic Homotopy Theory, South Lake Tahoe, California (April 2013)

Quillen Memorial Conference, MIT (October 2012)

TEACHING EXPERIENCE

MIT 18.905 Fall 2020. Algebraic Topology I.

MIT 18.917 Spring 2020. Topics in Algebraic Topology.

MIT 18.06 Fall 2019. Linear Algebra. Teaching Assistant (course taught by Andrei Negut).

Harvard Math 21b Spring 2018. Linear Algebra. Teaching Fellow.

Harvard Math 21b Spring 2016. Linear Algebra. Teaching Fellow.

MIT 18.905 Fall 2011. Algebraic Topology I. Teaching Assistant (course taught by Gonçalo Tabuada).