Curriculum Vitae: Natalie Stewart

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EDUCATION

Harvard University, Cambridge MA
Ph.D. in Mathematics, beginning in September 2021.

Massachusetts Institute of Technology, Cambridge MA
B.S. in Mathematics with Computer Science, May 2021
Overall GPA: 5.0/5.0; math GPA: 5.0/5.0

PAPERS

Lower vounds of hyperbolic 3-manifolds via decomposition. Joint with Colin Adams et. al.

TALKS

Borromean rings, chainmaille, and genuine equivariant homotopy theory (September 2023). Given for Harvard trivial notions seminar.

The Adams spectral sequence for ko theory of the sphere (April 2023). Given for Harvard Zygotop seminar.

On chromatic cyclotomic extensions (March 2023). Given for MIT babytop seminar.

Crash course on stable homotopy theory (February 2023). Given for MIT Juvitop seminar.

Nilpotence detection and the chromatic nullstellensatz (October 2022). Given for MIT Juvitop seminar.

Constructions of ∞-operads and the BV tensor product (April 2022). Given for Harvard ∞-categories seminar.

Operadic Koszul duality and the spectral Lie operad (March 2022). Given for MIT Juvitop seminar.

The Joyal model structure on simplicial sets, straightening, and unstraightening (February 2022). Given for Harvard ∞-categories seminar.

From $\mathbb{Q}$ to $\mathbb{R}$: bicategorical adjunctions, profunctors, and absolute colimits (February 2022). Given for the Trivial Notions seminar.

Operads and Iterated Loop Spaces (November 2021). Given for the MIT Kan seminar.

Adapted homology theories and the Adams spectral sequence (November 2021). Given for the MIT babytop seminar.

On Milnor's exotic 7-spheres (October 2021). Given for the MIT Kan seminar.

More talks

Lie algebra cohomology and L_∞-algebras (September 2021). Given for the MIT Juvitop seminar.

Estimating link volumes via subdivision (July 2020), given https://youtu.be/BgiOGIJK09M a 6 other undergraduates.

Some graphical realizations of two-row Specht modules of Iwahori-Hecke algebras of the Symmetric Group (August 2019), joint with Miles Johnson, final presentation for the MIT SPUR program.

PERT charts, project planning, and enriched categories (April 2019), for the MIT Categories Seminar.

Selected awards

James Mills Peirce Fellowship, Harvard University	2021
NSF GFRP Fellowship	2021
Phi Beta Kappa nomination,	2021
Sigma Xi nomination,	2021

Misc.

Organizer of the Harvard Zygotop seminar for Spring of 2022 through the present. Co-organiz located at https://nataliesstewart.github.io/infty_one/

Mentor in the Harvard directed reading program (DRP) for fall 2021 and spring 2022.

Mentor in the MIT Undergrad Society of Women in Math (USWIM) mentorship program during fall 2020 and spring 2021.

Undergraduate assistant for 18.112 (functions of a complex varable) for the fall 2020 term.

Participant in MIT's Directed Reading Program (DRP) during the January 2020 term concerning category theory, including higher category theory.

Graded for 18.700 (linear algebra) for the latter half of the fall 2019 term.

Graded for 18.701 (algebra 1) for the fall 2018 term.