

# David Chan

## Curriculum Vitae

Nashville, TN

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### Employment

Beginning August 2023 **Michigan State University**, *RTG Postdoctoral Associate*.

### Education

2017 – present **Vanderbilt University**, *PhD in Mathematics*, expected May 2023.  
Advisor: Anna Marie Bohmann

2013 – 2016 **Johns Hopkins University**, *Masters of Arts in Mathematics*.

2013 – 2016 **Johns Hopkins University**, *Bachelors of Arts in Mathematics*.

### Publications

- [1] **Algebraic K theory of Green functors**, *In preparation*, With M. Calle and A. Mejia.
- [2] **Equivariant trees and partition complexes**, *Submitted*, With J. Bergner, P. Bony, M. Calle, and M. Sarazola, arxiv:2302.08949.
- [3] **Bi-incomplete Tambara Functors as  $\mathcal{O}$ -Commutative Monoids**, *Submitted*, arxiv.org:2208.05555.
- [4] **Comultiplication in the Serre Spectral Sequence**, *Submitted*, arXiv:2007.03080.

### Talks Given

- Mar. 2023 **Distributivity in Equivariant Algebra**, *Johns Hopkins University Topology Seminar*.
- Dec. 2022 **Distributivity in Equivariant Algebra**, *University of Rochester Topology Seminar*.
- Oct. 2022 **Distributivity in Equivariant Algebra**, *University of Virginia Topology Seminar*.
- Oct. 2022 **Algebraic K theory of Green functors**, *University of Pennsylvania Homotopy Theory Seminar*.
- Sep. 2022 **Compatible Multiplicative and Additive Structures in Equivariant Algebra**, *University of Kentucky Topology Seminar*.
- Apr. 2022 **Compatible Transfer Systems in Equivariant Algebra**, *Graduate Student Geometry and Topology Conference*.
- Mar. 2022 **Bi-incomplete Tambara functors and  $\mathcal{O}$ -commutative monoids**, *FRG: Trace Methods in K-Theory Seminar*.
- Feb. 2022 **Compatible Transfer Systems in Equivariant Algebra**, *University of Pennsylvania Homotopy Theory Seminar*.
- Nov. 2021 **Comultiplication in the Serre Spectral Sequence**, *UC Riverside Topology Seminar*.
- Oct. 2021 **A Detection Principle for  $m$ -Semiadditivity in  $\infty$ -Categories**, *Talbot Workshop*.
- June 2021 **Comultiplication in the Serre Spectral Sequence**, *TopFlavours Conference*, University of Warwick.
- May 2021 **Genuine Equivariant Monads**, *University of Kentucky Topology Seminar*.

- Feb. 2021 **Ideals of Tambara Functors**, *electronic Computational Homotopy Theory Seminar in Equivariant Algebra* .
- Dec. 2020 **Comultiplication in the Serre Spectral Sequence**, *University of Kentucky Topology Seminar*.
- Sep. 2019 **Quillen's Rational Homotopy Theory**, *electronic Computational Homotopy Theory Kan Seminar* .
- Feb. 2020 **Introduction to the Serre Spectral Sequence**, *Vanderbilt Geometry Seminar*.

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## Conferences Attended

- Winter 2023 **Chromatic Homotopy, K-Theory and Functors**, *CIRM, Luminy, Fr.*
- Fall 2022 **Floer homotopical methods in low dimensional and symplectic topology**, *Mathematical Sciences Research Institute*.
- Fall 2022 **Introductory Workshop: Floer Homotopy Theory**, *Mathematical Sciences Research Institute*.
- Fall 2022 **Connections Workshop: Floer Homotopy Theory**, *Mathematical Sciences Research Institute*.
- Summer 2022 **Collaborative Workshop in Homotopy Theory**, *Lexington, Virginia*.
- Summer 2022 **Talbot Workshop: Scissors congruence and algebraic K-theory**, *New Lebanon, NY*.
- Spring 2022 **Algebraic Structures in Topology**, *San Juan, Puerto Rico*.
- Spring 2022 **Graduate Student Topology and Geometry Conference**, *Georgia Institute of Technology*.
- Fall 2021 **Talbot Workshop: Ambidexterity in Chromatic Homotopy Theory**, *Boston, Massachusetts*.
- Summer 2021 **TopFlavours Conference**, *University of Warwick*.
- Summer 2019 **A Jolly Pleasant Conference for Greenlees**, *Norwegian University of Science and Technology*.
- Spring 2019 **Shanks Workshop on new directions in homotopy theory**, *Vanderbilt University*.
- Spring 2019 **Graduate Student Topology and Geometry Conference**, *University of Illinois at Urbana-Champaign*.
- 2018 **AMS Southwest Sectional Meeting**, *Vanderbilt University*.  
**Midwest Topology Seminar.**
  - Fall 2021 Virtual
  - Spring 2021 Virtual
  - Fall 2020 Virtual
  - Spring 2020 Virtual
  - Fall 2019 University of Chicago
  - Spring 2018 UIUC

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## Service Activities

- 2019 – Present **Graduate Student Seminar.**  
Co-founder and co-organizer of the Vanderbilt University graduate student mathematics seminar.
- 2019 – Present **Directed Reading Program**, *Graduate Mentor*.  
Mentored several undergraduate students interested in topics in algebra and topology.

- 2019 – Present **Nashville Math Club**, *Teacher, Curriculum Creator*.  
Teaching middle and high school students and creating curriculum for the Nashville Math Club.
- Summer 2017 **College Prep Program at JHU APL**, *College Coach*.  
Worked with students to prepare resumes, essays, and other materials for college applications.

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## Teaching

### Vanderbilt University

- Fall 2021 **Math 1300: Calculus I**, Teaching Assistant.
- Spring 2021 **MATH 1201: Calculus II**, Instructor of Record.
- Fall 2020 **MATH 1301: Calculus II**, Teaching Assistant.
- Spring 2020 **MATH 1201: Calculus II**, Instructor of Record.
- Fall 2019 **MATH 1301: Calculus II**, Teaching Assistant.
- Spring 2019 **MATH 1201: Calculus II**, Teaching Assistant.
- Fall 2018 **MATH 1200: Calculus I**, Teaching Assistant.

### Johns Hopkins University

- Fall 2016 **Calculus I**, Teaching Assistant.

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## Honors and Awards

- Spring 2021 **B.F. Bryant Award for Excellence in Teaching**, *Vanderbilt University Department of Mathematics*.
- Spring 2021 **The Outstanding Graduate Teaching Assistant Award**, *Vanderbilt University College of Arts and Science*.
- Spring 2017 **Sigma Pi Sigma**, *Johns Hopkins University*.
- Spring 2017 **Phi Beta Kappa**, *Johns Hopkins University*.