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## Employment

- 2021 – present **UC San Diego.**  
S. E. Warschawski Assistant Professor of Mathematics (postdoctoral position)
- 2018 – 2021 **Northwestern University.**  
Boas Assistant Professor of Mathematics (postdoctoral position)

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## Education

- 2013 – 2018 **Ph.D., Mathematics, Massachusetts Institute of Technology.**  
Thesis: “Localization at  $b_{10}$  in the stable category of comodules over the Steenrod reduced powers”
- 2012 – 2013 **M.A., Mathematics, Cambridge University.**
- 2008 – 2012 **B.A. cum laude, Mathematics, Harvard University.**  
Secondary field in music

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## Research interests

Homotopy theory (classical, chromatic, and motivic), and applications of homological algebra to homotopy theory

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## Grant support

- 2022 – 2025 **NSF Standard Grant, “Computations in Classical and Motivic Stable Homotopy Theory”, DMS-2204357.**
- 2022 **AWM-NSF Mentoring Travel Grant.**  
Funds a month-long visit to a collaborator
- 2014 – 2017 **NSF Graduate Research Fellowship.**

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## Research Publications

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### *Published or accepted*

Eva Belmont and Daniel C. Isaksen.  $\mathbb{R}$ -motivic stable stems. *J. Topol.*, 15(4):1755–1793, 2022.

Eva Belmont, Natàlia Castellana, Jelena Grbić, Kathryn Lesh, and Michelle Strumila. Normalizers of chains of discrete  $p$ -toral subgroups in compact Lie groups. *Topology and its Applications*, 316:108101, 2022. Women in Topology III.

Eva Belmont and Katsumi Shimomura. Beta families arising from a  $v_2^9$  self map on  $s/(3, v_1^8)$ , 2021. Accepted, Algebraic & Geometric Topology.

Eva Belmont, Bertrand J. Guillou, and Daniel C. Isaksen.  $C_2$ -equivariant and  $\mathbb{R}$ -motivic stable stems II. *Proc. Amer. Math. Soc.*, 149(1):53–61, 2021.

Eva Belmont. A Cartan-Eilenberg spectral sequence for non-normal extensions. *J. Pure Appl. Algebra*, 224(4):106216, 21, 2020.

Eva Belmont. Localizing the  $E_2$  page of the Adams spectral sequence. *Algebraic & Geometric Topology*, 20(4):1965–2028, 2020.

Eva Belmont, Holden Lee, Alexandra Musat, and Sarah Trebat-Leder.  $\ell$ -adic properties of partition functions. *Monatshefte für Mathematik*, 173:1–34, 2014.

Eva Belmont. A complete characterization of paths that are  $m$ -step competition graphs. *Discrete Applied Math*, 159:1381–1390, 2011.

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### *Preprints and other research materials*

Eva Belmont, Zhouli Xu, and Shangjie Zhang. The reduced ring of the  $RO(C_2)$ -graded  $C_2$ -equivariant stable stems. In preparation, 2022.

Eva Belmont, Natàlia Castellana, and Kathryn Lesh. Subgroup collections controlling the homotopy type of a  $p$ -local compact group. <https://arxiv.org/abs/2210.00952>, 2022.

Eva Belmont, Daniel C. Isaksen, and Hana Jia Kong.  $\mathbb{R}$ -motivic  $v_1$ -periodic homotopy. <https://arxiv.org/abs/2204.05937>, 2022.

Eva Belmont and Hana Jia Kong. A Toda bracket convergence theorem for multiplicative spectral sequences. <https://arxiv.org/abs/2112.08689>, 2022.

Eva Belmont and Guozhen Wang. Adams-Novikov data. Charts and raw data for the  $p = 3$  Adams-Novikov spectral sequence  $E_2$  page, available at [https://github.com/ebelmont/ANSS\\_data](https://github.com/ebelmont/ANSS_data).

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## Invited talks and workshops

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### *Conference talks*

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| January 2023 | Joint Math Meetings: AMS special session on homotopy theory: Connections and Applications I (upcoming)        |
| October 2022 | AMS Fall Western Sectional Meeting: Special session on higher topological and algebraic K-theories (upcoming) |
| March 2022   | Mittag Leffler Institute program “Higher algebraic structures”  |
| May 2021     | AIM workshop on Equivariant Techniques in Stable Homotopy Theory  |
| October 2021 | AMS Fall Western Sectional Meeting: Special session on equivariant and motivic homotopy theory                |
| August 2020  | Transchromatic homotopy online conference   |
| May 2020     | Midwest topology seminar  |

- June 2019 Vietnam–USA Joint mathematical meeting, (Quy Nhon, Vietnam)
- June 2018 International Workshop on Algebraic Topology (Shenzhen, China)
- May 2018 Chromatic homotopy theory: Journey to the Frontier (Boulder, CO)
- March 2018 AMS Spring Central Sectional Meeting: Special session on homotopy theory
- October 2017 AMS Fall Eastern Sectional Meeting: Special session on algebraic topology

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### *Seminar talks*

Electronic Computational Homotopy Theory (ECHT) Seminar: 2019  
ECHT Seminar on machine computations: 2022  
Johns Hopkins University: 2017  
Michigan State University: 2017  
Northwestern University: 2017 and 2020  
The Ohio State University: 2017  
Stanford University: 2017  
Texas A&M University: 2022  
University of California, San Diego: 2020  
University of Chicago: 2017, 2022  
University of Colorado, Boulder: 2017  
University of Kentucky: 2018  
University of Minnesota: 2018  
University of Southampton: 2021  
University of Virginia: 2018  
Wayne State University: 2019

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### *Minicourses*

June 2022 *EWM-EMS Summer School: Chromatic homotopy theory and friends*,  
2-part lecture on motivic homotopy theory aimed at graduate students

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### *Invited workshop participation*

July 2022 Oberwolfach, "Topologie" program  
August 2019 *Women in Topology III* participant  
Research in teams  
November 2017 Women in Topology Workshop (MSRI)  
Workshop for women in topology, aimed at fostering research collaborations  
February 2016 Banff Equivariant Derived Algebraic Geometry Workshop

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## Teaching and Mentoring

2021 – present

### Courses taught at UCSD.

- Math 109: Mathematical Reasoning  
*Introduction to proofs, taught in independent sections of 60-70 students*
- Math 142a: Introduction to Analysis I  
*Proof-based course on sequences and continuity; taught in coordinated sections of 60-70 students*
- Math 142b: Introduction to Analysis II  
*Proof-based course on differentiation and the Riemann integral; taught in independent sections of 60-70 students*
- (Upcoming) Math 190b: Foundations of Topology II  
*Elective course covering the fundamental group and covering spaces*

2018 – 2021

### Courses taught at Northwestern.

- Math 220-2: Single-Variable Integral Calculus  
*Coordinated course taught in sections of 25–35 students*
- Math 228-1: Multivariable differential calculus for engineering  
*Coordinated course taught in sections of 25–35 students*
- Math 230-1: Multivariable differential calculus  
*Coordinated course taught in sections of 25–35 students*
- Math 240: Linear algebra  
*Linear algebra for engineers; coordinated course taught in sections of 25–40 students*
- Math 300: Foundations of Higher Mathematics  
*Introduction to proofs (enrollment ~25)*
- Math 334: Linear Algebra: Second course  
*Proof-based linear algebra for math majors (enrollment ~20)*

Spring 2021

### Mentor for Northwestern DRP freshman proofs seminar.

Organized a non-credit seminar for four freshmen to present proofs from Aigner and Ziegler's *Proofs from THE BOOK*

Summer 2014

### Mentor for the MIT UROP+ program.

Mentored an undergraduate research project on equivariant homotopy theory

Summer 2013

### Co-Head-Counselor at the Program in Mathematics for Young Scientists (PROMYS), Boston University.

Taught number theory to advanced high school students, mentored exploratory projects, organizational duties

Summer 2012

### Counselor at PROMYS.

Taught number theory to advanced high school students, mentored exploratory projects

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## Service

2019 – present

### Journal refereeing.

Referee for *Advances in Mathematics*, *Homology, Homotopy and Applications*, *Journal of Topology*, *Transactions of the AMS*

- 2021 – present **UCSD topology seminar co-organizer.**  
Co-organized invited speaker seminar and graduate student learning seminar
- 2021 – present **UCSD AWM mentorship program.**  
Career advice mentorship for a graduate student
- 2019 – 2021 **Northwestern University AWM chapter faculty advisor.**  
Organizer for undergraduate women in math group
- 2018 – 2021 **Northwestern topology seminar co-organizer.**  
Coordinated invited speaker seminar
- 2014 – 2018 **Talbot Workshop co-organizer.**  
Coordinated yearly 40-person graduate student workshop in algebraic topology
- Spring 2017 **Juvitop co-organizer.**  
One of two organizers of Juvitop, MIT's graduate student algebraic topology learning seminar