

Katalin Berlow

Curriculum Vitae

Carnegie Mellon University
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Education

- 2017–2021 **Carnegie Mellon University**, *B.S. in Mathematics*, .
2021–Present **University of California, Berkeley**, *Ph.D in Mathematics*, .

Awards and Fellowships

- o NSF Graduate Research Fellowship
- o Benter Foundation Mathematics Scholarship

Experience

Research

- June–August 2020 **Duluth REU - University of Minnesota Duluth**, *Duluth, MN*, Advisor: Prof. Joe Gallian.
Conducted original research in Combinatorics.
- June–August 2019 **UCSB REU - University of California Santa Barbara**, *Santa Barbara, CA*, Advisor: Prof. Zhirayr Avetisyan.
Conducted original research in Lie Theory.

Employment

- January–May 2020 **Teaching Assistant**, *Carnegie Mellon University*, Pittsburgh, PA.
"Concepts of Mathematics" (21-127). Lead recitation and held office hours.
- October–December 2019 **Grader**, *Carnegie Mellon University*, Pittsburgh, PA.
"Concepts of Mathematics" (21-127). Graded homeworks and exams for "Concepts of Mathematics" (21-127).
- July–August 2018 **Teaching Assistant**, *Carnegie Mellon University*, Pittsburgh, PA.
"Physics 1 for Engineering Students" (33-106). Co-led recitation as well as ran a daily supervised study hall.

Papers

Original Research

- o *Restricted Stacks as Functions*. Preprint. (Submitted to *Discrete Mathematics*) arXiv:2008.01164
- o *Distance Sequences of Locally Infinite Primitive Graphs*. Preprint. arxiv:2009.11276
- o (With M. Almora-Rios, Z. Avetisyan, I. Martin, G. Rakholia, K. Yang, H. Zhang, Z. Zhao) *Analysis on almost Abelian Lie groups: Groups, subgroups and quotients*. Preprint. (Submitted to *Journal of Group Theory*) arXiv:2004.04369

Expository

- o "Lie Theory for Someone Who Doesn't Know Analysis or Algebra" - Notes on Lie Theory from the UCSB REU.

Talks/Posters

- o "Flexibility, Rigidity and Configuration Spaces", (April 2021) **Nonlinear Algebra and Applications Graduate Student Seminar**

- o "Restricted Stacks as Functions", (October 2020) **2020 Fall Western Sectional Meeting**
- o "Distance Sequences of Locally Infinite Primitive Graphs", (May 2019) **CMU Mathematics Poster Competition**
- o "Almost Abelian Lie Groups, Their Quotient Groups and Automorphisms", (August 2019) **Undergraduate and Graduate Research Colloquium**, UC Santa Barbara
- o "Almost Abelian Groups, Their Subgroups and Automorphisms", (August 2019) **Young Mathematicians Conference**