

CV

Redi Haderi

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Education

- BA in Mathematics, Boğaziçi University, 2008 - 2012
- MSc in Mathematics, Koç University, 2012 - 2014
- PhD in Mathematics, Bilkent University, 2016 - 2023

Employment

- 2023-2024 : *Postdoctoral researcher* in Bilkent University, working in quantum information theory in a project lead by Cihan Okay.
- 2024 - 2026 : *Lecturer* in Yıldırım Beyazıt University.
- 2026 - present : *Assistant Professor* in Boğaziçi University.

Research interests

I am interested in the interaction between category theory and algebraic topology. More specifically, my work is devoted in developing combinatorial structures for homotopy coherent operads and similar species of objects. I also have a mild interest in applied category theory.

Written work

Published

- "*Simplicial lists in operad theory I.*" In: Higher Structures 10.1 (2026), pp. 40–98. doi: 10.21136/HS.2026.03, with Özgün Ünlü.
- "*The operadic theory of convexity.*" Applied Categorical Structures 33.3 (2025): 17, with Cihan Okay and Walker H. Stern.
- "*A simplicial category for higher correspondences*", 2Appl Categor Struct 31, 4 (2023). <https://doi.org/10.1007/s10485-022-09705-w>

Preprints

- "*Double categories for adaptive quantum computation.*" arXiv preprint arXiv:2510.25915 (2025), with Cihan Okay, Selman Ipek and Walker Stern
- "*An $\mathcal{O}$ -monoidal Grothendieck construction.*" arXiv preprint arXiv:2404.01031 (2024), with Walker H. Stern.
- "*Colimits of categories, zig-zags and necklaces.*" arXiv preprint arXiv:2309.00337 (2023).

In preparation

- "*Simplicial lists in operad theory II*", with Walker Stern.
- "*Simplicial lists in operad theory III*"

Some talks and presentations

- "Simplicial categories as double categories", Topics in Category Theory: Spring School, University of Edinburgh, 2020.
- "Higher equipments and homotopy colimits", Young Topologists Meeting, EPFL, 2019.
- "Enriched lifting and extension problems", Categories and Companions Symposium, Macquarie University, 2021.
- "A simplicial category for higher correspondences", Category Theory 2021, University of Genoa.
- "What is an ∞ -operad?", Topology Seminar, 2024, Bilkent University
- "The operadic theory of convexity", 7-th International Conference in Applied Category Theory, 2024, Oxford University.
- "Simplicial lists in operad theory (and more)", Homotopy and Smooth Structures at Yeditepe, Yeditepe University.

Courses taught in universities

- Math 1090, Pre-business Calculus, Fall 2014, University of Utah, USA
- Analize 2, Calculus 2, Spring 2016, Metropolitan University, Albania
- Math 102, Calculus 2, Fall 2019 and Spring 2022, Bilkent University, Türkiye
- Math 101, Calculus 1, Spring 2020 and Fall 2022, Bilkent University, Türkiye

- Math 105, Calculus 1, Fall 2021, Bilkent University, Türkiye
- Math 102, Calculus 2, Spring 2025, Ankara Yıldırım Beyazıt University, Türkiye
- Math 116, History of Science and Mathematics, Spring 2025, Ankara Yıldırım Beyazıt University, Türkiye
- Math 201, Matrix Theory, Fall 2026, Boğaziçi University

Awards

- Best talk award in Topics in Category Theory: Spring School, University of Edinburgh, 2020.
- Orhan Alisbah Award in the graduate category, Bilkent University, 2022.

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