

MARCOS MAZARI-ARMIDA

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Department of Mathematics \diamond University of Colorado Boulder \diamond Boulder, Colorado, USA

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EMPLOYMENT

University of Colorado Boulder

Aug. 2021 – Present

Burnett Meyer Postdoctoral Fellow

Mentor: Agnes Szendrei

EDUCATION

Carnegie Mellon University

Aug. 2015 – June 2021

Ph.D. in Mathematical Sciences

Advisor: Rami Grossberg

Title: Remarks on classification theory for abstract elementary classes with applications to abelian group theory and ring theory

Received the **Sacks prize** for best thesis in mathematical logic in the world in 2021

Carnegie Mellon University

Aug. 2015 – May 2017

M. Sc. in Mathematics

Universidad Nacional Autónoma de México

Aug. 2010 – May 2015

Licenciatura en Matemáticas (B.S. in Mathematics) with honors

University of California at Berkeley

Spring 2013

Study Abroad Program

PAPERS

Published and accepted papers

- [1] Marcos Mazari-Armida and Sebastien Vasey, *Universal classes near \aleph_1* , The Journal of Symbolic Logic **83** (2018), no. 4, 1633–1643.
- [2] Marcos Mazari-Armida, *Non-forking w -good frames*, Archive for Mathematical Logic **59** (2020), no. 1-2, 31–56.
- [3] Marcos Mazari-Armida, *Algebraic description of limit models in classes of abelian groups*, Annals of Pure and Applied Logic **171** (2020), no. 1, 102723 (17 pages).
- [4] Thomas G. Kucera and Marcos Mazari-Armida, *On universal modules with pure embeddings*, Mathematical Logic Quarterly **66** (2020), no. 4, 395–408.
- [5] Marcos Mazari-Armida, *A model theoretic solution to a problem of László Fuchs*, Journal of Algebra **567** (2021), 196–209.
- [6] Marcos Mazari-Armida, *Superstability, noetherian rings and pure-semisimple rings*, Annals of Pure and Applied Logic **172** (2021), no. 3, 102917 (24 pages).
- [7] Marcos Mazari-Armida, *On superstability in the class of flat modules and perfect rings*, Proceedings of the American Mathematical Society, **149** (2021), 2639–2654.
- [8] Rami Grossberg and Marcos Mazari-Armida, *Simple-like independence relations in abstract elementary classes*, Annals of Pure and Applied Logic, **172** (2021), no. 7, 102971 (28 pages).

- [9] Marcos Mazari-Armida, *Characterizing categoricity in several classes of modules*, Journal of Algebra **617** (2023), 382–401.
- [10] Marcos Mazari-Armida, *Some stable non-elementary classes of modules*, The Journal of Symbolic Logic, to appear, 25 pages. <https://doi.org/10.1017/jsl.2021.68>

Papers submitted for publication

- [11] Marcos Mazari-Armida, *A note on torsion modules with pure embeddings*, submitted, 15 pages <https://arxiv.org/abs/2104.10160>
- [12] Ivo Herzog and Marcos Mazari-Armida, *A countable universal torsion abelian group for purity*, submitted, 15 pages <https://arxiv.org/abs/2208.13913>

GRANTS AND AWARDS

AMS-Simons Travel Grant , <i>American Mathematical Society</i> Grant for research related travel expenses, \$5,000.	2022 – 2024
2021 Sacks Prize , <i>Association for Symbolic Logic</i> Award given for the best thesis in mathematical logic in the world.	Nov. 2021
GSA/Provost Office Conference Funding , <i>Carnegie Mellon University</i> Travel award, \$750.	Spring 2020
ASL student travel award , <i>Association for Symbolic Logic</i> 2 travel awards totalling \$2,000.	2019, 2020
MCS travel award , <i>Mellon College of Sciences, Carnegie Mellon University</i> Travel award, \$500.	Fall 2019
Programa de Apoyo al Posgrado Beca Complemento , <i>SEP</i> Fellowship given by the Mexican Government through the Department of Education to complement graduate students expenses in any discipline, \$3,600 per annum.	2015, 2016
Medalla Gabino Barrera , <i>Universidad Nacional Autónoma de México</i> Award for highest GPA in my class.	2015

TALKS

- **2023:** Workshop on the Frontiers of Set Theory (*Guest speaker*), Fields Institute, Canada (expected).
- **2022:** BLAST Conference (*Plenary speaker*), Chapman University; Department colloquium, Baylor University; CMU Model Theory Seminar; Seminario Súmate, Universidad Nacional Autónoma de México; Logic@TXST seminars, Texas State University; Panglobal Algebra and Logic Seminar, CU Boulder.
- **2021:** Toronto Set Theory Seminar, Canada; Bogota Logic Seminar, Colombia; Online Logic Seminar, Southern Illinois University; MidWest Model Theory Seminar, University of Illinois Chicago and University of Chicago; Panglobal Algebra and Logic Seminar, CU Boulder; MALGA Seminar, University of Padova and University of Verona, Italy.
- **2020:** OSU Logic Seminar; Association for Symbolic Logic 2020 Annual North American Meeting, UC Irvine (YouTube video); CMU Model Theory Seminar; Masaryk University Algebra Seminar, Czech Republic; CMU Mathematical Logic Seminar.
- **2019:** Association for Symbolic Logic 2019 Annual North American Meeting, CUNY; The 19th Graduate Student Conference in Logic, University of Illinois Chicago.
- **2018:** Harvard Logic Seminar; Mathematics Seminar, ITAM, México; Logic Seminar, Universidad Nacional Autónoma de México; CMU Model Theory Seminar.

TEACHING

Teaching experience

- **University of Colorado Boulder**, *Postdoctoral Fellow*.
 - *Sole instructor*: Linear algebra for non-math majors, Topics in Logic (Graduate course), Ordinary differential equations, and Foundations of mathematics.
- **Carnegie Mellon University**, *Graduate Student*.
 - *Teaching Assistant*: Matrices and Linear Transformations (five times, once online), Matrix Theory (twice), Calculus in Three Dimensions, and Multidimensional Calculus.
 - *Grader*: Concepts of Mathematics and Calculus in Three Dimensions.
- **Universidad Nacional Autónoma de México**, *Undergraduate Student*.
 - *Teaching Assistant*: Mathematical Logic I, Mathematical Logic II (three times), and Mathematical Logic III.

Teaching Programs

Future Faculty Program, *Eberley Center, Carnegie Mellon University* 2020
A university-wide program for graduate students to develop and improve their teaching skills.

SERVICE AND OUTREACH

- **Serving/Served on the following Committees at CU Boulder**
 - Department of Mathematics Diversity Committee 2021 – Present
 - Comprehensive Exam Committee (twice) 2021
 - PhD Thesis Defense Committee: Jordan DuBeau March 2022
- **Seminar organizer**
 - Panglobal Algebra and Logic Seminar organizer, *CU Boulder* 2021 – Present
 - Grad Set Theory and Model Theory Seminar organizer, *CMU* 2019 – 2020
- **Reviewer and referee**

Reviewer for Mathematical Reviews (AMS) and referee for Annals of Pure and Applied Logic.
- **Outreach**
 - Faculty advisor for Math COSMOS 2022 – Present
Math COSMOS is a student-led organization looking to bring community and resources to underrepresented populations in mathematics.
 - Mentor through the MAS Program, *SACNAS* 2022 – Present
Helped an undergraduate student prepare for graduate school applications in biostatistics and applied mathematics.

MEMBERSHIPS

Association for Symbolic Logic; American Mathematical Society; Society for the Advancement of Chicanos/Hispanics and Native Americans in Science.

LANGUAGES

Spanish (native); English (fluent); German (basic).