THOMAS C. MARTINEZ

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EDUCATION

University of California, Los Angeles   **2022 -**
PhD, Mathematics   Los Angeles, California

Harvey Mudd College   **2017 - 2021**
BS, Mathematics · High Distinction and Honors in Mathematics   Claremont, CA
Thesis: *The Slice Rank Polynomial Method* · Advisor: Mohamed Omar

HONORS/AWARDS

Greever Research Prize – Honorable Mention   **2021**
- Awarded by the Harvey Mudd College Math Department to a math major who has made an original contribution to the theory of mathematics.

Dorman Student Altruism Prize – Nominee   **2021**
- Awarded by Harvey Mudd College to graduating seniors recognizing "one who has done the most for his/her fellow students." The nominations are done by student peers.

Alvin White Prize   **2020**
- Awarded by the Harvey Mudd College Math Department to students who have greatly contributed to the humanistic side of the HMC Math Department and beyond.

PUBLICATIONS

(with T. Blum, C. Choi, A. Hoey, J. Iskander and K. Lakein). *On Class Numbers, Torsion Subgroups, and Quadratic Twists of Elliptic Curves.* Trans. Amer. Math. Soc. **375**(1), 351-368. 2022.

(with H. V. Chu, D. King, N. Luntzlara, S. J. Miller, L. Shao, C. Sun, and V. Xu). *Generalizing the Distribution of Missing Sums in Sumsets.* The Journal of Number Theory. **239**(10), 402-444. 2022

(with S. J. Miller, C. Mizgerd, J. Murphy, and C. Sun). *Generalizing Zeckendorf's Theorem to Homogeneous Linear Recurrences, II.* Fibonacci Quarterly. **60**(5), 220-230. 2022.

(with S. J. Miller, C. Mizgerd, and C. Sun). *Generalizing Zeckendorf's Theorem to Homogeneous Linear Recurrences, I.* Fibonacci Quarterly. **60**(5), 231-254. 2022.

(with F. Beretta, J. Dimino, W. Fang, S. J. Miller, and D. Stoll) *On Benford's Law and the Coefficients of the Riemann Mapping Function for the Exterior of the Mandelbrot Set.* Fractal and Fractional. **6**(10), 534-552. 2022.

(with A. T. Benjamin and J. Lentfer). *Counting on Euler and Bernoulli Number Identities.* Fibonacci Quarterly. **58**(5), 30-33. 2020.

Papers to Appear

(with T. Jaklitsch, S. J. Miller, S. Mukherjee) *Connections of class numbers to the group structure of generalized Pythagorean triples.* To appear in the Rocky Mountain Journal of Mathematics.
https://arxiv.org/abs/2112.03663

Book Reviews

D. King, T. C. Martinez, S. J. Miller, and C. Sun. Review of *Additive Combinatorics: A Menu of Research Problems*, by Béla Bajnok. The American Mathematical Monthly. **126**(10), 955-958. 2019.

MENTORED RESEARCH

Harvey Mudd College Senior Thesis   **Fall 2020 - Spring 2021**
Extremal Combinatorics   Mentor: Mohammed Omar

University of Virginia REU   **Summer 2020**
Algebraic Number Theory and Algebraic Geometry   Mentor: Ken Ono

Harvey Mudd College Independent Study   **Fall 2019**
Enumerative Combinatorics   Mentor: Arthur T. Benjamin

Williams College SMALL REU   **Summer 2019**
Enumerative Combinatorics and Additive Number Theory   Mentor: Steven J. Miller

Teaching

Teaching Assistantships UC Los Angeles
- Math 61 (Introduction to Discrete Structures) *Fall 2022-Fall 2023*
- Math 32A (Multivariable Differential Calculus) *Fall 2023*

Tutoring Harvey Mudd College
- "Academic Excellence" Peer Tutor *2019-2021*

Proof-based Calculus, Linear Algebra, Differential Equations, Multivariable Calculus, Discrete Mathematics

Conference and Seminar Organization

- 20th International Fibonacci Conference (Sarajevo, Bosnia & Herzegovina) *July 2022*
- 19th International Fibonacci Conference (Virtual, via Zoom) *July 2020*

Leadership / Outreach

The Motivational Edge **Allapattah, FL**
Volunteer Tutor September 2021 - March 2022
- Tutored elementary and middle school students weekly in mathematics, English, and science
- Provided meaningful insights of the students I worked with to directors to create personalized learning plans

City Year Miami **Miami Jackson Senior High School**
Team Leader and Math AmeriCorps Member August 2021 - June 2022
- Led, developed, and managed team of four 21-24-year-old AmeriCorps members serving over 200 9th-10th grade students delivering academic tutoring, behavioral interventions, and whole school initiatives
- Provided attendance, behavior, and academic support in Algebra 1 for 71 9th-10th grade students
- Created and implemented weekly targeted academic and behavioral interventions for 11 students to address critical skill gaps

Number Theory & Benford's Law Research Groups **Polymath Jr. Program (Virtual)**
Assistant Director June 2021 - August 2021
- Mentored 40 students in conjunction with Professor Steven J. Miller, other graduate students, and post docs
- Organized a weekly seminar series for participants to share progress
- Led to various publications and conference presentations for participants

Academic Excellence **Harvey Mudd College**
Math Peer Tutor August 2019 - May 2021
- Tutored first and second-years in introductory math courses at HMC weekly
- Led the transition to a virtual learning space during the COVID-19 semesters

Associated Students of Harvey Mudd College **Harvey Mudd College**
West Dorm Co-President April 2018 - April 2019
- Representative of my dorm in the Student Government meetings
- Responsible for leading monthly dorm meetings, along with my Co-Presidents

Languages

Programming/Markup:
- LaTeX · Java · Python · C++

Written/Spoken:
- English (fluent) · Portuguese (fluent) · Spanish (proficient)

Last Updated: September 22, 2023