

Lucy Martinez

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Education

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| PhD in Mathematics, Rutgers University | September 2021 - Present |
| MS in Mathematics, Rutgers University | May 2023 |
| BS in Mathematics, Stockton University | May 2021 |
| Minor in Computer Science, Stockton University | May 2021 |

Teaching Experience

Rutgers University

1. Academic Success Mentor September 2022 - May 2023
 - Provided math tutoring and mentorship support through one-on-one sessions for all students.
 - Directly assisted students in developing effective study habits and academic self-efficacy through planning, facilitating workshops, and one-on-one sessions.

Stockton University

1. Head Mathematics Tutor September 2020 - May 2021
2. Educational Opportunity Fund (EOF) Instructional Assistant Summer 2018
 - Assisted students with academic tutoring during assigned tutoring modules.
 - Attended afternoon and evening tutoring modules for a six week program designated for low-income, underprivileged students.
3. Mathematics Tutor April 2018 - April 2021
4. Workshop Mathematics Tutor January 2018 - April 2021
 - Served as a math workshop tutor to linked sections of Quantitative Reasoning courses.
 - Provided one-on-one assistance and reinforced material learned in class to the students.
 - Proctored quizzes and graded them.

Mentoring Experience

1. Summer@ICERM: Computational Combinatorics Summer 2022
Graduate Research Assistant

Fellowships

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| National Science Foundation (NSF) Graduate Research Fellowship | 2021 - 2026 |
| Rutgers School of Arts and Sciences (SAS) Excellence Fellowship | 2022 - 2023 |

Research Experience

East Tennessee State University, ETSU REU June - August 2020

1. Research advised by Dr. Fernando Piñero.
2. Title: Minimum Rank of Regular Bipartite Graphs.

East Tennessee State University, ETSU REU June - August 2020

1. Research advised by Dr. Anant Godbole.
2. Title: Involution Derangement Graphs.

Stockton University March - November 2020

1. Research advised by Dr. Bradley Forrest.
2. Title: Nonisomorphic Trees and their Chromatic Symmetric Function.

Mathematical Sciences Research Institute, MSRI-UP June - July 2019

1. Research advised by Dr. Pamela E. Harris.
2. Title: On Kostant's weight q -multiplicity formula for $\mathfrak{sl}_4(\mathbb{C})$. AAEECC (2020).

Research Publications

3. [*How many dice rolls would it take to reach your favorite kind of number?*](#), with Doron Zeilberger. To appear.
2. [*Repetitions of Pak-Stanley labels in \$G\$ -Shi arrangements*](#), with Cara Bennett, Ava Mock, Gordon Rojas Kirby, and Robin Truax. Submitted.
1. [*On Kostant's weight \$q\$ -multiplicity formula for \$\mathfrak{sl}_4\(\mathbb{C}\)\$*](#) , with Rebecca E. Garcia, Pamela E. Harris, Marissa Loving, David Melendez, Joseph Rennie, Gordon Rojas Kirby, and Daniel Tinoco. AAEECC (2020).

Talks and Presentations

Research Talks

8. Moravian College, Student Mathematics Conference, February 2021
Minimum Rank of Regular Bipartite Graphs
7. Joint Math Meetings, Special Session on Research in Mathematics by Undergraduates and Students in Post-Baccalaureate Programs, January 2021
Minimum Rank of Regular Bipartite Graphs
6. Canadian Mathematical Society Winter Meeting, Algebraic Combinatorixx (Women in AC), December 2020
Minimum Rank of Regular Bipartite Graphs
5. The Ohio State University, Young Mathematicians Conference, August 2020
Involution Derangement Graphs
4. Clemson University, South Carolina, REU Conference, July 2020
Involution Derangement Graphs
3. Moravian College, Student Mathematics Conference, February 2020
Closed formulas for Kostant's Partition Function for $\mathfrak{sl}_4(\mathbb{C})$
2. Dalhousie University, Canada, Combinatorial Algebra meets Algebraic Combinatorics, January 2020
Geometric Constructions for Lie Algebra Type A_3

1. Mathematical Sciences Research Institute, MSRI, Berkeley, CA, July 2019
The q -Analog of Kostant's Weight Multiplicity Formula for $\mathfrak{sl}_4(\mathbb{C})$

Seminar Talks

5. Berkeley University, Combinatorics Seminar, March 2023
The G -Shi Arrangement: Pak-Stanley Labels and Games on Paths
4. Stockton University, Math Seminar, October 2022
Introduction to chip-firing
3. Stockton University, Math Seminar, November 2020
Chromatic Symmetric Function of Trees
2. Stockton University, Math Seminar, March 2020
Geometric Constructions for Lie Algebra Type A_3
1. Stockton University, Math Seminar, October 2019
My Research Experience working with Combinatorics and Discrete Math

Research Poster Presentations

2. Colorado Convention Center, Joint Math Meetings (JMM), January 2020
Weyl alternation sets for $\mathfrak{sl}_4(\mathbb{C})$
1. The Hawaii Convention Center, SACNAS Conference, November 2019
Weyl alternation sets for $\mathfrak{sl}_4(\mathbb{C})$

Grants and Other Funding

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| 2. Stockton University REU (\$1,000) | December 2019 |
| 1. Stockton Student Travel Fund (\$1,250) | October 2019 |

Awards and Honors

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| Princeton Prospective PhD Preview (P3) Program - Honorific Mention | 2020 |
| Stockton University Foundation Scholarship | 2019 - 2021 |
| Math Alliance Scholar | 2019 - 2021 |
| Hispanic Fund Scholarship | 2019 - 2021 |
| Dean's List | 2017 - 2021 |

Writing Contributions to the Profession

6. A model for a one-hour workshop on mentoring, with Pamela E. Harris, Zoe Markman, Ava Mock, Eric J. Pabón Cancel, Amanda Verga, and Susan Wang. MAA FOCUS, Vol. 41, No. 1, February/March 2023, p. 18-21.
5. [Ten Tips to Being Productive Online for Students - and Everyone](#). Math Values. February 25, 2021.
4. [Supporting math majors and grad students in the time of pandemic](#), with Pamela E. Harris, and Giovanni Marquez, e-Mentoring Network in the Mathematical Sciences-connecting students and mentors. AMS blogs. January 26, 2021.
3. [Networking Basics for Math Undergrads](#), with Joanne Beckford, Alex Christensen, Pamela E. Harris, Eduardo Torres Davila, and Fabrice O. Ulysse, e-Mentoring Network in the Mathematical Sciences-connecting students and mentors. AMS blogs. July 21, 2020.

2. [Learning During the Pandemic: What we wish our professors and mentors knew](#), with Mayleen Cortez, Melissa Gutierrez, Pamela E. Harris, Brooke Keene-Gomez, Amaury Minino, Alicia Prieto Langerica, Kelemua Tesfaye, and Stephanie, e-Mentoring Network in the Mathematical Sciences-connecting students and mentors. AMS blogs. May 04, 2020.
1. [Bank of REU/Grad Fair Questions](#), with Eduardo Torres Davila, e-Mentoring Network in the Mathematical Sciences-connecting students and mentors. AMS blogs. January 24, 2019.

Professional Development

Panels

- Graduate School Workshop: Funding and Fellowships Panel, The Women+ of Color Project, October 2022
Panelist
- Graduate School Panel, Summer@ICERM, June 2022
Panelist
- Undergraduate Research Student Panel, Professional Development Workshop, Center for Undergraduate Research in Mathematics, June 2022
Panelist
- YSU Beginning Undergraduates' Mathematical research Preparation (BUMP) Panel, Youngstown State University, May 2022
Panelist
- Current Issues: What can we do to support math majors and grad students in the time of pandemic?, AMS Panel Session on Education, Joint Math Meetings, January 2021
Panelist
- Student Panel, IMA/Math Alliance Workshop, University of Minnesota, July 2020
Panelist
- Educational Opportunity Fund (EOF), Stockton University, July 2020
Panelist

Service and Outreach

- *Speaker*, Critical Issues in Mathematics Education, Mathematical Sciences Research Institute (MSRI), March 2023.
Title: Mentoring Experiences Through the Lens of a Mentee.
- *Facilitator/Host*, Cafe Con Leche, Research Talk hosted by Latinxs and Hispanics in the Mathematical Sciences, March 2022.
- *Co-President and Co-founder* of the Stockton Women in Math (SWIM), AWM Chapter, September 2020 - May 2021.
- *Volunteer*, Networking/Speaker Series, Summer Math and Science Honors Academy (SMASH), July 2020.

- *Volunteer*, Homework Completion Program, Atlantic City Library, NJ, March 2020.
- *Volunteer*, Networking/Speaker Series, Summer Math and Science Honors Academy (SMASH), July 2019.
- *Proctor*, High School Math Mayhem Competition, Stockton University, April 2019.
- *Service-Learning Coordinator* of the Alliance of Educational Opportunity Fund (EOF) Students of NJ, September 2019 - May 2020.

Professional Activities

Workshops Participation

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| Modern Math Workshop - SACNAS pre-conference | October 2022 |
| Open Problems in Algebraic Combinatorics (OPAC) | May 2022 |
| The Women of Color Project - Harvard University | October 2020 |
| IMA/Math Alliance Workshop on Career Paths in the Mathematical Sciences | July 2020 |
| Modern Math Workshop - SACNAS pre-conference | October 2019 |

Programs

Latinas Achieve in STEM (LaSTEM) February - April 2021

- This 7-week program was offered to 5 undergraduate Latinas interested in pursuing careers in STEM.
- As one of the projects, we created a [website](#) which is showcased in the Student Transition Programs at Stockton University.

Memberships

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| Association for Women in Mathematics (AWM) | July 2020 - July 2021 |
| American Statistical Association (ASA) | November 2019 - November 2020 |
| Pi Mu Epsilon (Member, 2019-2020 Secretary) | September 2019 - May 2021 |
| Advancement of Chicanos/Hispanics and Native Americans in Science, (SACNAS) | July 2019 - Present |

Skills

Technology

Proficient in \LaTeX , Sage, Maple and CoCalc. Some experience with HTML, Java and Python.

Other

Fluent in English and Spanish, both written and verbal.