

Lucy Martinez

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Education

BS in Mathematics, Stockton University Expected May 2021

Academic Positions

Stockton University

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

Research Experiences

New Jersey Governor's STEM Scholars Program-Research Mentor September 2020- May 2021

1. This program gives an opportunity to high school students engage in a research project led by the undergraduate and graduate students.
2. Title: Connecting graph coloring solutions to world applications.

East Tennessee State University, ETSU REU June 08-August 07, 2020

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

East Tennessee State University, ETSU REU June 08-August 07, 2020

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

Stockton University March 2020-Present

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

Mathematical Sciences Research Institute, MSRI-UP June 15-July 28, 2019

1. Research advised by Dr. Pamela E. Harris.
2. Title: On Kostant's weight q -multiplicity formula for $\mathfrak{sl}_4(\mathbb{C})$. Applicable Algebra in Engineering, Communication and Computing (2020).

Research Publications

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, and Daniel Tinoco. Applicable Algebra in Engineering, Communication and Computing (2020).

Talks and Presentations

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 $\mathfrak{sl}_4(\mathbb{C})$

Talks

8. The Ohio State University, Young Mathematicians Conference, August 2020
Involution Derangement Graphs
7. Clemson University, South Carolina, Online Math REU Conference, July 2020
Involution Derangement Graphs
6. Stockton University, New Jersey, Online Math Seminar, March 2020
Geometric Constructions for Lie Algebra Type A_3
5. Moravian College, Student Mathematics Conference, February 2020
Closed formulas for Kostant's Partition Function for $sl_4(\mathbb{C})$
4. Dalhousie University, Canada, Combinatorial Algebra meets Algebraic Combinatorics, January 2019
Geometric Constructions for Lie Algebra Type A_3
3. Stockton University, New Jersey, Differential Geometry class, December 2019
Minimal Surfaces
2. Stockton University, New Jersey, Math Seminar, October 2019
My Research Experience working with Combinatorics and Discrete Math
1. Mathematical Sciences Research Institute, MSRI, Berkeley, CA, July 2019
The q -Analog of Kostant's Weight Multiplicity Formula for $sl_4(\mathbb{C})$

Awards and Honors

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

Writing Contributions to the Profession

[Evidence-based Practices for Effective Mentorship](#), with Abbe Herzig, Notices of the AMS. Submitted.

[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.

[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 Langarica, Kelemua Tesfaye, and Stephanie, e-Mentoring Network in the Mathematical Sciences-connecting students and mentors. AMS blogs. May 04, 2020.

[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.

Professionial Activities

IMA/Math Alliance Workshop on Career Paths in the Mathematical Sciences	July 13-15, 2020
This online workshop brings together participants in the Alliance's F-GAP program and their mentors with leaders in applied mathematics and statistics, data science, and economics and management.	
Modern Math Workshop	October, 2019
The workshop includes two mini-courses aimed at undergraduates, research sessions aimed at graduate students and recent PhDs.	
Field of Dreams	November, 2019
Attended as a Facilitated Graduate Applications Program (F-GAP) participant and matched with a Doctoral Mentor.	
Alliance of Educational Opportunity Fund (EOF) Students of NJ	Fall 2019- Spring 2020
Service-Learning Coordinator responsible for setting up list of organizations for the club to assist throughout the year.	
Pi Mu Epsilon (Member, 2019-2020 Secretary)	Fall 2019- Spring 2021
Math Club (Member)	Fall 2018- Spring 2021

Community Service

Online Panelist, <i>The Summer Math and Science Honors Academy (SMASH)</i> - Berkeley, CA.	July 2020
Online Panelist, <i>IMA/Math Alliance Workshop</i> - University of Minnesota.	July 2020
Online Panelist, <i>Educational Opportunity Fund Academy (EOF)</i> - Stockton University, NJ.	July 2020
Homework Completion Volunteer, <i>Atlantic City Library, NJ.</i>	Spring 2020
Panelist, <i>The Summer Math and Science Honors Academy (SMASH)</i> - Berkeley, CA.	July 2019
Proctor, <i>High School Math Mayhem Competition</i> - Stockton University, NJ.	April 2019

Grants and Other Funding

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

Memberships

Association for Women in Mathematics (AWM)	July 2020-July 2021
American Statistical Association (ASA)	November 2019-November 2020
Advancement of Chicanos/Hispanics and Native Americans in Science, (SACNAS)	July 2019-July 2021

Skills

Technology

Proficient in \LaTeX , Sage, and Maple. Familiar with virtualization and assembly code. Some experience with HTML, Java and Python.

Other

Fluent in English and Spanish, both written and verbal