

# Lucy Martinez

Stockton University, Department of Mathematics  
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## Education

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BS in Mathematics, Stockton University	Expected May 2021
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## Academic Positions

### Stockton University

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| 1. <b>Head Mathematics Tutor</b>   | Fall 2020 to Spring 2021 |
| 2. <b>Educational Opportunity Fund (EOF) Instructional Assistant</b>   | 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. <b>Mathematics Tutor</b>  | Spring 2018 to present   |
| 4. <b>Workshop Mathematics Tutor</b>   | 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. |                          |

<b>Private Mathematics Tutor</b>	Spring 2018 to present
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## Research Experiences

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<b>East Tennessee State University, ETSU REU</b>	June 08-August 07, 2020
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1. Research advised by Dr. Fernando Piñero.
2. Title: Finding better bounds for graph codes.

<b>East Tennessee State University, ETSU REU</b>	June 08-August 07, 2020
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1. Research advised by Dr. Anant Godbole.
2. Title: Involution Derangement Graphs.

<b>Stockton University</b>	March 2020-Present
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1. Research advised by Dr. Bradley Forrest.
2. Title: Nonisomorphic Trees and their Chromatic Symmetric Function.

<b>Mathematical Sciences Research Institute, MSRI-UP</b>	June 15-July 28, 2019
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1. Research advised by Dr. Pamela E. Harris.
2. Title: On Kostant's weight  $q$ -multiplicity formula for  $\mathfrak{sl}_4(\mathbb{C})$ .
3. To appear in Applicable Algebra in Engineering, Communication and Computing.

## Research Publications

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[\*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. To appear in Applicable Algebra in Engineering, Communication and Computing.

## 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

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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.

## Professional Activities

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<b>IMA/Math Alliance Workshop on Career Paths in the Mathematical Sciences</b>	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.	
<b>Modern Math Workshop</b>	October, 2019
The workshop includes two mini-courses aimed at undergraduates, research sessions aimed at graduate students and recent PhDs.	
<b>Field of Dreams</b>	November, 2019
Attended as a Facilitated Graduate Applications Program (F-GAP) participant and matched with a Doctoral Mentor.	
<b>Alliance of Educational Opportunity Fund (EOF) Students of NJ</b>	Fall 2019- Spring 2020
Service-Learning Coordinator responsible for setting up list of organizations for the club to assist throughout the year.	
<b>Pi Mu Epsilon</b> (Member, 2019-2020 Secretary)	Fall 2019- Spring 2021
<b>Math Club</b> (Member)	Fall 2018- Spring 2021

## Community Service

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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

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

## Memberships

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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

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### Technology

Proficient in  $\text{\LaTeX}$ , 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