

# Lucy Martinez

Stockton University, Department of Mathematics  
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## Education

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**BS in Mathematics, Stockton University**

Expected May 2021

## Academic Positions

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**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.

**Private Mathematics Tutor**

Spring 2018 to present

## Research Experiences

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**East Tennessee State University, ETSU REU**

June 08-August 07, 2020

1. Research advised by Dr. Fernando Piñero.
2. Title: Finding better bounds for graph codes.

**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  $\mathfrak{sl}_4(\mathbb{C})$ .
3. Submitted to *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. Submitted.

## Writing Contributions to the Profession

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[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.

## Talks and Presentations

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### 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

7. Clemson University, South Carolina, Online Math REU Conference, Expected 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  $\mathfrak{sl}_4(\mathbb{C})$*

## Professionial Activities

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**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

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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>	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

## Awards and Honors

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Stockton University Foundation Scholarship	September 2020-May 2021
Math Alliance Scholar	September 2020-September 2021
Hispanic Fund Scholar	September 2020-September 2021
Stockton University Foundation Scholarship	September 2019-May 2020
Math Alliance Scholar	September 2019-September 2020
Hispanic Fund Scholar	September 2019-September 2020
Dean's List	September 2017- Present

## 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  $\LaTeX$ , 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