

# Lucy Martinez

Stockton University, Department of Mathematics  
(856) 558-8174 lucymartinez988@gmail.com website: marti310.github.io

## 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.

**Private Mathematics Tutor**

Spring 2018 to present

## Research Experiences

---

**East Tennessee State University, ETSU REU**

June 08-August 07, 2020

Currently working on two projects. The first one is Kneser graphs and set partitions. The second project involves graph codes over different types of combinatorial structures.

**Mathematical Sciences Research Institute, MSRI-UP**

June 15-July 28, 2019

Participated in the mathematics research program under the supervision by Dr. Pamela E. Harris of Williams College, completed a research project on Lie Representation Theory, and submitted a paper.

## Research Publications

---

*On Kostant's weight  $q$ -multiplicity formula for  $\mathfrak{sl}_4(\mathbb{C})$* , with Rebecca E. Garcia, Pamela E. Harris, Marrissa Loving, David Melendez, Joseph Rennie, and Daniel Tinoco. Submitted.

## Writing Contributions to the Profession

---

*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

---

### 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

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

## Professional Activities

**IMA/Math Alliance Workshop on Career Paths in the Mathematical Sciences** July 13-15, 2020  
This 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, *Educational Opportunity Fund Academy (EOF)* - Stockton University, NJ July 2020

Homework Completion Volunteer, *Atlantic City Library, NJ* Spring 2020

Panelist, *The Summer Math and Science Honors Academy (SMASH)* - Berkeley, CA July 2019

Proctor, *High School Math Mayhem Competition* - 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

## Awards and Honors

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  
Math Alliance Scholar  
Hispanic Fund Scholar  
Dean's List

September 2019-May 2020  
September 2019-September 2020  
September 2019-September 2020  
September 2017- Present

## 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