

Amairani Hernandez Garcia
831 Cloverleaf St. Houston, TX 77015
832-744-5717- heram5@yahoo.com

Education

Bachelor of Science, *Mathematics* May 2015
Minor: *Statistics*
University of Houston-Downtown, *Cum Laude*

Masters of Science, *Mathematics* May 2017
Sam Houston State University

Research Experience

- *String Vibration in Oil Industry*, University of Houston-Downtown Aug 2014 – May 2015
To analyze the dynamic behavior of a vibrating chain, we pose the problem using the wave equation with Dirichlet and Neumann boundary conditions. We compare previous studies done experimentally with the theoretical studies using the Laplace Transform method as well as with numerical results using the method we developed in MATLAB.
- *The Change Problem Via Numerical Monoids*, Sam Houston State University Jan 2017 – May 2017
Using the set of lengths of a numerical semigroup, we studied the amounts of money that can be made using a given set of denominations. More specifically, we studied the denominations that provides an optimal way to give an amount of change.

Work Experience

- *Instructor, Sam Houston State University* Aug 2017-present
Teaching Plane Trigonometry and PreCalculus College Algebra
- *Graduate Teaching Assistant, Sam Houston State University* Aug 2016- May 2017
Taught PreCalculus College Algebra, formulated course structures and requirements, and administered all grades.
- *Graduate Assistant, Sam Houston State University* Aug 2015- May 2016
Graded homework and exams for the following courses: College Algebra, Calculus I, II, and III, Discrete Mathematics.
- *Supplemental Instructor, University College, UHD* Jan 2014 – July 2016
Attended to class lecture and assisted students, provided weekly peer-led study sessions outside the classroom, conducted exam reviews, and served as a model student to classmates.
Courses: College Algebra, Mathematics for Liberal Arts Majors, Pre-Calculus, and Calculus I
- *Collaborative Learning Community Center Math Tutor, UHD* Aug 2014 – May 2016
Assisted students with upper-level mathematics courses.
- *Peer-Led Team Learning Math Tutor, UHD* Aug 2012 – May 2016
Provided one-to-one support for students enrolled in lower-level mathematics courses.
- *Peer-Led Team Learning- Training Coordinator, UHD* Aug 2013 – May 2014
Conducted weekly training for future Mathematics/Computer Science tutors, prepared training materials, and wrote weekly reports on the development of the training.

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Memberships/ Organizations

- American Mathematical Association, *Vice-President* Aug 2015- May 2016
Planned and coordinated committees to manage a series of meetings and programs. Organized programs with the president and the executive committee.
- Scholars Academy *Member*, UHD Aug 2011- May 2016
Maintained a 3.0 GPA, attended to required STEM related seminars, fieldtrips and research conferences every semester.
- Scholars Academy *Ambassador*, UHD Aug 2012 – May 2016
Recruited low-income high school students to STEM related majors during college fairs, assisted at on/off campus special events to recruit students to the Scholars Academy program
- Scholars Academy *Peer Mentor*, UHD Aug 2013 - Aug 2014
Advised students about research, courses, Scholars Academy requirements, college life, lead group to volunteer activities, and organized networking/study meetings every semester.
- College Success Program- *Leader*, UHD Aug 2013 - Dec 2014
Lead an incoming freshman group through college preparation and proper research method
- Mathematical Association of America-*Secretary, Executive Officer*, UHD Aug 2012 - Aug 2014
Recorded notes from bi-weekly meetings, designed and posted MAA special events fliers
Assisted the president in the organizing and facilitating MAA during fundraising events and volunteer activity

Conferences Attended

- Gulf States Math Alliance Conference Feb 24-26, 2017
- Southwest Local Algebra Meeting (SLAM) Feb 27-28, 2016
- Peer-Led Team Learning International Society May 28-30, 2015
- HENNAC Great Minds in STEM Conference Oct 2-5, 2014
- Texas Undergraduate Topology and Geometry Conference Feb 21-23 2014
- Texas Undergraduate Mathematics Conference Apr 26-27, 2013
- Combina Texas 2013: Combinatory in the South-Central U.S. Apr 21-22, 2013

Scholarships/ Awards

- Graduate Bridge Program Aug 2015- Present
- Scholars Academy Aug 2011 – May 2015
- Freshman UHD Cain Scholarship Aug 2011 – May 2015
- Edwin and Justine Hodges Memorial Scholarship May 2013 – June 2014
- Removing Educational Barriers Aug 2013
- Brown Foundation Scholarship Aug 2011

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Presentations

- *3-Minute Thesis Competition*, Sam Houston State University Feb 2017
Presented Master's Research Project under three minutes titled, "Lengths of Factorizations in a Numerical Semigroup"
- *String Vibration in Oil Industry*, Research Presentation, Sam Houston State University Apr 2016
Analyzing the dynamic behavior of string vibrations and its applications in oil drilling
- "*Proposing a Study Workshop for Math and Computer Science*" Poster Presentation May 2015
University of Texas-Dallas
Developing a series of Peer-Led workshops for undergraduate students in math and computer science
- "*Unstoppable*" Research presentation, University of Houston-Downtown Apr 2012
Freshman presentation regarding chemical-explosion risks
- "*Peer-Led Team Learning Influence on Future Teachers*" University of Houston-Downtown Jun 2013
Peer-Led Team Learning experience benefiting future secondary teachers