

## Alexandra Cuadra

E-mail: [fernan87@purdue.edu](mailto:fernan87@purdue.edu) or [acuadra002@gmail.com](mailto:acuadra002@gmail.com)

Webpage: <https://www.math.purdue.edu/~fernan87>

### EDUCATION

**Pursuing Doctor of Philosophy Degree in Mathematics** – Expected August 2024  
Purdue University, West Lafayette, IN

**Master of Arts Degree in Mathematics** (2016); Eastern Michigan University, Ypsilanti, MI      GPA: 3.94

**Bachelor of Science in Mathematics** (2014); Florida International University, Miami, FL

**Associate of Arts in Mathematics** (2010) Miami Dade College, Miami, FL

### SPECIAL SKILLS

- Languages: Spanish, English
- Computer Skills: LaTeX, Microsoft Office, Python, SQLite
- Course Managers: Blackboard, Canvas, Brightspace
- Homework programs: ALEKS, Wiley Plus, CourseCompass, MyMathLab, MyLab Math, LON-CAPA

### PROFESSIONAL EXPERIENCE

August 2019 – Present

**Teaching Assistant – Mathematics Dept.;** Purdue University, West Lafayette, IN

- Subjects: Precalculus – Functions and Trigonometry (MA 15800), Plane Analytic Geometry and Calculus I-II (MA 16100-16200), Applied Calculus I-II (MA 16010-16020), Multivariate Calculus (MA 26100)
- Designing and implementing course curriculum, and assessments
- Assessing students' progress in the course
- Tutoring students with specific math homework problems

August 2016 – August 2017

**Teaching Assistant – Mathematics Dept.;** University of Toledo, Toledo, OH

- Subject: Calculus For The Life Sciences With Applications I (MATH 1750), Trigonometry (MATH 1330)
- Designing and implementing course curriculum, and assessments
- Assessing students' progress in the course

A. Cuadra

September 2015 – December 2016

**Lecturer – Mathematics Dept.;** Eastern Michigan University, Ypsilanti, MI

- Subject: Intermediate Mathematics (MATH 104)
- Designing and implementing course curriculum, and assessments
- Assessing students' progress in the course

September 2014 – August 2016

**Graduate Assistant – Mathematics Dept.;** Eastern Michigan University, Ypsilanti, MI

- Tracking student attendance, test corrections, and media checkout in the Math Lab
- Tutoring in the Math Center, Collaborating with faculty on research projects, Grading for Professors, Proctor Developmental Math Exams and Teaching undergraduate mathematics courses
- Subjects being tutored range from Finite Mathematics to Calculus 3 and Differential Equations.

May 2015 – December 2015

**Graduate Assistant – Ronald E. McNair Program;** Eastern Michigan University, Ypsilanti, MI

- Assisting with the collection, creation, and analysis of sign-in sheets and evaluations of GRE Prep Workshops and Weekly Seminars
- Tutoring students in their mathematics courses and the quantitative portion of the GRE
- Analyzing information on students who have participated in the program
- Created 2007-2015 McNair Report in support of a grant proposal
- Assist students analyze quantitative and qualitative components of their research projects.
- Advisor for McNair Organization of Students (MOST)

September 2014 – April 2015

**Tutor- Holman Success Center,** Eastern Michigan University, Ypsilanti, MI

- Tutoring students with specific math homework problems, studying for the math placement exams, and studying for standardized tests such as the GRE or GMAT
- Subjects being tutored range from Developmental Mathematics to Calculus 3
- Assisted in the creation of the Drop-In Tutor Manual

2012 – 2014

**Assistant Researcher - Office of Retention and Graduation Success,** Florida International University

- Promoted from a Ronald E. McNair Fellow to a Researcher.
- Research Projects:
  1. To find vital markers (i.e. courses student's do poorly in) in all the engineering tracks, and determining if those vital markers are a cause for the low numbers of engineering students at FIU.
  2. Determining if AP scores or AP course grades can be used as a placement tool for Calculus 2 or 3.
- Assisting in the creation of 2-, 3-, 4- and 5-year major maps for the academic years within 2012-2014.

**Learning Assistant – Mathematics Dept.,** Florida International University, Ypsilanti, MI

- Met weekly with faculty to plan for the upcoming week, reflect and analyze from the previous week
- Facilitate collaboration among students by assessing student understanding and asking guiding questions
- Assist with the admission of a group of students called the Golden scholars and their learning of math
- Mentor students with questions about college life at Florida International University.
- Assist, create, grade, and administrate students' homework (online software), quizzes, exams, and finals.
- Deliver lesson to a class of 40 students which featured concepts of Calculus III.
- Subjects: Developmental Mathematics II, Business Calculus, Calculus I, Calculus III, Intermediate Algebra, and College Algebra

2011 – 2013

**Tutor - Multicultural Programs and Services Assistance for Academic Achievement.**

Florida International University, Miami, FL

- Assisted students mathematics subjects during one-on-one tutoring sessions.
- Created the monthly progress reports, which assessed the number of appointments made and kept by students and the quality of each appointment.
- Subjects being tutored range from Finite Mathematics to Calculus 3 and Differential Equations.

2010 - 2012

**Private Tutoring;** Dade / Broward County, FL

- Led one-on-one tutoring sessions with students in the Miami-Dade and Broward County schools and colleges/universities (Ages range from 3 to 23)
- Courses: Civics, Pre-Algebra, Intermediate Algebra, Finite Mathematics, College Algebra, Trigonometry and Liberal Mathematics

**DEPARTMENTAL & UNIVERSITY SERVICE**

**Committee Member,** FIU iREAL (Integrating Research Engagement Assessment Learning) Commission, 2013  
College of Arts & Sciences, Florida International University

- Collaborated with professors, faculty/staff, and undergraduate students during weekly meetings
- Preparing for the strategic plan for the university which focused on: “What are the major drivers of change, now and in the foreseeable future, in the delivery of educational services, and how will they likely impact FIU and our predominantly minority and non-traditional (working) students who have been shown to have a greater need for high-touch educational experiences?”
- Completion of a draft vision white paper which will then be integrated into an overall Commission paper
- Website: <http://commission.fiu.edu/about-fiu-ireal/>

**AWARDS, SCHOLARSHIPS, & FELLOWSHIPS**

Graduate Assistance in Areas of National Need (GAANN) Fellowship (Recipient, August 2017- July 2020)

- Supported by the Department of Education and Purdue University
- No teaching duties for the first two years, and then supervised teaching experience during the third year.

Barbra A. Kunze Scholarship (Recipient, August 2016)

- Awarded to new graduate students who show exceptional promise.

Department of Mathematics at Eastern Michigan University: Outstanding Achievement Award for Excellence in Graduate Studies (Recipient, April 2016)

Department of Mathematics at Eastern Michigan University: Graduate Research Conference Participation Award (Recipient, April 2016)

Department of Mathematics at Eastern Michigan University: Recognition for Outstanding Service as a Graduate Assistant (Recipient, April 2015, and April 2016)

Department of Mathematics at Eastern Michigan University: Recognition for Outstanding Service as a Mathematics Tutor (Recipient, April 2015 and April 2016)

Latino Advisory Council of Staff and Faculty & Latino Students Association: EMU Latino Alumni Network Award (Recipient, September 2015)

- To assist Latino students in their pursuits of academic excellence
- Awarded to a graduate student who has demonstrated active involvement in the Latino and/or university community

Commission on Women Eastern Michigan University: Women's Commission Scholarship (Recipient, August 2015)

- Awarded to students who are advancing and improving the status of women on campus

Latino Advisory Council of Staff and Faculty & Latino Students Association: Committed Latino Leader Award (Recipient, March 2015)

- To assist Latino students in their pursuits of academic excellence
- Awarded to a graduate student who has demonstrated active involvement in the Latino and/or university community

Certificate of Appreciation for Dedication and Lasting Involvement as an Officer in Delta Epsilon Iota Academic Honor Society (Recipient, April 2014)

Certificate of Appreciation for Academic Excellence and Graduation with Delta Epsilon Iota Academic Honor Society (Recipient, April 2014)

FIU Office of Multicultural Programs and Services & Student Support Services Program: Outstanding Academic Achievement Award (Recipient, February 2014)

Certificate of Appreciation for Dedication and Lasting Involvement as an Officer in Delta Epsilon Iota Academic Honor Society (Recipient, October 2013)

Ronald E. McNair Fellowship (Recipient, Spring 2012-Present)

- **TRIO Program** sponsored by the U.S. Department of Education
- Participants are given the unique opportunity of developing the highest-level academic and research skills needed for successful admission to and completion of a Ph.D. program.

FIU Office of Multicultural Programs and Services & Student Support Services Program: Outstanding Academic Achievement Award (Recipient, January 2012)

National Science Foundation's Robert Noyce Scholarship / Fellowship (Recipient, Spring 2012-August 2014)

- Committed to work as a (paid) full-time teacher in a “high-need local education agency” for two years for each year of scholarship assistance
- Received support of a Noyce mentor and FIU program faculty

Student Support Services Program (Member, Spring 2011 – August 2014)

- **TRIO Program** sponsored by the U.S. Department of Education.
- Qualifications: Either a first generation college and/or financial aid recipient and/or registered with the Disability Resource Center.
- Program provides opportunities for grant aid, academic development, assistance with basic college requirements, and motivates students toward the successful completion of their bachelor degree.

Florida Bright Futures Scholarship (Florida Medallion Scholars) (Recipient, Fall 2010 – August 2014)

- To reward Florida high school graduates for high academic achievement.

Presidential Volunteer Service Award (Gold) (Recipient, June 2010)

- Recognizes individuals that have achieved a certain standard – measured by the number of hours of service over a 12-month period or cumulative hours earned over the course of a lifetime.

## **PRESENTATIONS**

Fernandez, A. (November, 2016). *“What Becomes a Fraction, the Power or the Result?” : An Investigational Study on the Strength of Concept Image versus Concept Definition*. Presented at the Graduate @ the Podium (GaP) at Eastern Michigan University, Ypsilanti, MI. (Oral Presentation)

Fernandez, A. (October, 2016). *Using Concept Images to Reinforce Concept Definitions*. Presented at the 34<sup>th</sup> Annual MTA Connections Conference at University of Michigan, Ann Arbor, MI. (Oral Presentation)

Fernandez, A. (November, 2015). *Elliptic Curves and Their Applications To Cryptography*. Presented at the The Graduate Research Conference (GRC) at Eastern Michigan University, Ypsilanti, MI. (Oral Presentation)

*Honest Talk*, McNair Research Seminar at Eastern Michigan University. October 3, 2014. (Panel Presentation)

Cuadra, A. (March, 2014). *Determining which Placement Tool is best for Students Entering Calculus 2 and Calculus 3*.

Presented at the Annual Advanced Research and Creativity in Honors Conference (ARCH) at Florida International University, Miami, FL. (Oral Presentation)

Presented at Florida International University Math Club Student Colloquium Meeting at Florida International University, Miami, FL. (Oral Presentation)

Cuadra, A. (October, 2012). *Transitions across Engineering students*. Presented at the Ronald E. McNair Annual Symposium at Florida International University, Miami, FL. (Oral Presentation)

Cuadra, A. *Determining which Placement Tool is best for Students Entering Calculus 2 and Calculus 3.*

(March 2014) Presented at the Annual Advanced Research and Creativity in Honors Conference (ARCH) at Florida International University, Miami, FL. (Poster Presentation)

(February 2014) Presented at the Florida Undergraduate Research Conference (FURC) at Florida International University, Miami, FL. (Poster Presentation)

## **CONFERENCES & WORKSHOPS**

*5<sup>th</sup> SI/Tutor Conference*, Jackson College. April 9, 2016

*The 19<sup>th</sup> Annual MKN McNair Heartland Research Conference*, Marriott Country Club Plaza Hotel (Kansas City, MO). September 25-27, 2015. (Moderator)

*Teaching Works: Elementary Mathematics Laboratory*, University of Michigan: School of Education. July 29-August 9, 2013

*1079<sup>th</sup> American Mathematical Society Meeting*, University of South Florida. March 10-11, 2012.

## **PUBLICATIONS**

Cuadra, A. (TBA). *Transitions across engineering students*. Unpublished manuscript, Office of Retention & Graduation Success, Florida International University, Miami, FL.

## **LICENSURE / CERTIFICATION**

*Security Awareness Training Certification* (2013)

Florida International University; Division of Information Technology

*Collaborative Institutional Training Initiative (CITI)* (October 2013)

(1) Responsible Conduct of Research, (2) Basic Course-Human Subjects Research Curriculum

*Florida Teacher Certification Exams* (2012)

(1) General Knowledge Exam, (2) Professional Education Exam, (3) Subject Area Exam in Mathematics

*“Protecting Human Research Participants” Training Course* (2012)

Certified by the National Institutes of Health (NIH) Office of Extramural Research

## **AFFILIATIONS & LEADERSHIPS**

Member: Math Club at Eastern Michigan University (September 2014 – August 2016)

Advisor: McNair Organization of Students (MOST) at Eastern Michigan University

(November 2015 – May 2016)

Member: Latino Student Association at Eastern Michigan University (January 2015 – August 2016)

Member: Math Club at Eastern Michigan University (September 2014 – August 2016)

Treasurer: Delta Epsilon Iota: Academic Honor Society (2012 – 2014); Member (2011 – 2014)

Events Coordinator, Florida International University Math Club (2013 – 2014); Member (2011 – 2014)

Member, Student Support Services Club (2013 – 2014)

**VOLUNTEER EXPERIENCE**

**Hialeah Gardens High School**, Hialeah Gardens, Florida, Volunteer ESOL Assistant Teacher (2010 – 2014)

- Observe different teaching style from multiple educators
- Assist new teachers with grading, disciplining, and instructing students: Algebra to Calculus
- Educated 20 ESOL students in Algebra I and II

**Mater Academy Charter High School**, Hialeah Gardens, Florida, Field Experience Teaching (2011)

- Reviewed Pre-Calculus material using reading strategies
- Created individualize lessons for students who needed the extra help
- Co-taught 40 students with the primary teacher