Alejandra Alvarado, Ph.D. **Curriculum Vitae**

CONTACT INFORMATION

Department of Mathematics & Computer Science
Eastern Illinois University
Charleston, IL 61920

Office: (217) 581 - 5902
E-mail: aalvarado2@eiu.edu
URL: `castle.eiu.edu/aalvarado2`

RESEARCH INTERESTS

Diophantine Equations, Elliptic Curves

EDUCATION

Arizona State University, Tempe, AZ

Ph.D. Mathematics — May 2009

- *Arithmetic Progressions on Curves*
- Advisor: Professor Andrew Bremner

University of Arizona, Tucson, AZ

M.S. Mathematics — December 2004

- *A Brief Introduction to Some Elliptic Curve Cryptography*
- Advisor: Professor Kirti Joshi

San José State University, San José, CA

B.S. Applied and Computational Mathematics — May 2000

- Minor: Physics
- Advisor: Professor Daniel Goldston

REFEREED PUBLICATIONS

Component Analysis-based Change Detection for Oean Floor Multi-temporal Imagery of Synthetic Aperture Sonar, with Tesfaye G-Michael, Jeannine Abiva, Rodney G. Roberts, Richard A. Nelson; IEEE Journal of Oceanic Engineering, **51** no. 1 (2026), pp. 520 - 532.

A Robust Implementation for Solving the S-unit Equation and Several Applications, with Angelos Koutsianas, Beth Malmskog, Chris Rasmussen, Christelle Vincent, Mckenzie West; Simons Symposia series (Arithmetic Geometry, Number Theory, and Computation), Springer (2021), `https://arxiv.org/pdf/1903.00977.pdf`.

Academic Preparation for Business, Industry, and Government Positions, with Candice Price; Association for Women in Mathematics Series, Springer, **18** (2019), pp. 79 - 87.

Difficult Dialogues in the Midwest: A Retrospective on the Impact of EDGE at Purdue University, with Rachel Davis, Donatella Danielli, Zenephia Evans, Edray H. Goins; Association for Women in Mathematics Series, Springer, **18** (2019), pp.55 - 65.

A Mathematician's Journey From Mentee to Mentor: Reflections on the EDGE Program, with Sarah Bryant; Journal of Humanistic Mathematics, **7** Issue 2 (2017), pp. 394 - 400, `https://scholarship.claremont.edu/jhm/vol7/iss2/21/`.

On the Diophantine Equation $x^4 + y^4 + z^4 + t^4 = w^2$, with Jean-Joël Delorme; Journal of Integer Sequences, **17** (2014), Article 14.11.5, `https://cs.uwaterloo.ca/journals/JIS/VOL17/Alvarado/alva3.pdf`.

Arithmetic Progressions on Conic Sections, with Edray H. Goins, International Journal of Number Theory, **9** no. 6 (2013), pp. 1379 - 1393, http://arxiv.org/abs/1210.6612.

Arithmetic Progressions in the y-coordinates on Certain Elliptic Curves, Aportaciones Matemáticas, Investigación **20** (2011), pp. 1 - 9.

Arithmetic Progressions on Quartic Elliptic Curves, Annales Mathematicae et Informaticae, **37** (2010), pp. 3 - 6, `http://ami.ektf.hu/uploads/papers/finalpdf/AMI_37_from3to6.pdf`.

An Arithmetic Progression on Quintic Curves, Journal of Integer Sequences, **6** (2009), Article 09.7.3, `https://cs.uwaterloo.ca/journals/JIS/VOL12/Alvarado/alvarado2.pdf`.

Expository Publications

The Struggle of Qualifying Exams, Living Proof: Stories of Resilience Along the Mathematical Journey, AMS-MAA Press (2019), pp. 32 - 34, `https://www.ams.org/about-us/LivingProof.pdf`.

An Exposition of Schoof's Algorithm, Sonoran Journal of Graduate Mathematics, Arizona State University, (2005), `http://mathpost.asu.edu/~sjgm/issues/2005_spring/SJGM_alvarado.pdf`.

Publications in Progress

Investigation of the Collatz Function in the Gaussian and Eisenstein Integers, with Jason Torchinsky, Erik Knutsen, and Rafael Ceja Ayala, submitted, Minnesota Journal of Undergraduate Mathematics.

Numerical Approximation of Coefficients of Shabat Polynomials, with Edray H. Goins and Luis Melara, in preparation.

Employment

Professor
Eastern Illinois University — Fall 2024 - present
Department of Mathematics and Computer Science

Associate Professor
Eastern Illinois University — Spring 2021 - Spring 2024
Department of Mathematics and Computer Science — Fall 2017

Undergraduate courses taught (Danville Correctional Center)

MAT 1160 Mathematics: A Human Endeavor
MAT 1170 Problem Solving

Undergraduate courses taught (EIU)

MAT 1160	Mathematics: A Human Endeavor
MAT 1330	Analytical Trigonometry
MAT 1441	Calculus and Analytic Geometry I
MAT 2250	Elementary Statistics
MAT 2550	Introduction to Linear Algebra
MAT 3530	Abstract Algebra
MAT 3701	Probability and Statistics I
MAT 3702	Probability and Statistics II
MAT 4700	Seminar in Mathematics; Diophantine Equations
MAT 4760	Linear Algebra
MAT 4810	Calculus for K-12 Math Educators
MAT 4910	Number Theory

Graduate courses taught (EIU)

MAT 5000	Mathematics Graduate Seminar
MAT 5100	Abstract Algebra
MAT 5810	Math Content Course for K-12 Math Educators
MAT 5335	Introduction to Data Science
MAT 5335	Introduction to Elliptic Curves
MAT 5990	Independent Study in Quadratic Integers

Advanced Placement Reader (in-person) Summer 2024, 2026
AP Statistics; AP Research (virtual) Summer 2023, 2025

Scientist
Naval Surface Warfare Center, Panama City, FL Spring 2018 - Fall 2020

Worked on automated change detection for sonar imagery; presented results in internal, national, and international conferences.

REU Faculty Mentor
California State University, Channel Islands Summer 2017

I directed an eight week summer research project with three undergraduate students on the Gaussian and Eisenstein integers. I also ran workshops on LaTeX and applying for graduate schools.

Assistant Professor
Eastern Illinois University Fall 2013 - Spring 2017
Department of Mathematics and Computer Science

Local Co-coordinator, Enhancing Diversity in Graduate Education (EDGE) Program Summer 2016
Purdue University, West Lafayette, IN

The mission of the four week program is to strengthen the abilities of women to successfully complete graduate programs in the mathematical sciences. The program consists of mini-

courses in vital areas of mathematical research in pure and applied mathematics, short-term visitors from academia and industry, guest lectures, graduate student mentors, and problem sessions. In addition, a follow-up mentoring program and support network is established with the participants' respective graduate programs.

ACT Preparation Instructor, Minority Teacher Identification and Enrichment Program (EIU) Summer 2014

The mission of the one week program is to recruit and retain underserved high school students who have an interest in becoming teachers. I taught the mathematics portion of the ACT.

Abstract Algebra Instructor, EDGE Program
New College of Florida, Sarasota June 2013

Visiting Assistant Professor
Purdue University, Department of Mathematics Fall 2011 - Spring 2013

MA 173	Calculus with Analytic Geometry II
MA 174	Multivariable Calculus
MA 265	Linear Algebra
MA 511	Graduate Linear Algebra with Applications

Adjunct Faculty
University of Arizona, Department of Mathematics Fall 2009 - Spring 2011

Math 120	Precalculus
Math 263	Introduction to Statistics
Math 302A	Understanding Elementary Mathematics (Required content course for pre-service elementary teachers.)

Adjunct Faculty
Pima Community College, Mathematics Department, Tucson, AZ Summer 2009

MAT 173 Mathematics for Business 1: Probability and Simulation

Graduate Teaching Assistant
Arizona State University, School of Mathematical and Statistical Sciences Fall 2007 - Spring 2009

MAT 170 Precalculus
MAT 270 Calculus with Analytical Geometry I

Graduate Student Mentor, EDGE Program
New College of Florida, Sarasota June 2006

Two mentors and I ran problem sessions for the students in Algebra and Analysis. Mentors helped to coordinate events, as well as share graduate school experiences.

Graduate Teaching Assistant
Arizona State University, School of Mathematical and Statistical Sciences — Spring 2006

I ran a problem session for graduate students in real analysis. The course was intended for students that required extra practice while enrolled in core courses.

Research Assistant
Arizona State University, School of Mathematical and Statistical Sciences — Spring 2005 - Fall 2005

I was involved in a variety of duties, most relevant was researching and analyzing the precalculus concept assessment instrument for the Center for Research on Education in Science, Mathematics, Engineering and Technology.

Graduate Teaching Assistant
University of Arizona, Department of Mathematics — Summer 2004

I taught college algebra for the New Start Summer Math Program, a six week program designed to help students transition to college. This intensive summer program has been "effective at serving low-income, racial minority, and first-generation college students."

Graduate Teaching Assistant
University of Arizona, Department of Mathematics — Fall 2001 - Fall 2004

Graduate Assistants in the department had full responsibility for the courses taught. Additionally, senior graduate students assisted with beginning graduate and advanced undergraduate courses by holding office hours and running problem sessions.

Math 110	College Algebra
Math 120	Precalculus
Math 124	Calculus I
Math 415A	Abstract Algebra TA

Mathematics Teacher
José Valdés Math Institute, San José, CA — Summer 2001

Grants

AMS-Simons Research Enhancement Grants for Primarily Undergraduate Institution (PUI) Faculty, $3000 — Fall 2023 - present

Eastern Illinois University — Fall 2021
College of Liberal Arts and Sciences Travel Award, $500
Faculty Development and Innovation Center Partnership Grant, $1000
with Andrew Mertz

Increasing the Visibility of Women's Research in Mathematics through Graduate Student Participation in National Workshops, — Spring 2018

Co-Principal Investigator, $49966 NSF Grant DMS-1821955
with Karoline Pershell, Ami Radunskaya

Eastern Illinois University, Achievement and Contribution Award — Fall 2017
Eastern Illinois University, Redden Grant, annual
$1000, $3000, $1500, $1500, $1500

Eastern Illinois University, College of Sciences — Fall 2015
Early Research Support Grant, $500, $500, $500 — Fall 2014
Visiting Scholars Award, $600, $300, $200 — Fall 2013

Midwest Women in Mathematics Symposium — Fall 2015
$224, $200 — Fall 2014

EDGE mini-sabbatical grant, $400 — Summer 2014

Infinite Possibilities Conference — Spring 2014
Co-Principal Investigator $25000 NSA Grant
with Edray Goins, Lily Khadjavi, Tanya Moore

Underrepresented Students in Topology and Algebra Research Symposium — Fall 2012
(USTARS) Co-Principal Investigator, $25000 NSF Grant DMS-1317928
with Syvillia Averett, Edray Goins, Pamela Harris, Candice Price, Shannon Talbott

AWM-NSF Travel Grant, $1500, $710, $1000 — Summer 2018
Fall 2014
Spring 2012

Fellowships & Scholarships

Sloan Fellowship — Fall 2006 - Spring 2007

More Graduate Education at Mountain State — Fall 2005 - Spring 2009
Alliance Travel and Research Stipends (MGE@MSA)

National Science Foundation VIGRE Fellowship — Summer 2003

Computer Science, Engineering and Mathematics Scholarship — Fall 2002 - Spring 2004

Graduate College Scholarship — Fall 2001 - Spring 2002

Ronald E. McNair Post Baccalaureate Achievement Program — Summer 2000

Selected Talks

An Implementation for Solving the S-unit Equation
Mathematical Congress of the Americas, invited — Summer 2025

Arithmetic Progressions on Curves
Great Lakes Section of SIAM Annual Meeting, invited — Fall 2024
Purdue University Northwest, Hammond, IN

Colloquium, invited — Spring 2024
Wabash College, Crawfordsville, IN

Department of Mathematics and Statistics Colloquium, invited — Fall 2023
Southern Illinois University, Carbondale, IL

GROW Conference, invited — Fall 2023
Duke University, Durham, NC

Conference on Strengthening Community in Research Mathematics, invited — Spring 2023
Pomona College, Claremont, CA

The Collatz Conjecture over the Gaussian Integers
Physics and Mathematics Colloquium (virtual), invited — Spring 2025
Universidad de Colima, Mexico,

Young Mathematicians Conference, invited — Summer 2023
The Ohio State University, Columbus, OH

Department of Mathematics Colloquium, invited — Fall 2022
Shippensburg University, PA

Department of Mathematics and Computer Science — Fall 2017
Colloquium, Eastern Illinois University, Charleston, IL

My Post-Grad Mathematical Journey — Spring 2022
Professional Development Seminar (virtual), invited
Arizona State University, Tempe, AZ

Investigation of the Collatz Function in the Gaussian & Eisenstein Integers — Spring 2022
AMS Spring Central Virtual Sectional Meeting
Purdue University, West Lafayette, IN

Scattering Wavelet Transform — Spring 2019
Department of Mathematics, AWM Student Chapter, invited
University of Kentucky, Lexington, KY

My Mathematical Journey — Fall 2018
Hidden No More: Stories of Triumph, Excellence, and Achievement
in STEM NSF-INCLUDES Lecture Series, invited
Southwestern University, Georgetown, TX

Formal and Informal Internal Presentations, — Summer 2018 - Summer 2020
approximately one per quarter
Naval Surface Warfare Center, Panama City Division, FL

My Lessons Learned — Summer 2018
EDGE Reunion Banquet Speaker, invited
Texas Tech University, Lubbock, TX

Latinos in the Mathematical Sciences Conference 2018 — Spring 2018
Careers in Government Panelist, IPAM, Los Angeles, CA

Arithmetic Progressions on Conic Sections
Mathematical Congress of the Americas, invited — Summer 2017
Joint Mathematics Meetings, invited — Spring 2017
Session on Discrete Structures in Number Theory, Atlanta, GA
Colloquium, Eastern Illinois University, Charleston, IL — Fall 2016

Journey to the Ph.D.
Louis Stokes Alliance for Minority Participation, invited — Spring 2017
California State University, Channel Islands

NExT Panel: Retaining Students from Underrepresented Groups in STEM
Indiana Section MAA Meeting, invited — Fall 2016
Purdue University, West Lafayette, IN

Brief Introduction to Public Key Cryptography
3rd Lake Michigan Workshop on Combinatorics and Graph Theory, invited — Spring 2016
Purdue University, West Lafayette, IN

Random Bits of Advice
Nebraska Conference for Undergraduate Women in Mathematics, invited — Spring 2016
University of Nebraska, Lincoln

Approximating Coefficients of Shabat Polynomials
Rose Hulman Institute of Technology, Terre Haute, IN, invited — Spring 2016
AMS Sectional Meeting, Loyola University, Chicago, IL, invited — Fall 2015
Bradley University Math Seminar, Peoria, IL, invited — Fall 2015
MAA MathFest, Washington, DC — Summer 2015

Dessin d'Enfants and Shabat Polynomials
Latinos in the Mathematical Sciences Conference — Spring 2015
IPAM, Los Angeles, CA
Midwest Women in Mathematics Symposium, — Spring 2015
Dominican University, Chicago, IL

On the Diophantine Equation $x^4 + y^4 + z^4 + t^4 = w^2$
Conference on Diophantine m-tuples and Related Problems, invited — Fall 2014
Purdue University North Central, Westville, IN
Midwest Women in Mathematics Symposium, — Spring 2014
University of Notre Dame, Notre Dame, IN

What's so Special About Mordell Curves?
SACNAS National Conference, Los Angeles, CA — Fall 2014
Universidad Autonoma Metropolitana, Mexico, D.F., invited — Summer 2014
Math Club Talk, Purdue University North Central, Westville, IN — Spring 2013
Bridge to Research Seminar, Purdue University, West Lafayette, IN — Spring 2013

Arithmetic Progressions on Curves
AWM Research Symposium, Santa Clara University, Santa Clara, CA — Spring 2013

Arithmetic Progressions on Mordell Curves
Colloquium, Eastern Illinois University, Charleston, IL — Spring 2013

Questions About Powers of Numbers
Number Theory Seminar, Purdue University, West Lafayette, IN — Spring 2013

Journey to the Ph.D., invited
Center for Leadership and Diversity in STEM, — Fall 2012
United States Military Academy, West Point, NY

Arithmetic Progressions on Conic Sections
Automorphic Forms Seminar, Purdue University, West Lafayette, IN — Fall 2012

Belyĭ's Theorem
Number Theory Seminar, Purdue University, West Lafayette, IN — Fall 2012

On Square Values of Quadratics
Number Theory Seminar, Purdue University, West Lafayette, IN — Spring 2012

Arithmetic Progressions on Mordell Curves
Underrepresented Students in Topology and Algebra Research Symposium — Spring 2012
University of Iowa, Iowa City, IA

Arithmetic Progressions in the x-coordinates on Mordell Curves, invited
Joint Mathematics Meeting, Special Session on Arithmetic Geometry, — Spring 2012
Boston, MA

My Adventures with Elliptic Curves, invited
AGEP PRiME: Purdue Research in Mathematics Experience, — Summer 2011
Purdue University, West Lafayette, IN

Arithmetic Progressions on $y^2 = x^3 + k$
Automorphic Forms and Representation Theory Seminar, — Spring 2011
Purdue University, West Lafayette, IN
Algebra/Combinatorics/Geometry/Topology Seminar, — Spring 2011
Northern Arizona University, Flagstaff, AZ

Some Elliptic Curve Crytography, invited
MSRI - UP: Elliptic Curves and Applications, — Summer 2010
Mathematical Sciences Research Institute, Berkeley, CA

Arithmetic Progressions in the y-coordinates of Certain Elliptic Curves
Fourteenth International Conference on Fibonacci Numbers — Summer 2010
and their Applications, Morelia, Mexico

Arithmetic Progressions on Curves, invited
Research Experiences in Mathematics for Undergraduates and Teachers, — Summer 2009
California State University, Chico, CA

y-coordinate Arithmetic Progressions on Elliptic Curves
Number Theory Seminar, Arizona State University, Tempe, AZ — Fall 2008

Integral Arithmetic Progressions on $y^2 = x^3 + k$
International Conference on Statistics and Related Fields, Honolulu, HI — Spring 2008

Cryptography Workshop
Presentation for Sonia Kovalevsky Day (a one day high school mathematics workshop for female students), University of Arizona, Tucson, AZ — Spring 2007

Arithmetic Progressions on Curves of Degree Five
West Coast Number Theory Conference, Ensenada, Mexico — Fall 2006

The Mordell Weil Theorem over $\mathbb{Q}$
Number Theory Seminar, Arizona State University, Tempe, AZ — Spring 2006

Schoof's Algorithm
MGE@MSA Student Research Conference, Arizona State University, — Spring 2005
Graduate Colloquium, University of Arizona, Tucson, AZ — Fall 2004

A Brief Introduction to Some Algorithms in Elliptic Curve Cryptography
Master's Thesis Defense, University of Arizona, Tucson, AZ — Fall 2004

Ideals Defined by Matrices
Graduate Math Colloquium, University of Arizona, Tucson, AZ — Spring 2004

Poster Presentations

Mohanty's Conjectures
SACNAS National Conference, San José, CA — Fall 2011
AWM Anniversary Conference, Providence, RI — Fall 2011

Arithmetic Progressions on Elliptic Curves
Career Options for Women in Mathematical Sciences, Minneapolis, MN — Spring 2009
Joint Mathematics Meetings, San Francisco, CA — Spring 2009

Arithmetic Progressions on Curves of Degree Five
International Confererence on Statistics and Related Fields, Honolulu, HI — Spring 2008
Infinite Possibilities Conference, Raleigh, NC — Fall 2007
MGE@MSA Student Research Conference, Arizona State University, — Spring 2007
Tempe, AZ (First Place in Mathematics Category)

Professional Workshops & Conferences

Institute for Computational and Experimental Research in
Mathematics (ICERM), Collaborate@ICERM, Providence, RI — Spring 2022

- The goal of the weeklong workshop was to work on updates for the project "Solving S-unit Equations" with same members from Collaborate@ICERM 2017.

American Institute of Mathematics (AIM)
Latinx Mathematicians Network, San Jose, CA — Fall 2019

- The goal of the workshop is to build a network of Latinx mathematicians, which will encourage and promote the advancement of Latinx to pursue careers in the mathematical sciences, and showcase their mathematical contributions.

Linton-Poodry SACNAS Leadership Institute
AAAS Headquarters, Washington, DC Summer 2018

- The goal of the intensive five day course is to lay the foundation for motivated scientists to lead institutional transformation.

USTARS Early Career Faculty Workshop Spring 2017
Amherst College, MA

- The goal of the workshop and conference is to further the success of underrepresented students and faculty in algebra and topology.

Institute for Computational and Experimental Research in
Mathematics (ICERM), Collaborate@ICERM, Providence, RI Spring 2017

- The goal of the weeklong workshop was to continue collaborating with the same members from Sage Days 62 on "Solving S-unit Equations".

re:boot Number Theory Spring 2016
Duke University, Durham, NC

- The goal of the four day workshop is to develop long-term research trajectories including overview of the grant writing process.

USTARS Spring 2016
Sam Houston State University, Huntsville, TX

- The goal of the workshop was to find, develop, and implement research opportunities for underrepresented students in topology and algebra.

Sage Days 62: Women in Sage 5 Summer 2014
Portland, OR

- The goal of the 4 day workshop was to work on a number theoretical group project developing Sage code, as well as increasing the number of women in the community of Sage developers.

Structured Quartet Research Ensembles (SQuaREs) Spring 2014
American Institute of Mathematics (AIM), Palo Alto, CA

- The goal of the week long workshop was to continue collaborating with the same members from REUF4 on the project, "Visualizing Dessins d'Enfants".

Research Experience for Undergraduate Faculty (REUF4) Summer 2012
ICERM, Providence, RI

- The goal of the week long workshop is to introduce undergraduate faculty to potential

research projects and to equip them with the tools to mentor students in undergraduate research in mathematics.

AWM Women in Mathematics Symposium — Spring 2011
Institute for Pure and Applie Mathematics, Los Angeles, CA

- The goal of the two day symposium was to provide new female mathematicians with career information and networks as they prepare for postgraduate careers.

The National Summer Institute, Denver, CO — Summer 2010

- The goal of the four day institute was to provide participants with the necessary training to prepare them for faculty positions in academia.

Promoting Diversity at the Graduate Level in Mathematics — Fall 2008
Mathematical Sciences Research Institute, Berkeley, CA

- I was invited to be on the panel, *The Students' Perspective*. The objectives of the three day workshop was to identify and discuss successful models that improve retention of underrepresented groups in graduate mathematics.

The Ninth Workshop on Elliptic Curve Cryptography Conference — Fall 2005
and Summer School, Copenhagen, Denmark

- The weeklong summer school provided background for the conference which was held the following week. Some topics included p-adic numbers, pairing, Weil descent, and an introduction to MAGMA.

Anogia Summer School, Number Fields and Curves over — Summer 2005
Finite Fields, Crete, Greece

- The weeklong school consisted of lectures which included Arakelov theory, curves over finite fields and modular forms. There were also guest lectures by fellow students.

EDGE Program, — Summer 2002
Bryn Mawr College, PA

- The aim of the program was to prepare female students for graduate school in the mathematical sciences. The program was four weeks long and covered core courses in algebra and analysis, including minicourses in different areas of mathematics.

Service & Outreach

Nebraska Conference for Undergraduate Women in Mathematics — Spring 2026
University of Nebraska, Lincoln

- The goal of NCUWM is to encourage and mentor undergraduate women to pursue graduate study in mathematics and seek mathematical careers by providing role models, insider knowledge, and an opportunity to present original research. Funded to take students in 2015, 2016, 2026, 2027.

MAA Representative on the MAA-SIAM-AMS, chair — Fall 2024 - Spring 2025
Hrabowski-Gates-Tapia-Mcbay Lecture Selection Committee — Spring 2023 - Fall 2025

AMS Central Section Program, Committee chair	Spring 2023 - Fall 2023
Committee member	Spring 2022 - Fall 2022
MAA Representative-at-Large for Interests of Minoritized/Marginalized Communities in Mathematics	Summer 2023
LatMath Conference 2022, "Tips for Effective Mentoring" session co-organizer with Cindy Wyels	Summer 2022
AWM Executive Committee Clerk	Spring 2022 - Fall 2025
Education and Outreach Committee	Spring 2025 - Fall 2025
Membership Committee	Spring 2024 - Fall 2024
Awards Committee	Spring 2023 - Fall 2023
Policy and Advocacy Committee	Spring 2022 - Fall 2022
MathFest Committee Chair	Spring 2018 - Spring 2019
Organizing Committee	Spring 2016 - Fall 2017
MathFest 2018 Town Hall: Shaping and Fostering an Equitable Community in our Departments	
Infinite Possibilites Conference	
Took three students	Spring 2025
Organizing committee	Summer 2024 - Spring 2025
	Fall 2013 - Spring 2015, Fall 2017 - Spring 2018
Student poster judge	Spring 2012
EIU Department of Mathematics and Computer Science	
Curriculum Committee	Fall 2024 - present
Colloquium Committee	Fall 2022 - Spring 2024
Social & Good of the Order Committee	Fall 2022 - present
iSTEM Advisory Committee	Fall 2021 - present
Graduate Committee	Fall 2021 - Spring 2022
Scholarship Committee	Spring 2014, Spring 2021 - Spring 2022
Hiring Committee	Spring 2021, Fall 2013 - Spring 2014
Undergraduate, and Graduate Semi-annual Open House	Fall 2014 - Fall 2017
Publicity and Outreach Committee	Fall 2016 - Fall 2017
Graduate Coordinator	Fall 2014 - Spring 2017
Kappa Mu Epsilon/Math club advisor	Fall 2013 - Spring 2015
Illinois Council of Teachers of Mathematics (ICTM) Math Contest Volunteer	annually each Spring
Eastern Illinois University:	
UPI Bargaining Committee	Fall 2025 - Spring 2026
Annual Gateway Program "Professor's Expectation" panelist	Fall 2025
Latino Heritage Month planning committee	Fall 2016 - 2017
Sigma Xi scientific honor society participant	Spring 2017
Sigma Xi undergraduate poster judge	Spring 2016
Building Bridges: Connecting Latino Faculty/Staff with Students (Charlando Con Los Profesores)	Spring 2016 Fall 2014

UPI Diversity Committee — Fall 2014 - Spring 2016
Council on Academic Affairs, Learning Goals committee — Fall 2013 - Spring 2014

EIU College of Sciences:
Minority Mentoring in Mathematics and Sciences (M^3S) chair — Fall 2016 - Spring 2017
Women in Science and Mathematics (WiSM) member — Spring 2015 - Fall 2017
SURE award selection committee, three year term — Spring 2014 - Spring 2016

All About Her Podcast, interview, "of influential women in STEM to learn more about their experiences in high school, college, and their current careers", `https://www.youtube.com/watch?v=B7DkKqICJBY` — Summer 2021

Change the Path Program; Virtual Q&A with 7th graders on the path through mathematics, Rancho Milpitas Middle School, CA. — Spring 2021

Graduate Research Opportunities for Women, invited (virtual) panelist — Fall 2020
Took two students
Northwestern University, Evanston, IL — Fall 2016

NSF INCLUDES Stakeholders Meeting participant — Summer 2017
University of Nebraska, Lincoln

re:boot Number Theory 2017 organizing committee — Fall 2016 - Spring 2017
Duke University, Durham, NC

NSF Site Visit, Statistics Living-Learning Community — Spring 2017
Purdue University, West Lafayette, IN

2017 Joint Mathematics Meetings Session Co-organizer
AMS Special Session on An Amicable Combination of Algebra and Number Theory (Dedicated to Dr. Helen G. Grundman) — Fall 2016

AWM Research Symposium 2017
Special Session Co-organizer — Fall 2016 - Spring 2017

10th Annual Field of Dreams Conference, Panelist — Fall 2016
Washington University, St. Louis, MO

Graduate Research Opportunities for Women, invited panelist — Fall 2017
Took student who was accepted to participate — Fall 2016
Northwestern University, Evanston, IL

External Mathematical Referee/MathSciNet Reviewer — Fall 2014 - present

MAA MathFest Undergraduate Paper Session Judge — Summer 2015

Richard Tapia Celebration of Diversity in Computing Conference:
Session co-organizer: Solving the Unsolvable through Scientific Computing — Fall 2016

	Travel scholarship reviewer	Fall 2014
	SACNAS National Conference:	
	Scientific Symposium Session, co-organizer and co-chair;	Fall 2024, 2023, 2015
	Sage Software Workshop; Harshad Numbers and Sage Workshop	Fall 2014
	Undergraduate Student Poster judge;	Fall 2013
	Travel Scholarship Reviewer;	Fall 2012
	judges sub-committee chair;	Fall 2011
	Purdue University:	
	Local organizer for USTARS 2013	Fall 2012 - Spring 2013
	Course coordinator for MA 265 Linear Algebra	Spring 2013
	Co-organizer for Purdue Research in Mathematics Experience	Summer 2012
	M.S. defense committee member	Spring 2013
	for three non-thesis students	Summer 2012
	ADVANCE Purdue Research in Mathematics Experience (PRiME)	Summer 2012
	Graduate School 101 Symposium Faculty Panel, Black Graduate Student Association	Spring 2012
	Chapter reviewer for a proposed textbook in Functional Analysis Springer Publishing	Fall 2012
Students Advised	Sarada Bandara, M.A. *An Exposition of the Eisenstein Integers*	M.A. May 2016
Affiliations	Society for the Advancement of Chicanos and Native Americans in the Sciences (SACNAS) Lifetime Member	
Continuing Education	EIU Online Course Development Institute; Certificate of Completion	Fall 2020
	Fundamentals, Code Acceleration and Deep Learning in MATLAB; NSWC PCD weeklong course	Fall 2019
	Advanced Programming in C++; NSWC PCD weeklong course	Summer 2018
	Intro to R for Data Science; edX Certificate	Spring 2017
	Programming with R for Data Science; edX Certificate	Spring 2017
Technical Skills	HTML, LaTeX, Magma, Maple, Mathematica, MATLAB, R, Sage	
Volunteer	Trail maintenance, invasive species removal, bat monitoring (Grand Prairie Friends)	
Languages	English, Spanish	
Citizenship	United States	