

Alexander J. Barrios

CONTACT INFORMATION	University of St. Thomas, Department of Mathematics 2115 Summit Avenue St. Paul, MN 55105 USA <i>E-mail:</i> abarrios@stthomas.edu <i>Webpage:</i> sites.google.com/site/barriosalex	
EDUCATION	Purdue University, West Lafayette, IN USA Ph.D. Mathematics, May 2018 M.S. Mathematics, May 2016 Advisor: Edray Goins Ph.D. Thesis: <i>Minimal Models of Rational Elliptic Curves with non-Trivial Torsion</i>	Brown University, Providence, RI USA Sc.B. Mathematics, May 2011 Miami Dade College, Miami, FL USA A.A. Mathematics, May 2009
RESEARCH INTERESTS	Algebraic Number Theory, Class Field Theory, and Diophantine Geometry. My recent work includes the explicit classification of rational elliptic curves with a non-trivial isogeny, as well as the classification of minimal discriminants and local data of rational elliptic curves with non-trivial torsion and their applications to the explicit abc conjecture.	
EDUCATION EXPERIENCE	University of St. Thomas, Department of Mathematics <i>Assistant Professor of Mathematics</i>	Aug. 2022 - Present
	Pomona Research in Mathematics Experience, Pomona College <i>Co-Director and Project Leader</i>	May. 2019 - Present
	Carleton College, Department of Mathematics and Statistics <i>Visiting Assistant Professor of Mathematics</i> <i>Scholar-in-Residence Fellow</i>	Sept. 2019 - Aug. 2022 Sept. 2018 - Aug. 2019
	Mathematical Sciences Research Institute - Undergraduate Program <i>Research Mentor</i>	Jun. 2020 - Jul. 2020
	Purdue University, Department of Mathematics <i>Graduate Teaching Assistant</i> <i>Graduate Student Representative</i>	Aug. 2013 - May 2018 May 2014 - Apr. 2015
	Purdue University, Minority Engineering Program (MEP) <i>Lead Instructor</i> <i>Instructor</i> <i>Tutor</i>	May 2015 - Aug. 2018 May 2014 - Aug. 2014 Aug. 2014 - Dec. 2016
RESEARCH PUBLICATIONS AND SUBMITTED ARTICLES	<ol style="list-style-type: none">1. <i>Reduced minimal models and torsion</i>, submitted.2. <i>On abc triples of the form $(1, c - 1, c)$</i>, submitted (with Elise Alvarez-Salazar, Calvin Henaku, Summer Soller).3. <i>Prime isogenous discriminant twins over number fields</i>, submitted (with Maila Brucal-Hallare, Alyson Deines, Piper H, Manami Roy).4. <i>Lower bounds for the modified Szpiro ratio</i>, to appear in <i>Acta Arithmetica</i>.5. <i>Explicit classification of isogeny graphs of rational elliptic curves</i>, <i>Int. J. Number Theory</i> 19 (2023), no. 4, 913-936.6. <i>Good elliptic curves with a specified torsion subgroup</i>, <i>Journal of Number Theory</i> 242 (2023), 21-43.7. <i>Representations attached to elliptic curves with a non-trivial odd torsion point</i>, <i>Bull. London Math. Soc.</i> 2022;54:1846-1861 (with Manami Roy).8. <i>Local data of rational elliptic curves with non-trivial torsion</i>, <i>Pacific J. Math.</i> 318 (2022) 1-42 (with Manami Roy).9. <i>Minimal models of rational elliptic curves with non-trivial torsion</i>, <i>Res. Number Theory</i> 8 (2022), no. 1, Paper No. 4, 39 pp.10. <i>A constructive proof of Masser's Theorem</i>, <i>Contemp. Math.</i>, Vol 759, pp. 51-61, 2020.	

ARTICLES IN PREPARATION	11. <i>Minimal models of rational elliptic curves with non-trivial torsion</i> , Ph.D. Thesis - Purdue University, 2018, 372 pp. ISBN: 978-0438-01030-7, ProQuest LLC, Ann Arbor, MI	
	1. <i>Symmetric tensor powers of graphs</i> , in preparation (with Waymar Astaiza, Henry Chimal-Dzul, Stephan Garcia, Jaaziel Lopez de La Luz, Victor Moll, Yunied Puig, Diego Villamizar).	
	2. <i>Minimal discriminants of rational elliptic curves with prescribed isogeny graphs</i> , in preparation (with Alyssa Brasse, Alvaro Cornejo, Owen Ekblad, Nevin Etter, Gustavo Flores, Marietta Geist, Kayla Harrison, Abigail Loe, Andrew Miller, Manami Roy, Summer Soller).	
	3. <i>Local data of rational elliptic curves under twist</i> , in preparation (with Manami Roy, Nandita Sahajpal, Darwin Tallana, Bella Tobin, Hanneke Wiersema).	
EXPOSITORY PUBLICATIONS	1. <i>Math Alliance: Investing in Tomorrow Today</i> , to appear as book chapter in Count Me In: Community and Belonging in Mathematics by Della Dumbaugh and Deanna Haunsperger, MAA Press (with Ranthony A.C. Edmonds, Roberto Soto).	
GRANTS	1. <i>National Science Foundation DMS-2228858</i> (\$64,920 – Co-PI)	
	2. <i>National Science Foundation DMS-2113782</i> (\$548,786 – Co-PI)	
TEACHING EXPERIENCE	University of St. Thomas , St. Paul, MN	
	MATH 109 - Calculus 1 with Review	Fall 2023
	MATH 113 - Calculus 1	Fall 2022; Spring 2023, 2024
	MATH 114 - Calculus 2	Spring 2023
	MATH 200 - Multivariable Calculus	Fall 2023
	Carleton College , Northfield, MN	
	MATH 120 - Calculus 2	Fall 2018–2019
	MATH 210 - Calculus 3	Fall 2020; Winter 2019–2022; Spring 2019
	MATH 232 - Linear Algebra	Winter 2020; Spring 2019
	MATH 236 - Mathematical Structures	Fall 2019, 2021; Spring 2021
	MATH 312 - Elementary Theory of Numbers	Winter 2021; Spring 2020
	MATH 321 - Real Analysis I	Spring 2022
	Purdue University , West Lafayette, IN	
	MEP MITE SAT Mathematics	Summer 2014–2018
	MEP ABC Calculus 1	Summer 2017–2018
	MATH153 - College Algebra	Fall 2014; Spring 2015
	MATH16010I - Active Learning Calculus 1 (teaching assistant)	Spring 2018
	MATH16020I - Active Learning Calculus 2 (teaching Assistant)	Spring 2017
	MATH162 - Calculus 2	Summer 2017
	MATH162 - Calculus 2 (recitation)	Spring 2014
	MATH173 - Honors Calculus 1 and 2 (recitation)	Fall 2013
	MATH261 - Calculus 3 (recitation)	Fall 2015
	MATH303 - Differential Equations & PDEs (grader)	Summer 2018
	MATH584 - Algebraic Number Theory (grader)	Fall 2017
	MATH585 - Mathematical Logic (grader)	Fall 2017
UNDERGRADUATE RESEARCH PROJECTS ADVISED	1. Pomona Research in Mathematics Experience	Jun. 2022 - Aug. 2022
	<i>Students:</i> Elise Alvarez-Salazar (University of California, Santa Barbara), Calvin Henaku (Washington University in St. Louis), and Summer Soller (University of Utah)	
	<i>Topic:</i> Good <i>ABC</i> Triples and Good Elliptic Curves	
	• Recipients of the MAA MathFest 2022 Poster Presentation Award	
	• MAA MathValues Blog Post: <i>Five lessons learned at my first REU</i> by C. Henaku	
	2. Pomona Research in Mathematics Experience	Jun. 2021 - Aug. 2021
	<i>Students:</i> Alyssa Brasse (Hunter College), Nevin Etter (Washington and Lee University), Gustavo Flores (Carleton College), Andrew Miller (University of California, Santa Barbara), and Summer Soller (University of Utah)	

Topic: Minimal Discriminants of Rational Elliptics with Prescribed Isogeny Graphs

- Recipients of the MAA MathFest 2021 Number Theory Undergraduate Research Presentation Award
Jun. 2020 - Jul. 2020

- MSRI-UP 2020 Research Project (co-advised with Edray Goins)
Students: Samuel Heard (University of Oklahoma), Fabian Ramirez (Sonoma State University), Vanessa Sun (Hunter College)
Topic: Automorphism and Monodromy Groups of Classical Modular Curves
- MSRI-UP 2020 Research Project (co-advised with Edray Goins) Jun. 2020 - Jul. 2020
Students: Ra-Zakee Muhammad (Pomona College), Javier Santiago (University of Puerto Rico, Río Piedras), Eyob Tsegaye (Stanford University)
Topic: Explicit Constructions of Finite Groups as Monodromy Groups
- MSRI-UP 2020 Research Project (co-advised with Edray Goins and Sofia Martinez) Jun. 2020 - Jul. 2020
Students: Nicholas Arosemena (Morehouse College), Yaren Euceda (University of Minnesota, Twin Cities), Ashly Powell (University of the Virgin Islands)
Topic: Dessin d'Enfants from Cartographic Groups
- Carleton College Towsley Fund for Winter Research Dec. 2019
Student: Abigail Loe
Topic: Minimal Discriminants of Rational Elliptic Curves Separated by a 4-isogeny
- Pomona Research in Mathematics Experience Jun. 2019 - Aug. 2019
Students: Alvaro Cornejo (University of California, Santa Barbara), Owen Ekblad (University of Michigan, Dearborn), Marietta Geist (Carleton College), Kayla Harrison (Eckerd College), and Abigail Loe (Carleton College)
Topic: Minimal Discriminants of Rational Elliptic Curves with non-Trivial Isogeny
 - Recipients of the MAA MathFest 2019 Number Theory Undergraduate Research Presentation Award
 - AMS Blog Post: [The MathFest Experience](#) by A. Cornejo and K. Harrison

UNDERGRADUATE SENIOR THESIS ADVISED

- Modular Forms and the Four Squares Theorem* Jan. 2022 - May 2022
Students: David Chae, John Groos, Chi Nguyen, Xander Roti, Sabine Shanaa
- Class Groups of Elliptic Dedekind Domains* Sept. 2020 - Mar. 2021
Students: Jack Heinzl, Daniel Kleber, Matt Mendiola
- Kummer's Proof of Fermat's Last Theorem for Regular Primes* Sept. 2019 - Mar. 2020
Students: Sam Chen, Marietta Geist, Alex Kiral, Brody Lynch

FELLOWSHIP, HONORS, AND AWARDS

- Invited Lecture Series for the Arizona Winter School* Jan. 2021 - Mar. 2021
- Lathisms Honoree* Sept. 2020
- MAA Project NExT Fellow* Jun. 2018 - Aug. 2019
- CFD Fellow* Sept. 2018 - Aug. 2019
- NSF Math Institute's Award for Best Presentation* Jan. 18, 2019

INVITED TALKS

- Seminario de Teoría de Números de la Universidad Autónoma de Madrid y el Instituto de Ciencias Matemáticas, Madrid, España January 18, 2023
- AMS Special Session on A Showcase of Number Theory at Undergraduate Institutions Joint Mathematics Meetings, Boston, MA January 5, 2023
- AMS Special Session: Presentations by Math Alliance Scholars Joint Mathematics Meetings, Boston, MA January 4, 2023.
- Rethinking Number Theory Invited Paper Session MAA MathFest, Philadelphia, PA August 4, 2022
- Latinx in the Mathematical Sciences Conference Institute for Pure and Applied Mathematics, Los Angeles, CA July 7, 2022
- MAA Project NExT Session on Creating Opportunities for Undergraduate Research Virtual April 10, 2022

7. AMS Special Session on Rethinking Number Theory
Virtual April 7, 2022
8. AMS Special Session on A Showcase of Number Theory at Undergraduate Institutions
Virtual April 6, 2022
9. Mathematics Colloquium
Cal State East Bay, Hayward, CA March 18, 2022
10. Mathematics Colloquium
University of St. Thomas, St. Paul, MN Jan. 24, 2022
11. Lathisms Lecture Series Speaker
Virtual talk December 10, 2021
12. CMS Session on Algebraic Number Theory
Canadian Mathematical Society Winter meeting (virtual talk) December 5, 2021
13. Mathematics Colloquium
Trinity College, Hartford, CT October 27, 2021
14. St. Olaf College Research Seminar
St. Olaf College, Northfield, MN October 8, 2021
15. Algebraic Geometry and Number Theory Seminar
Rice University, Houston, TX September 29, 2021
16. Seminario de Teoría de Números de la Universidad Autónoma de Madrid y
el Instituto de Ciencias Matemáticas, Madrid, España (charla virtual) June 22, 2021
17. Number Theory and Algebra Seminar
University of Zagreb, Zagreb, Croatia (virtual talk) May 31, 2021
18. Mathematics Club
University of Oklahoma, Norman, OK (virtual talk) Apr. 29, 2021
19. Mathematics Colloquium
Valparaiso University, Valparaiso, IN (virtual talk) Jan. 29, 2021
20. Lecture Series on Modular Forms
Arizona Winter School (Virtual) Jan.-Mar., 2021
21. Mathematics & Computer Science Colloquium
Macalester College, St. Paul, MN Feb. 3, 2020
22. Number Theory Seminar
Simon Fraser University, Burnaby, Canada Nov. 21, 2019
23. Mathematics Colloquium
Washington and Lee University, Lexington, VA Oct. 24, 2019
24. Mathematics Colloquium
University of St. Thomas, St. Paul, MN Oct. 10, 2019
25. BEAM Colloquium
Harvey Mudd College, Claremont, CA Jun. 29, 2019
26. AMS Special Session on Arithmetic Dynamics
University of Hawaii, Honolulu, HI Mar. 22, 2019
27. NAM Haynes-Granville-Browne Session of Presentations by Recent Doctoral Recipients
Joint Mathematics Meetings, Baltimore, MD Jan. 18, 2019
28. AMS Special Session: Presentations by Math Alliance Scholars
Joint Mathematics Meetings, Baltimore, MD Jan. 18, 2019
29. Front Range Algebra, Geometry and Number Theory Seminar
Colorado State University, Fort Collins, CO Mar. 29, 2018
30. Mathematics and Statistics Colloquium

	Carleton College, Northfield, MN	Jan. 25, 2018
	31. Mathematics and Computer Science Colloquium Wabash College, Crawfordsville, IN	Oct. 17, 2017
PROFESSIONAL ACTIVITIES AND SERVICE	1. <i>Seminar Co-organizer</i> , Lathisms Lecture Series and Cafe con Leche Seminar 2. <i>Conference Co-organizer</i> , Pomona College <i>Conference on Strengthening Communities in Research Mathematics</i> 3. <i>Panel Participant</i> , Joint Mathematics Meetings <i>Topic: A DEI Perspective on Undergraduate Research</i> 4. <i>Co-organizer</i> , Joint Mathematics Meetings <i>Topic: Panel on Fostering Good Collaborations</i> 5. <i>Panel Participant</i> , Joint Mathematics Meetings <i>Topic: Panel Discussion with Alliance Scholars</i> 6. <i>Member</i> , The Honors College at Miami Dade Alumni Advisory Committee 7. <i>Panel Participant</i> , Field of Dreams Conference <i>Topic: Fields of Success</i> 8. <i>Host</i> , Prison Math Project <i>Topic: Pi Day Event 2022</i> 9. <i>Panel Participant</i> , Lunch in the Time of Covid <i>Topic: Investing in the Future of Mathematics</i> 10. <i>Panel Participant</i> , OURFA ² M ² <i>Topic: Our Stories</i> 11. <i>Panel Participant</i> , Field of Dreams Conference <i>Topic: The Value of Undergraduate Research Experiences</i> 12. <i>Co-organizer</i> , MAA MathFest Workshop* Canceled due to COVID <i>Topic: Navigating Academia as an Underrepresented Early Career Mathematician</i> 13. <i>Discussion Facilitator</i> , JMM Session <i>Topic: Identifying and Managing Microaggressions</i> 14. <i>Panel Participant</i> , USTARS Conference <i>Topic: Mentoring Panel</i> 15. <i>Panel Participant</i> , TRIO at Carleton <i>Topic: First Generation Faculty Panel</i> 16. <i>Presenter</i> , Prairie Creek Community School's STEM Day <i>Topic: Hilbert's Hotel and Combinations</i> 17. <i>Session Co-organizer</i> , JMM Session <i>Topic: Standards-based Grading: Tools and Tips for Successful Implementation</i> 18. <i>Member</i> , NAM Editorial Board 19. <i>Tutor</i> , AGEF, LSAMP, and Purdue Science Bound 20. <i>Mentor</i> , Association for Women in Mathematics (AWM) - Purdue Chapter 21. <i>Workshop Co-organizer</i> , Purdue Office of Graduate Diversity Initiatives <i>Topic: How to Prepare for Prelims</i> 22. <i>Workshop Co-organizer</i> , SROP <i>Topic: GRE Mathematics Workshop</i> 23. <i>Panel Participant</i> , LSAMP and SROP	Aug. 2022 - Present Feb. 17-18, 2023 Jan. 5, 2023 Jan. 4, 2023 Jan. 4, 2023 2021 - 2022 Nov. 4, 2022 Mar. 14, 2022 Mar. 17, 2021 Dec. 19, 2020 Nov. 6, 2020 Jul. 30, 2020 Jan. 16, 2020 Apr. 27, 2019 Apr. 5, 2019 Feb. 21, 2019 Jan. 16, 2019 May 2018 - Apr. 2019 Jan. 2016 - May 2018 Jul. 2015 - May 2018 Oct. 24, 2017 Jul. 8 and 15, 2017 Jun. 6, 2017

Topic: Life in Graduate School

24. *Mentor*, Purdue Graduate School eMentoring Program Sept. 2016 - Apr. 2017
25. *Mentor*, Purdue University Minority Engineering Program Aug. 2015 - Dec. 2016
26. *Recruiter*, California Forum for Diversity in Graduate Education Nov. 5, 2016
27. *Panel Participant*, Purdue Science Bound Oct. 4, 2016
Topic: What is Mathematics?
28. *Workshop Co-organizer*, The Summer Research Opportunities Program (SROP)
Topic: GRE Mathematics Workshop Jul. 9 and 16, 2016
29. *Panel Participant*, LSAMP Jul. 12, 2016
Topic: Graduate School
30. *Recruiter*, California Forum for Diversity in Graduate Education Apr. 23, 2016
31. *Undergraduate Research Mentor*, LSAMP Sept. 2015 - Dec. 2015
32. *Graduate Student Representative*, Purdue Department of Mathematics May. 2014 - Apr. 2015
33. *Volunteer*, Bridge to Enter Advance Mathematics Jul. 15-19, 2014
34. *Panel Participant*, USTARS Conference Apr. 21, 2013
Topic: Mentoring Panel

CONFERENCES
ATTENDED

1. *Conference on Strengthening Communities in Research Mathematics*
Pomona College, Claremont, CA Feb. 17-18, 2023
2. *Joint Mathematics Meetings 2023*
Boston, MA Jan. 4-7, 2023
3. *Field of Dreams Conference*
Minneapolis, MN Nov. 4-5, 2022
4. *MAA Mathfest 2022*
Philadelphia, PA Aug. 3 - Aug. 6, 2022
5. *Latinx in the Mathematical Sciences Conference 2022*
UCLA, Los Angeles, CA Jul. 7-9, 2022
6. *Joint Mathematics Meetings 2022*
Virtual Apr. 6-9, 2022
7. *Midwest Representation Theory Conference*
University of Michigan, Ann Arbor, MI Mar. 11-13, 2022
8. *Field of Dreams Conference*
Virtual Nov. 5-6, 2021
9. *MAA Mathfest 2021*
Virtual Aug. 4-7, 2021
10. *Southern California Math REU Conference 2021*
Virtual Jul. 29, 2021
11. *Rethinking Number Theory II*
Virtual Jul. 12-23, 2021
12. *Latinx Mathematicians Network III*
Virtual Jun. 7-11, 2021
13. *OURFA²M²*
Virtual Dec. 19, 2020
14. *Field of Dreams Conference*
Virtual Nov. 6-8, 2020
15. *Rethinking Number Theory I*
Virtual Oct. 5-18, 2020

16. *Madison Moduli Weekend*
Virtual
Sept. 26-27, 2020
17. *Connecticut Number Theory Conference 2020*
Virtual
Jun. 12-14, 2020
18. *Joint Mathematics Meetings 2020*
Denver, CO
Jan. 15-18, 2020
19. *Latinx Mathematicians Network II*
American Institute of Mathematics, San Jose, CA
Dec. 5-6, 2019
20. *Field of Dreams Conference*
St. Louis, MO
Nov. 15-17, 2019
21. *Modular Forms, Arithmetic, and Women in Mathematics*
Emory University, Atlanta, GA
Nov. 1-3, 2019
22. *MAA Fall North Central Section*
Concordia College, Moorhead, MN
Oct. 18-19, 2019
23. *MAA Mathfest 2019*
Cincinnati, OH
Jul. 29 - Aug. 4, 2019
24. *Underrepresented Students in Topology and Algebra Research Symposium*
Iowa State University, Ames, IA
Apr. 26-28, 2019
25. *MAA Spring North Central Section*
Augsburg University, Minneapolis, MN
Apr. 5-6, 2019
26. *AMS Spring Central and Western Joint Sectional Meeting #1147*
University of Hawaii, Honolulu, HI
Mar. 22-24, 2019
27. *Joint Mathematics Meetings 2019*
Baltimore, MD
Jan. 16-19, 2019
28. *Sixth Abel Conference: A Mathematical Celebration of Robert P. Langlands*
University of Minnesota, Minneapolis, MN
Nov. 14-16, 2018
29. *Blackwell-Tapia Conference*
ICERM - Brown University, Providence, RI
Nov. 9-10, 2018
30. *MAA Fall North Central Section*
Southwest Minnesota State University Marshall, MN
Oct. 12-13, 2018
31. *MAA Mathfest 2018*
Denver, CO
Aug. 1-4, 2018
32. *Mathematics is a Long Conversation: A Celebration of Barry Mazur*
Harvard University, Cambridge, MA
Jun. 4-8, 2018
33. *Arithmetic of Algebraic Curves*
University of Wisconsin-Madison, Madison, WI
Apr. 6-8, 2018
34. *Latinx in the Mathematical Sciences Conference 2018*
UCLA, Los Angeles, CA
Mar. 8-10, 2018
35. *Critical Issues in Mathematics Education 2018*
MSRI, Berkeley, CA
Feb. 21-23, 2018
36. *Joint Mathematics Meetings 2018*
San Diego, CA
Jan. 10-13, 2018
37. *Field of Dreams Conference*
St. Louis, MO
Nov. 3-5, 2017
38. *MAA Indiana Sectional Meeting*
Manchester University, North Manchester, IN
Oct. 7, 2017
39. *MAA Mathfest 2017*

	Chicago, IL	Jul. 26-29, 2017
40.	<i>Blackwell-Tapia Conference</i> NIMBioS, Knoxville, TN	Oct. 28-29, 2016
41.	<i>Kummer Classes and Anabelian Geometry</i> University of Vermont, Burlington, VT	Sept. 10-11, 2016
42.	<i>GANITA Conference in honor of V. Kumar Murty's 60th Birthday</i> The Fields Institute, Toronto, Canada	Jun. 13-16, 2016
43.	<i>Careers in Mathematical Sciences: A Workshop for Underrepresented Groups</i> Institute for Mathematics and its Applications, Minneapolis, MN	Mar. 26-28, 2015
44.	<i>Underrepresented Students in Topology and Algebra Research Symposium</i> UC Berkeley, Berkeley, CA	Apr. 11-13, 2014
45.	<i>Underrepresented Students in Topology and Algebra Research Symposium</i> Purdue University, West Lafayette, IN	Apr. 19-21 2013
46.	<i>Blackwell-Tapia Conference</i> ICERM - Brown University, Providence, RI	Nov. 9-10, 2012
47.	<i>SACNAS National Conference</i> Seattle, WA	Oct. 11-14, 2012
48.	<i>Joint Mathematics Meeting</i> New Orleans, LA	Jan. 6-9, 2011
49.	<i>SACNAS National Conference</i> Anaheim, CA	Sep. 30 - Oct. 3, 2010
50.	<i>Approaches to Group Theory, in honor of Ken Brown's 65th birthday</i> Cornell University, Ithaca, NY	Oct. 9-11, 2010
51.	<i>Joint Mathematics Meeting</i> San Francisco, CA	Jan. 13-16 2010
52.	<i>SACNAS National Conference</i> Dallas, TX	Oct. 15-18, 2009
CITIZENSHIP AND LANGUAGES	Born on October 29, 1988 in Miami, Florida, United States Native Proficiency in English and Spanish; Reading Proficiency in French Software Proficiency in L ^A T _E X, Mathematica, Python, SageMath	
AFFILIATIONS	American Mathematical Society (AMS) Association for Women in Mathematics (AWM) Math Alliance, Mathematical Association of America (MAA) National Association of Mathematicians (NAM) Society for the Advancement of Chicanos and Native Americans in the Sciences (SACNAS)	