ANDRÉS R. VINDAS MELÉNDEZ

avindasmelendez@g.hmc.edu \diamond math.hmc.edu/arvm

SCHOLARLY INTERESTS

- Algebraic, enumerative, and geometric combinatorics.
- Scholarship of teaching and learning.
- Quantitative justice.

EDUCATION

Doctor of Philosophy in Mathematics (PhD) , University of Kentucky Dissertation: <i>Combinatorial Invariants of Rational Polytopes</i> Advisor: Benjamin Braun	August 2021
Graduate Certificate, University of Kentucky Specialization: Latin American, Caribbean, and Latinx Studies	December 2019
Master of Arts in Mathematics (MA), San Francisco State University Thesis: Two Problems on Lattice Point Enumeration of Rational Polytopes Advisors: Federico Ardila & Matthias Beck	August 2017
Bachelor of Arts in Mathematics (BA) , University of California, Berkeley Minors: Philosophy & Chicanx and Latinx Studies	May 2015

APPOINTMENTS			
Harvey Mudd College Position: Tenure-track Assistant Professor	July 2024 - Present		
University of California, Berkeley Position: National Science Foundation Postdoctoral Scholar & Lecturer	August 2021 - May 2024		
Simons Laufer Mathematical Sciences Institute (SLMath) Program: Algorithms, Fairness, and Equity Position: Research Member	Fall 2023		
Institute for Comp. & Exp. Research Mathematics (ICERM) Program: Data Science & Social Justice: Networks, Policy, & Education Position: Research Fellow	Summers 2022 & 2023		
Mathematical Sciences Research Institute (MSRI) Position: Postdoctoral Fellow Mentor: Hélène Barcelo	August 2021 - May 2022		

FELLOWSHIPS

- 2024-2025 Project NExT Fellowship, Mathematical Association of America
- 2023-2025 MGB-SIAM Early Career Fellowship, Society for Industrial and Applied Mathematics
- 2021-2024 Postdoctoral Research Fellowship, National Science Foundation
- 2020-2021 Bridge to Doctorate Fellowship, National Science Foundation
- 2017-2020 Graduate Research Fellowship, National Science Foundation

Updated: 10-June-2025

Assistant Professor, Harvey Mudd College	
\diamond Math 19: Single and Multivariable Calculus	Falls 2024, 2025
\diamond Math 104: Graph Theory	Spring 2025
\Diamond Math 174: Representation Theory	Spring 2025
Lecturer, University of California, Berkeley	
\diamond Math 130: Groups and Geometries (Undergraduate)	Spring 2024
\diamond Math 172: Combinatorics (Undergraduate)	Fall 2022
\diamond Math 249: Algebraic Combinatorics (Graduate)	Spring 2023
\diamondsuit Math 274: Algebraic Combinatorics on Convex Polytopes (Graduate)	Fall 2023
Instructor, DaVinci Camp Summer Institute	
♦ Graph Theory (UC Berkeley & Caltech)	Summers 2017 & 2021
\diamond Polyhedral Geometry (Caltech)	Summer 2018
\Diamond Methods in Arithmetic & Algebra (UC Berkeley)	Summers 2014 - 2016
Graduate Teaching Associate, San Francisco State University	
♦ Math 60: Entry Level Math I, Instructor of Record	Fall 2015, Summer 2016,
	Fall 2016, Summer 2017
\Diamond Math 70: Entry Level Math II, Instructor of Record	Spring 2017
\diamond Math 199: Precalculus, Instructor of Record	Spring 2016, Fall 2016,
	Spring 2017
\Diamond Math 226: Calculus I (Lab), <i>Teaching Assistant</i> for Anne Krause	Fall 2015
\Diamond Math 301: Exploration and Proof, $Grader$ for Federico Ardila	Fall 2015
Mathematics Instructor, San Francisco Math Circle	
\Diamond June Jordan School for Equity, Grades: 9 - 12	Spring 2017
\Diamond Lowell High School, Grades: 6 - 9	Fall 2016
\Diamond Clarendon Elementary School, Grades: 2 & 3	Spring 2016

TEACHING

MENTORING AND ADVISING

Harvey Mudd College: Undergraduate Research and/or Honor's Thesis

- ♦ Cameron Ake, Undergraduate Research, Summer 2025
- ◊ Tito Augusto Cuchilla, Undergraduate Research, Summer 2025
- ♦ Spencer Lewis, Undergraduate Research, Summer 2025
- ♦ Amanda Louie, Undergraduate Research, Summer 2025
- ♦ Cole Plepel, Undergraduate Research, Summer 2025
- \diamond Louis Ye, Undergraduate Research, Summer 2025

National Alliance for Doctoral Studies in the Mathematical Sciences

- ♦ Tito Augusto Cuchilla (Harvey Mudd), Fall 2024
- ♦ Kimberly Lopez (Harvey Mudd), Fall 2024
- $\Diamond\,$ Jennifer Reyes (UC Berkeley), Fall 2023
- \diamond Tisha Asuncion (UC Berkeley), Fall 2023
- ♦ Mateo Morales (UC Berkeley), Fall 2022

UC Berkeley: Undergraduate Research and/or Honor's Thesis

- ♦ Alex Bouquet, Undergraduate Research, 2023
- ◊ Benjamin Eisley, Undergraduate Research, 2023

- ◊ Ishaan Patkar, Undergraduate Research, 2023
- \diamondsuit Zhi Wang, Undergraduate Research, 2023
- ◊ David Zhang, Undergraduate Research, 2023
- ◊ Alex Sánchez, Summer Undergraduate Research Fellow & Honor's Thesis, 2023 & 2024
- \diamond Eon Lee, Undergraduate Research, 2023
- ◊ Siddarth Menon, Undergraduate Research, 2023
- ◊ Carson Mitchell, Undergraduate Research & Honor's Thesis, 2023
- ♦ Felicia Lim, *Honor's Thesis*, 2022
- ♦ Emily Muller-Foster, *Honor's Thesis*, 2022
- \diamondsuit Aren Martinian, Undergraduate Research, 2022

SACNAS Mentor Activation for Student (MAS) Program

 \diamond Malike Conteh (Pomona College), Fall 2022

2020 Advancing Inquiry & Inclusion in Mathematics Undergraduate Program

- ◊ The parking function polytope: Alex Christensen (University of Arizona), Zakiya Jones (Pomona College), and Andrés Ramos Rodríguez (University of Puerto Rico)
- ◊ Privileged and k-zone parking functions: Saisha Goboodun (Williams College), Sasha Ruth Sepulveda (University of Arizona), and Jingyi Wu (Mt. Holyoke College)
- ◊ k-Naples parking functions and bijections: João Pedro Carvalho (Haverford College) and Nico Trepiny (Haverford College)
- ◊ Prime and Invariant Parking Sequences: Veronica Berger (Williams College), Ruozhen Gong (Mt. Holyoke College), and Melissa Gutiérrez González (Occidental College)
- ◊ Posets and parking functions: Shreya Ahirwar (Mt. Holyoke College), Parikshita Gya (Mt. Holyoke College), Nguyen "Emily" Pham (Mt. Holyoke College), and Aurora Vo (Mt. Holyoke College)
- Counting k-Naples parking functions through permutations and the k-Naples statistic: Zakiya Jones (Pomona College), Christo Keller (University of Massachusets at Amherst), Andrés Ramos Rodríguez (University of Puerto Rico), and Eunice Sukarto (UC Berkeley)

MATHEMATICS ARTICLES AND THESES

- Anastasia Chavez, Galen Dorpalen-Barry, Luis Ferroni, Fu Liu, Felipe Rincón, and Andrés R. Vindas-Meléndez, The Ehrhart polynomial of a matroid specializes to the beta invariant, submitted (arXiv:2504.15518).
- 24. Eon Lee, Andrés R. Vindas-Meléndez, and Zhi Wang, Generalized snake posets, order polytopes, and lattice-point enumeration, submitted (arXiv:2411.18695).
- Juan F. Pulido, José L. Ramírez, and Andrés R. Vindas-Meléndez, Generating trees and fibonacci polyominoes, Fibonacci Quart. (2025), accepted – to appear.
- 22. Matthias Beck, Mitsuki Hanada, Max Hlavacek, John Lentfer, Andrés R. Vindas-Meléndez, and Katie Waddle, *Polyhedral geometry of refined q,t-Catalan numbers*, J. Comb. (2024), accepted to appear.
- 21. Benjamin Eisley, Koji Matsushita, and Andrés R. Vindas-Meléndez, Matching polytopes, Gorensteinness, and the integer decomposition property, Graphs Combin. (2025), published online.
- 20. Esme Bajo, Matthias Beck, and Andrés R. Vindas-Meléndez, *q-Chromatic polynomials*, submitted (arXiv:2403.19573).
- Margaret M. Bayer, Steffen Borgwardt, Teressa Chambers, Spencer Daugherty, Aleyah Dawkins, Danai Deligeorgaki, Hsin-Chieh Liao, Tyrrell McAllister, Angela Morrison, and Garrett Nelson and Andrés R. Vindas-Meléndez, Combinatorics of generalized parking-function polytopes, submitted (arXiv:2403.07387).

- Alex Bouquet and Andrés R. Vindas-Meléndez, Combinatorial results on barcode lattices, Order 42 (2025), 193–209.
- 17. Danai Deligeorgaki, Daniel McGinnis, and Andrés R. Vindas-Meléndez, Ehrhart bounds for panhandle and paving matroids through enumeration of chain forests, submitted (arXiv:2311.01640).
- Esme Bajo, Benjamin Braun, Giulia Codenotti, Johannes Hofscheier, and Andrés R. Vindas-Meléndez, Local h^{*}-polynomials for one-row Hermite normal form simplices, Beitr. Algebra Geom. (2025), published online.
- 15. Eon Lee, Carson Mitchell, and Andrés R. Vindas-Meléndez, *Stack-sorting simplices: geometry and lattice-point enumeration*, Combinatorics, graph theory and computing, Springer Proc. Math. Stat., Springer, Cham, 2025, pp. accepted to appear.
- Miklós Bóna, Stoyan Dimitrov, Gilbert Labelle, Yifei Li, Joseph Pappe, Andrés R. Vindas-Meléndez, and Yan Zhuang, A combinatorial proof of a symmetry for a refinement of the Narayana numbers, Electron. J. Combin. 32 (2025), no. 2, Paper No. 2.46.
- Mitsuki Hanada, John Lentfer, and Andrés R. Vindas-Meléndez, Generalized parking function polytopes, Ann. Comb. 28 (2024), no. 2, 575–613
- 12. Aren Martinian and Andrés R. Vindas-Meléndez, On the critical group of hinge graphs, Rocky Mountain J. Math. (2023), accepted to appear.
- Derek Hanely, Jeremy L. Martin, Daniel McGinnis, Dane Miyata, George D. Nasr, Andrés R. Vindas-Meléndez, and Mei Yin, *Ehrhart Theory of Paving and Panhandle Matroids*, Adv. Geom. 23 (2023), no. 4, 501–526.
- João Pedro Carvalho, Pamela E. Harris, Gordon Rojas Kirby, Nico Tripeny, and Andrés R. Vindas-Meléndez, Enumerating k-Naples Parking Functions Through Catalan Objects, Integers 24 (2024), Paper No. A44, 18.
- Matias von Bell, Benjamin Braun, Derek Hanely, Khrystyna Serhiyenko, Julianne Vega, Andrés R. Vindas-Meléndez, and Martha Yip, *Triangulations, order polytopes, and generalized snake posets*, Comb. Theory 2 (2022), no. 3, Paper No. 10, 34.
- Shreya Ahirwar, Susanna Fishel, Parikshita Gya, Pamela Harris, Nguyen Pham, Andrés R. Vindas-Meléndez, and Dan Khanh Vo, *Maximal Chains in Bond Lattices*, Electron. J. Combin. 29 (2022), no. 3, Paper No. 3.11.
- Matthias Beck, Benjamin Braun, and Andrés R. Vindas-Meléndez, Decompositions of Ehrhart h^{*}-polynomials for rational polytopes, Discrete Comput. Geom. 68 (2022), no. 1, 50–71.
- Laura Colmenarejo, Pamela E. Harris, Zakiya Jones, Christo Keller, Andrés Ramos Rodríguez, Eunice Sukarto, and Andrés R. Vindas-Meléndez, Counting k-Naples parking functions through permutations and the k-Naples area statistic, Enumer. Comb. Appl. 1 (2021), no. 2, Paper No. S2R11, 16.
- Federico Ardila, Mariel Supina, and Andrés R. Vindas-Meléndez, The equivariant Ehrhart theory of the permutahedron, Proc. Amer. Math. Soc. 148 (2020), no. 12, 5091–5107.
- 4. Andrés R. Vindas Meléndez, Combinatorial invariants of rational polytopes, Ph.D. thesis, University of Kentucky, 2021.
- Federico Ardila, Anna Schindler, and Andrés R. Vindas-Meléndez, The equivariant volumes of the permutahedron, Discrete Comput. Geom. 65 (2021), no. 3, 618–635.
- Benjamin Braun and Andrés R. Vindas-Meléndez, A brief survey on lattice zonotopes, Algebraic and geometric combinatorics on lattice polytopes, World Sci. Publ., Hackensack, NJ, 2019, pp. 101–116.
- 1. Andrés R. Vindas Meléndez, Two problems on lattice point enumeration of rational polytopes, Master's thesis, San Francisco State University, 2017.

OEIS ENTRIES

Online Encyclopedia of Integer Sequences entries resulting from, associated to, or referencing my work:

1. A004170

- 2. A004767
- 3. A008288
- 4. A036968
- 5. A174586
- 6. A378704
- 7. A378706
- 8. A378707
- 9. A378716
- 10. A342270

BOOKS EDITED

 Pamela E. Harris, Alicia Prieto-Langarica, Vanessa Rivera Quiñones, Luis Sordo Vieira, Rosaura Uscanga, and Andrés R. Vindas Meléndez (eds.), *Testimonios — stories of Latinx and Hispanic mathematicians*, Classroom Resource Materials, vol. 67, American Mathematical Society, MAA Press, Providence, RI, ©2021.

PUBLISHED EXTENDED ABSTRACTS

- Matias von Bell, Benjamin Braun, Derek Hanely, Khrystyna Serhiyenko, Julianne Vega, Andrés R. Vindas-Meléndez, and Martha Yip, *Triangulations, order polytopes, and generalized snake posets*, Sém. Lothar. Combin. 86B (2022), Art. 5, 12.
- Matthias Beck, Benjamin Braun, and Andrés R. Vindas-Meléndez, Decompositions of Ehrhart h^{*}polynomials for rational polytopes, Sém. Lothar. Combin. 85B (2021), Art. 38, 12.
- Federico Ardila, Mariel Supina, and Andrés R. Vindas-Meléndez, The equivariant Ehrhart theory of the permutahedron, Sém. Lothar. Combin. 84B (2020), Art. 83, 12.
- Federico Ardila, Anna Schindler, and Andrés R. Vindas-Meléndez, The equivariant volumes of the permutahedron, Sém. Lothar. Combin. 82B (2019), Art. 16, 12.

WRITING ON MATHEMATICS, EDUCATION, CULTURE, AND SOCIETY

- Ron Buckmire, Carrie Diaz Eaton, Joseph E. Hibdon Jr., Jakini Kauba, Drew Lewis, Omayra Ortega, José
 L. Pabón Rachel Roca, and Andrés R. Vindas-Meléndez, *Quantifying and documenting gender-based*inequalities in the mathematical sciences in the United States, Advances in Data Science, Assoc. Women
 Math. Ser., Springer, Cham, ©2025, p. accepted
- Ron Buckmire, Joseph E. Hibdon Jr., Drew Lewis, Omayra Ortega, José L. Pabón, Rachel Roca, and Andrés R. Vindas-Meléndez, The mathematics of mathematics: Using mathematics and data science to analyze the mathematical sciences community and enhance social justice, La Matematica (2025), published online.
- Quindel Jones, Andrés R. Vindas Meléndez, Ariana Mendible, Manuchehr Aminian, Heather Zinn Brooks, Nathan Alexander, Carrie Diaz Eaton, and Phillip Chodrow, *Data science and social justice in* the mathematics community, Notices Amer. Math. Soc. 70 (2023), no. 9, 1479–1489

- Ron Buckmire, Carrie Diaz Eaton, Joseph E. Hibdon, Jr., Katherine M. Kinnaird, Drew Lewis, Jessica Libertini, Omayra Ortega, Rachel Roca, and Andrés R. Vindas Meléndez, On definitions of "mathematician", J. Humanist. Math. 13 (2023), no. 2, 8–38.
- 5. Rachel Petrik, Julianne Vega, and Andrés Vindas-Meléndez, A reflection on growth mindset and meritocracy, Journal of Humanistic Mathematics 12 (2022), no. 1, 408–421.
- 6. Andrés R. Vindas Meléndez, *Mathematics (combinatorics) the Colombian way: ECCO 2018*, AMS Blog: e-Mentoring Network in the Mathematical Sciences, June 2018.

WRITING CONTRIBUTIONS TO AMS AND MAA BLOGS

- 1. A Reflection on Giving ONLINE Talks (with L. Colmenarejo), Graduate Student Blog by and for math graduate students. AMS Blogs. January 6, 2021.
- Establishing Self-Care Practices While Pursuing a Math Grad Degree (with A. Alonso, J. Camero, A. Castillo, A. Diaz-Lopez, P.E. Harris, V. Rivera Quiñones, L. Sordo Vieira, F. Ulysse, V. Uribe, S. Wilson, A. Winger, and M. Young), MAA Math Values Blog, August 7, 2020.
- Staying the path: Motivation through graduate school (with A. Alonso, J. Camero, A. Castillo, A. Diaz-Lopez, P.E. Harris, V. Rivera Quiñones, L. Sordo Vieira, F. Ulysse, V. Uribe, S. Wilson, A. Winger, and M. Young), e-Mentoring Network in the Mathematical Sciences connecting students and mentors. AMS Blogs. July 31, 2020.
- 4. A Reflection on Giving Talks, Graduate Student Blog by and for math graduate students. AMS Blogs. February 29, 2020.
- 5. *Mathematics at 2019 SACNAS*, Graduate Student Blog by and for math graduate students. AMS Blogs. November 12, 2019.
- 6. Fellowships, Grants, and Awards: Advice from Award Recipients (with contributors), Graduate Student Blog by and for math graduate students. AMS Blogs. September 18, 2019.
- 7. Mathematics (Combinatorics) the Colombian Way: ECCO 2018, e-Mentoring Network in the Mathematical Sciences - connecting students and mentors. AMS Blogs. June 22, 2018.

TALKS AND PRESENTATIONS

PLENARY & COLLOQUIUM TALKS

INTERNATIONAL			
Date Event Institution Location			
June 2023	Coloquio de Matemática	Universidad de Costa Rica	San José, Costa Rica
June 2021	Coloquio de Matemática	Universidad de Costa Rica	San José, Costa Rica

NATIONAL			
Date	Event	Institution	Location
March 2025	Math & CS Social Justice Col- loquium	Davidson College	Davidson, NC
September 2024	CCMS Colloquium	Claremont Center for the Mathe- matical Sciences	Claremont, CA
February 2024	Math Monday Lecture	UC Berkeley	Berkeley, CA
April 2023	Raising Voices in Mathematics Lecture	San Francisco State University	San Francisco, CA
March 2023	GEMS of Combinatorics	American Institute of Mathemat- ics	San José, CA
March 2023	Math Colloquium	University of Illinois at Springfield	Springfield, IL
February 2023	Math Monday Lecture	UC Berkeley	Berkeley, CA
February 2023	Math Colloquium	Sonoma State University	Ronhert Park, CA
January 2023	Math Colloquium	Harvey Mudd College	Claremont, CA

December 2022	Math Colloquium	Bryn Mawr College	Bryn Mawr, PA
May 2022	Nor. Cal. Undergrad Math Conference	CSU Stanislaus	Turlock, CA
May 2022	Math/CS Colloquium	Santa Clara University	Santa Clara, CA
April 2022	Math Colloquium	San José State University	San José, CA
February 2022	Math Colloquium	University of San Francisco	San Francisco, CA
January 2022	Math Colloquium	UC Santa Cruz	Santa Cruz, CA
March 2021	Science-in-Action	College of San Mateo	San Mateo, CA
November 2020	Math Club Colloquium	San Francisco State University	San Francisco, CA
September 2020	Math Colloquium	CSU East Bay	Hayward, CA
April 2020	Talking Math W/ Your Friends Colloquium	TMWF	Virtual
March 2018	Graduate Student Colloquium	University of Kentucky	Lexington, KY
October 2017	Graduate Student Colloquium	University of Kentucky	Lexington, KY

INVITED RESEARCH TALKS

INTERNATIONAL			
Date	Event	Institution	Location
July 2024	Coloquio Latinoamericano de Álgebra	Pontificia Universidad Católica	Santiago, Chile
February 2023	Combinatorial & Algebraic Aspects on Lattice Polytopes	Kwansei Gakuin University	Hyogo, Japan
July 2022	Formal Power Series & Algebraic Combinatorics	Indian Institute of Science	Bangalore, India
May 2022	Frankfurt-Bochum Com- biantorics Seminar	Ruhr-Universität Bochum	Bochum, Germany
May 2022	Seminario Sabanero de Combi- natoria	Pontificia Universidad Javeriana	Bogotá, Colombia
February 2021	The Applied Algebra Seminar	York University	Toronto, Canada
February 2020	Discrete Geometry Seminar	Freie Universität Berlin	Berlin, Germany
January 2020	Discrete & Convex Geometry Seminar	Technischen Universität Berlin	Berlin, Germany
December 2019	Einstein Workshop on Poly- topes & Algebraic Geometry	Freie Universität Berlin	Berlin, Germany
July 2018	Summer Workshop on Lattice Polytopes	Osaka University	Osaka, Japan

	NATIONAL		
Date	Event	Institution	Location
October 2025	Session: Hyperplanes & Poly- topes	AMS Sectional	New Orleans, LA
January 2025	Session: Geometric and Topo- logical Combinatorics	JMM	Seattle, WA
April 2024	Combinatorics Seminar	UC Berkeley	Berkeley, CA
April 2024	Algebra Seminar	Georgia Tech	Atlanta, GA
March 2024	55th Southeastern Inter- national Conference on Combinatorics, Graph Theory & Computing	Florida Atlantic University	Boca Raton, FL
January 2024	Session: Topics in Combina- torics & Graph Theory	JMM	San Francisco, CA
January 2024	Session: Research Presenta- tions by Math Alliance Scholar Doctorates	JMM	San Francisco, CA
November 2023	Algebra, Geometry, & Com- binatorics Afternoon Sympo- sium	San Francisco State University	San Francico, CA
November 2023	Discrete CATS Seminar	University of Kentucky	Lexington, KY
October 2023	Combinatorics & Graph The- ory Seminar	Michigan State University	East Lansing, Michigan
September 2023	Center for Science and Math Education Speaker Series	San Francisco State University	San Francisco, CA
April 2023	Session: Geometric & Topo- logical Methods in Combina- torics	AMS Sectional	Cincinnati, OH

January 2023	MSRI Session: Geometric & Topological Combinatorics	JMM	Boston, MA
September 2022	Session: Algebraic, Geometric, & Topological Combinatorics	AMS Sectional	El Paso, TX
July 2022	Algebraic & Combinatorics Session	LatMath at IPAM/UCLA	Los Ángeles, CA
June 2022	Summer@ICERM Colloquium	ICERM at Brown University	Providence, RI
April 2022	Session: Geometric & Topo- logical Combinatorics	JMM	Virtual
March 2022	Algebra, Geometry, & Combi- natorics Seminar	San Francisco State University	San Francisco, CA
March 2022	Discrete Mathematics Seminar	Arizona State University	Tempe, AZ
February 2022	Algebra & Discrete Math Sem- inar	UC Davis	Davis, CA
October 2021	Session: New Trends in Com- binatorics	AMS Sectional	Virtual
September 2021	Discrete Math Seminar	Kennesaw State University	Kennesaw, GA
May 2021	Discrete Math Seminar	UMass Amherst	Amherst, MA
April 2021	Underrepresented Students in Topology & Algebra	USTARS	Virtual
April 2021	Graduate Student Combina- torics Conference	GSCC	Virtual
April 2021	Western Algebraic Geometry Symposium	WAGS	Virtual
April 2021	Math Club Seminar	University of Virginia	Charlottesville, VA
April 2021	Combinatorics Seminar	Dartmouth College	Hanover, NH
February 2021	Combinatorics & Geometry Seminar	University of Washington	Seattle, WA
January 2021	Session Presentations by Scholars in the Math Alliance	JMM	Virtual
November 2020	Algebra & Representation Theory Seminar	University of Oklahoma	Norman, OK
November 2020	Combinatorics Seminar	Washington University in St. Louis	St. Louis, MO
October 2020	SACNAS National Conference	SACNAS	Virtual
October 2020	Math SWAGGER Colloquium	Math SWAGGER	Virtual
October 2020	Discrete Mathematics Seminar	Iowa State University	Ames, IA
September 2020	Combinatorics Seminar	UC Berkeley	Berkeley, CA
September 2020	Session: Algebraic, Geometric, & Topological Combinatorics	AMS Sectional	Virtual
August 2020	Discrete CATS Seminar	University of Kentucky	Lexington, KY
November 2019	SACNAS National Conference	SACNAS	Honolulu, HI
September 2019	Session: Algebraic & Geomet- ric Combinatorics	AMS Sectional	Madison, WI
May 2019	Hypatian Seminar	UC Santa Barbara	Santa Barbara, CA
April 2019	Class of 1960 Speaker	Williams College	Williamstown, MA
April 2019	Session: Combinatorics, Com- mutative Algebra & Polyhe- dral Geometry	AMS Sectional	Hartford, CT
April 2019	Graduate Student Combina- torics Conference	GSCC	Philadelphia, PA
February 2018	Discrete CATS Seminar	University of Kentucky	Lexington, KY
October 2017	SACNAS National Conference	SACNAS	Salt Lake City, UT
April 2017	Underrepresented Students in Topolgy & Algebra	USTARS	Amherst, MA

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	INTERNATIONAL			
[Date	Event	Institution	Location
	July 2019	Formal Power Series & Algebraic Combinatorics	University of Ljubljana	Ljubljana, Slovenia
	October 2018	Einstein Workshop on Geo- metric & Topological Combi- natorics	Freie Universität Berlin	Berlin, Germany
	June 2018	6th Encuentro Colombiano de Combinatoria	Universidad del Norte	Barranquilla, Colombia

RESEARCH POSTER PRESENTATIONS

NATIONAL			
Date	Event	Institution	Location
April 2021	KY-WV LSAMP 13th Annual Research Symposium	University of Kentucky	Lexington, KY
March 2018	LatMath Student Poster Ses- sion	LatMath at IPAM/UCLA	Los Ángeles, CA
May 2017	College of Science & Engineer- ing Research Showcase	San Francisco State University	San Francisco, CA
February 2014	NSF CAMP Symposium	UC Irvine	Irvine, CA
October 2013	SACNAS National Conference	SACNAS	San Antonio, TX
August 2013	MSRIP Summer Research Symposium	UC Riverside	Riverside, CA
February 2013	NSF CAMP Symposium	UC Irvine	Irvine, CA
November 2012	AISES National Research Conference	AISES	Anchorage, AK
October 2012	SACNAS National Conference	SACNAS	Seattle, WA
August 2012	Cal NERDS Summer Research Symposium	UC Berkeley	Berkeley, CA

RESEARCH SCHOOL AND WORKSHOP PARTICIPATION

- Graduate Research Workshop in Combinatorics, Iowa State University, June 2025
- Graduate Research Workshop in Combinatorics, University of Wyoming, July 2023
- Educating at the Intersection of Data Science and Social Justice, ICERM, July 2023
- From Impact Factor to Influence Factor: Data Science and Policy for Social Justice, ICERM, June 2023
- Gems of Combinatorics, AIM, March 2023
- Interdisciplinary Network Analysis Methods for Analyzing Social Systems, ICERM, June 2022
- Mathematics Research Community: Trees in Many Contexts AMS, June 2022
- Ehrhart polynomials: inequalities and extremal constructions, AIM, May 2022
- Graduate Research Workshop in Combinatorics, Online, June 2021
- Latinx Mathematicians Research Community, AIM, Online, June 2021
- Einstein Workshop: Polytopes & Algebraic Geometry, Freie Universität Berlin (Germany), December 2019
- Summer School on Geometric and Algebraic Combinatorics, Sorbonne Université (France), June 2019
- Einstein Workshop: Algebraic Combinatorics, Freie Universität Berlin (Germany), November 2018
- Einstein Workshop: Geometric & Topological Combinatorics, Freie Universität Berlin (Germany), October 2018
- Summer Workshop on Lattice Polytopes & Research School, Osaka University (Japan), July-August 2018
- 6th Encuentro Colombiano de Combinatoria CIMPA Research School, Universidad del Norte (Colombia), June 2018
- Positivity Questions in Geometric Combinatorics, Summer Graduate Research School, MSRI, July 2017
- 5th Encuentro Colombiano de Combinatoria, Universidad de Antioquia and Universidad Nacional sede Medellín (Colombia), June 2016

FUNDING AND GRANTS

- 2023-2025 Structured Quartet Research Ensemble, American Institute of Mathematics
 Co-PIs: Anastasia Chavez, Galen Dorpalen-Barry, Luis Ferroni, Fu Liu, Felipe Rincón, Andrés R. Vindas Meléndez
- 2020-2021 Tensor-SUMMA Grant, Mathematical Association of America
 - Project: Lathisms: Latinxs and Hispanics in the Mathematical Sciences
 - PI: Pamela E. Harris, Co-PIs: Alicia Prieto-Langarica, Luis Sordo Vieira, Vanessa Rivera-Quiñones, Rosaura Uscanga, Andrés R. Vindas Meléndez
- 2019-2020 Tensor-SUMMA Grant, Mathematical Association of America
 - Project: Lathisms: Latinxs and Hispanics in the Mathematical Sciences
 - PI: Pamela E. Harris, Co-PIs: Alicia Prieto-Langarica, Gabriel Sosa,
 Vanessa Rivera-Quiñones, Rosaura Uscanga, Andrés R. Vindas Meléndez
- 2019-2020 *CDIP Mini-Grant*, California State University System — Project: Professional Development with a Combinatorial Flavor

AWARDS AND HONORS

- 2024 Honoree, The Atlas of Inspiring Hispanic/Latinx Scientists, Fred Hutchinson Cancer Center
- 2022 Pride Month Honoree, Spectra: The Association for LGBT Mathematicians
- 2021 Outstanding Research Award, UK Department of Mathematics
- 2020 Graduate Oral Presentation Award, SACNAS
- 2020 Latinxs & Hispanics in the Mathematical Sciences Honoree, Lathisms
- 2020 SACNAS National Conference Registration Scholarship
- 2020 Travel Award, UK Graduate Student Congress
- 2020 Endowed Doctoral Fellowship Award, UK Association of Emeriti Faculty
- 2020 CDIP Travel Award, Cal State University System
- 2019-2020 Chancellor's Doctoral Incentive Program Award, Cal State University System
- 2019 Professional Development Grant, Center for Graduate and Professional Diversity Initiatives, UK
- 2018 Professional Development Grant, Center for Graduate and Professional Diversity Initiatives, UK
- 2017 SACNAS National Conference Travel Scholarship
- 2017-2018 Hispanic Scholarship Fund (HSF) Scholarship
- 2016-2017 Sally Casanova Scholarship/California Pre-doctoral Fellowship, Cal State University System
- 2016-2017 Graduate Equity Fellowship, SFSU
- 2016-2017 Milowski Scholarship, Department of Mathematics, SFSU
- 2016-2017 University Scholarship, SFSU
- 2015-2016 Graduate Equity Fellowship, SFSU
- 2015-2016 Toyota/Hispanic Scholarship Fund (HSF) Scholarship
- 2015-2016 Frederick Walters Scholarship, Department of Mathematics, SFSU
- 2014 Honorable Mention for Poster Presentation, NSF CAMP Symposium
- 2013-2014 Associated Students of University of California Textbook Scholarship
- 2012-2013 UCB Raza Recruitment and Retention Center's La Lucha Sigue Scholarship
- 2013 SACNAS National Conference Travel Scholarship
- 2012 SACNAS National Conference Travel Scholarship

PROFESSIONAL MEMBERSHIP

- American Association for the Advancement of Science (AAAS), Member (since 2025)
- National Association of Mathematicians (NAM), Lifetime Member (since 2024)
- Society for Industrial and Applied Mathematics (SIAM), National Member (since 2023)

- Association for Women in Mathematics (AWM), National Member (since 2018)
- Mathematical Association of America (MAA), National Member (since 2017)
- American Mathematical Society (AMS), National Member (since 2015)
- Sigma Xi: The Scientific Research Society, Associate Member (since 2012)
- American Indian Science and Engineering Society (AISES), Chapter Secretary 2011-2012, Chapter Vice-President 2012-2013, National Member (since 2011)
- Society for Advancement of Chicanos and Native Americans in Science (SACNAS), UK Chapter Co-Founder (2019), National Member (since 2011)

PROFESSIONAL ACTIVITIES, LEADERSHIP, AND SERVICE

- AWM-MAA Etta Zuber Falconer Lecture Selection Committee, Member (2025-2028)
- American Association for the Advancement of Science (AAAS) Mathematics Section, *Early-Career Representative* (2025-2026)
- American Mathematical Society JMM Program Committee, Member at Large (2024-2025)
- National Alliance for Doctoral Studies in the Mathematical Sciences (Math Alliance), *Mentor* (2022-Present), *Alliance Scholar* (2016-2021)
- Julia Robinson Math Festival, Advisory Committee Member (2021-Present)
- Advancing Inquiry/Inclusion in Mathematics Undergraduate Program, Research Faculty (Summer 2020)
- American Mathematical Society Graduate Student Blog, Staff Writer (2019-2021)
- Lathisms: Latinxs & Hispanics in the Math. Sciences, Junior Associate (2019-2021)
- Latino Student Union at UK, Graduate Advisor (2019-2021)
- National Science Foundation Kentucky-West Virginia Louis Stokes Alliance for Minority Participation, Graduate student mentor for UK alliance scholars (2019-2021)
- Hispanic Scholarship Fund (HSF), Scholar (2015-2021)
- National Science Foundation Louis Stokes-California Alliance for Minority Participation (NSF CAMP), Scholar (2011-2015)
- Cal NERDS Program: New Experiences for Research & Diversity in Science, Scholar (2011-2015)
- Hispanic Engineers & Scientists (HES), General Member (2012-2015)
- Mathematics Undergraduate Student Association at UC Berkeley, General Member (2012-2015)
- Dean of Students Advisory Council at UCB, Liason for NERDS (2012-2013)

REFEREEING AND REVIEWING

- Boletín de la Sociedad Matemática Mexicana
- Discrete Mathematics, Algorithms, and Applications
- The College Mathematics Journal
- Electronic Research Archive
- Transactions of the American Mathematical Society
- Journal of Integer Sequences
- Proceedings of the Association for Women in Mathematics (AWM): Advances in Data Science
- European Journal of Combinatorics
- Discrete Mathematics
- Discrete Mathematics & Theoretical Computer Science
- Experimental Mathematics
- American Mathematical Monthly
- Annals of Combinatorics
- Formal Power Series & Algebraic Combinatorics: 2023, 2024, 2025
- Banff International Research Station Proposals
- Discrete & Computational Geometry
- Forum of Mathematics, Sigma
- Journal of Combinatorics

- Regeneron Science Talent Search (Society for Science)
- Electronic Journal of Combinatorics
- International Mathematics Research Notices
- Rocky Mountain Journal of Mathematics
- Proceedings of the Encuentro Colombiano de Combinatoria (ECCO): Alg. and Geom. Combinatorics
- Journal of Combinatorial Theory, Series A
- Association for Women in Mathematics 50th Anniversary Volume
- Lecturas Matemáticas (Sociedad Colombiana de Matemáticas)
- Proceedings of the 2018 Summer Workshop on Lattice Polytopes at Osaka University
- MathSciNet Mathematical Reviews
- zbMATH

CONFERENCE, SEMINAR, AND WORKSHOP ORGANIZATION

- March 2025 Latinx in the Mathematical Sciences Conference at IPAM/UCLA; Combinatorics Session co-organizer with L. Escobar
- February 2025 Computational Interactions between Algebra, Combinatorics, and Discrete Geometry at IPAM/UCLA; co-organizer with M. Beck, D. Erman, and S. Kara
- October 2024 Fall Western AMS Sectional, Special Session on GEMS of Combinatorics at UC Riverside; co-organizer with A. Dawkins (CMU) and K. Waddle (U. Michigan).
- July 2024 Workshop Celebrating Diversity Minisymposium: Quantitative Justice through Applied Data Science at SIAM Annual Meeting; organizer
- April 2024 Practicum for Undergrad Mathematicians in Combinatorics at IPAM/UCLA; co-organizer with A. Chavez.
- Fall 2022 Spring 2023 Combinatorics Seminar at UC Berkeley; co-organizer with C. Ryba, M. Hanada, & J. Lentfer.
- April 2022 Joint Math Meetings, AMS Special Session on Latinxs in Combinatorics; co-organizer with P.E. Harris (Williams College) & L. Escobar (Washington University in St. Louis)
- Fall 2021 Spring 2022 Combinatorics Seminar at UC Berkeley; co-organizer with S. Corteel & C. Ryba
 October 2021 Testimonios: Stories of Latinx & Hispanic Mathematicians; co-organizer with P.E. Harris (Williams College)
- July 2021 Enhancing Equity Initiatives: Climbing out of Traps & Tropes to make Transformative Change, Center for Minorities in the Mathematical Sciences; co-organizer with J. Vega (Kennesaw State)
- June 2021 Queer and Trans Mathematicians in Combinatorics Conference; Program Committee
- Fall 2020 Spring 2021 UK Discrete CATS Seminar; co-organizer with K. Serhiyenko
- Fall 2020 Spring 2021 Graduate Online Combinatorics Colloquium; co-organizer with G. Dorpalen-Barry (University of Minnesota) & A. McDonough (Brown University)
- November 2019 Latinxs Count: A Combinatorics (Math) Session, 2019 SACNAS Conference; co-chair with P.E. Harris (Williams College)
- March 2018 Latinx in the Mathematical Sciences Conference (IPAM/UCLA); Culture-setting team
- Summer 2017 Grad Student Seminar at SFSU: Preparing applications for PhD programs; Seminar Lead
- Fall 2016 Spring 2017 Distinguished Women in Mathematics Lecture Series; co-organizer and co-founder
- Fall 2016 Grad Student Seminar at SFSU: Polytopes; Seminar Lead
- 2013 AISES Regional Conference at UCB

OUTREACH AND VOLUNTEERISM

- Speaker at Latino Union Meeting, Head-Royce High School, Invited Speaker (March '24)
- STEMgiqueers Research Panel at the University of Kentucky, Invited Panelist (September '23)
- 2022 SACNAS The National Diversity in STEM Conference, Poster Judge & Conversations with Scientists Session Chair for Applied Mathematics, General Mathematics, Operations Research (October '22)

- Latinxs in the Mathematical Sciences (LatMath) at IPAM/UCLA, Math Circle Lead (July '22)
- Latinxs in the Mathematical Sciences (LatMath) at IPAM/UCLA, Poster Judge (July '22)
- OURFA²M², Invited Speaker (December '21)
- LGBTQ+ Math Day at the Fields Institute, Invited Panelist (November '21)
- Match Fellow & Visiting Mathematician, American Institute of Mathematics (Fall '21)
- Bridge to Enter Advanced Mathematics Career Day, Invited Speaker (July '21)
- paraDIGMS 2021 Spring Conference, Invited Lightning Talk Speaker (April '21)
- Bolstering the Advancement of Masters in Mathematics (BAMM!) Program, Invited Panelist (March '21)
- Math Faces, *Featured Guest* (May '20)
- Mentoring Moments: Graduate School Panel for Undergraduates, *Invited Panelist*, Center for Gradaute & Prof. Diversity Initiatives, Univ. of Kentucky (April '20)
- Summer Schools & Workshops Panel, Panelist, Dept. of Math., Univ. of Kentucky (Fall '19)
- NSF Fellowships Interest Panel, Panelist, Univ. of Kentucky Office of Competitive Awards (Fall '18)
- Winter Academic Training (WAT) Camp, *Linear Algebra Instructor* (Winter '15)
- Lynwood Alumni College Conference (LACC), *Presenter* Presentation Title: *Majoring in a STEM Field* (Winter '12, '13, '14, '15)
- RAZA Recruitment & Retention Center Spring Break High School Outreach (Spring '11, '12, '13)
- Helping Youth Pursue Higher Education Early (HYPHEE), Program Mentor, (Fall '11, '13)
- Math Tutor, grades 9-12 at El Cerrito High School, El Cerrito, CA (September '11- May '12)

CITIZENSHIP

United States of America & Costa Rica

SKILLS

- Spanish language (Oral, Written, Translating)
- Elementary French language (Reading, Oral)
- Scientific Computing: Macaulay2, Matlab, Normaliz, Polymake, SageMath/CoCalc