

Nancy Rodríguez (May 2021)

- CONTACT INFORMATION** Department of Applied Mathematics
University of Colorado Boulder *Phone: (303) 492-5199*
11 Engineering Dr *Fax: (303) 492-4066*
Boulder, CO 80309 *E-mail: rodrign@colorado.edu*
- EDUCATION** **University of California, Los Angeles**, Los Angeles, CA.
Ph.D., Mathematics, June 2011.
M.S., Mathematics, June 2008.
University of San Diego, San Diego, CA.
B.S., Mathematics, June 2006. *Summa Cum Laude, Phi Beta Kappa.*
B.S./B.A Industrial and Systems Engineering, June 2006. *Summa Cum Laude.*
- ACADEMIC EMPLOYMENT** **University of Colorado at Boulder**, Boulder, CO.
Assistant Professor of Mathematics, August 2018 - present.
University of North Carolina at Chapel Hill, Chapel Hill, NC.
Assistant Professor of Mathematics, July 2014 - July 2018.
Stanford University, Stanford, CA.
NSF Postdoctoral Fellow, June 2011 - June 2014.
Co-director of Summer Undergraduate Research in Math, January 2012 - March 2014.
- RESEARCH INTERESTS** Non-linear PDEs, mathematical modeling, biological aggregation, mathematical biology and ecology, crime modeling, chemotaxis, population dynamics.
- PAPERS UNDER REVIEW** 1. Halev, A., Patel, K., Rodríguez, N. and Wong, L., *Transport and concentration of wealth: first principles and sensitivity analysis*. submitted to AMS Proceedings of Symposia in Applied Mathematics, 30 pages (2021).
- REFEREED PUBLICATIONS** 1. Rodríguez, N. and Winkler, M., *On the global existence and qualitative behavior of one-dimensional solutions to a model for urban crime*, to appear in EJAM, 37 pages (2021).
2. Barbaro, A. B. T., Rodríguez, N, Yoldas, H, and Zamponi, N., *Analysis of a cross-diffusion model for rival gangs interaction in a city*, accepted in Comm. Math. Sci., (2021).
3. Ellefsen, E. and Rodríguez, N., *Efficiently finding steady states of nonlocal territorial models in ecology*, to appear in Journal of Applied Anal. and Comp. (2021)
4. Bakhshi, M., Ghazaryan, A., Manukian, V., and Rodríguez, N., *Traveling wave solutions in a model for social outbursts in a tension-inhibitive regime*, accepted in Studies in Applied Mathematics, (2021).
5. Rodríguez, N., Wang, Q., Zhang, L., *Understanding the effects of on- and off-hotspot policing: Evidence of hotspot, oscillating and chaotic activities*, accepted SIAM Dynamical Systems, (2021).
6. Cosner, C. and Rodríguez, N. *The Effect of Chemotactic Movement on the Allee Effect*, SIAM Applied Math, Vol 81 (2), pg. 404-433 (2021).
7. Ellefsen, E. and Rodríguez, N. *On some theory of monostable and bistable pure birth-jump integro-differential equations*, Ecol. Compl., Vol 45, 100892, (2020).
8. Yang, C. and Rodríguez, N. *Existence and Stability Traveling Wave Solutions for a System of Social Outbursts*, Journal of Math. Analysis & Appl., 494(1) 124583, (2021).

9. Rodríguez, N, and Winkler, M. *Relaxation by nonlinear diffusion enhancement in a two-dimensional cross-diffusion model for urban crime propagation*, M3AS, 30(11):2105-2137, (2020)
10. Hassan, A., Rodríguez, N., and Wong L. *Transport and concentration of wealth: modeling an amenities-based theory*. Chaos, Vol 30, 053110 (2020).
11. Topaz, C., Ciocanel, M-V., Cohen, P., Ott., M., and Rodríguez, N. *Institute for the Quantitative Study of Inclusion, Diversity, and Equity (QSIDE)*, Notices of the AMS, (Feb 2020): 223-227.
12. Rodríguez, N. and Hu, Y. *On the Steady-states of a two-species non-local cross-diffusion model*. Journal of Applied Analysis, Vol 26(1), pg. 1–19 (2020).
13. Yang, C. and Rodríguez, N. *A Numerical Perspective on Traveling Wave Solutions in a System for Rioting Activity*. Appl. Math. and Comp., Vol 364 (2020).
14. Malanson, G. and Rodríguez, N., *Traveling waves and spatial patterns from dispersal on homogeneous and gradient habitats*. Ecological Complexity, Vol. 33, pg. 57-65 (2018).
15. Rodríguez, N. and Malanson, G., *Plant dynamics, birth-jump processes and sharp traveling waves*, Bulletin of Math Biology, Vol. 80, pg. 1655–1687 (2018).
16. Bonnasse-Gahot, L., Berestycki, H., Depuiset, M-A., Gordon, M. B., Roché, S., Rodríguez, N., Nadal, J-P., *Epidemiological modelling of the 2005 French riots: a spreading wave and the role of contagion*. Scientific Reports, online publication 10.1038/s41598-017-18093-4 (2018).
17. H. Berestycki, N. Rodríguez, and L. Rossi, *Periodic cycles of social outburst*. Journal of Differential Equations, Vol. 264, pg. 163-196 (2018).
18. H. Berestycki and N. Rodríguez, *Non-local reaction-diffusion equations with a gap*. Discrete and Continuous Dynamical Systems-A, Vol. 27(2), pg. 685-723 (2017).
19. H. Berestycki and N. Rodríguez, *Analysis of a heterogeneous model for riot dynamics: the effect of censorship of information*. European Journal of Applied Mathematics, Vol. 27, Special Issue 03, pg. 554-582, (2016).
20. N. Rodríguez and L. Ryzhik, *The effect of social preference, mobility, and the environment on segregation*. Communications in Mathematical Sciences, Vol. 14, No. 2, pg. 363-387, (2016).
21. H. Berestycki, J-P. Nadal and N. Rodríguez, *A model of riots dynamics: shocks, diffusion and thresholds*. Networks and Heterogeneous Media, Vol. 10, No. 3, pg. 443-475, (2015).
22. N. Rodríguez, *Recent advances in mathematical criminology, comment on “Statistical physics of crime: A review, by M.R. D’Orsogna and M. Perc”*. Physics of Life Review, Vol. 12, pg. 38-39, (2015).
23. N. Rodríguez, *On an Integro-differential model for pest control in a heterogeneous environment*. Journal of Math. Biology, Vol 70, No. 5, pg. 1177–1206 (2015).
24. J. Bedrossian and N. Rodríguez, *Inhomogeneous Patlak-Keller-Segel models and aggregation equations with nonlinear diffusion in \mathbb{R}^d* . Discrete and Continuous Dynamical Systems-B, Vol. 19, No. 24, pg. 1279–1309 (2014).
25. H. Berestycki, N. Rodríguez and L. Ryzhik, *Traveling wave solutions in a reaction-diffusion model for criminal activity*. Multiscale Modeling and Simulations, Vol. 11, Issue 4, pg. 1097-1126, (2013).
26. N. Rodríguez, *On the global well-posedness theory for a class of PDE models for criminal activity*. Physica D: Nonlinear Phenomena, pg. 191-200, (2013).
27. J. Bedrossian, N. Rodríguez and A. Bertozzi, *Local and global well-posedness for aggregation equations and Patlak-Keller-Segel models with degenerate diffusion*. Nonlinearity, Vol. 24, No. 6, pg. 1683-1714, (2011).

28. N. Rodríguez and A. Bertozzi, *Local existence and uniqueness of solutions to a PDE model for criminal behavior*. M3AS, special issue on Math. and Complexity in Human and Life Sci., Vol 20, Issue supp01, pg. 1425–1457, (2010).
29. A.P. Velo, G.A. Gazonas, E. Bruder and N. Rodríguez, *Recursive dispersion relations in one-dimensional periodic elastic media*. SIAM Journal on Applied Mathematics, Vol. 69, No. 3, pg. 670–689, (2007).

PLENARY TALKS

1. *TBD*, SIAM Northern States meeting, Utah State University, October, 2021.
2. *A story on the ideal free distribution, the Allee effect, and competition through the lens reaction-advection-diffusion equations*. 47th Annual Mathematics Conference, Miami University of Ohio, September 2019.
3. *Partial Differential Equations as Models for Social Complex Systems*. SIAM Non-linear Waves and Coherent Structures (Anaheim, CA), June 2018.
4. *On reaction-advection-diffusion models for multi-species segregation*. 46th Annual John H. Barrett Memorial Lectures, Knoxville, TN., May 2016.
5. *A model for riot dynamics: shocks, diffusions, and thresholds*. Latinos in the Mathematical Sciences Conference, Los Angeles, CA. April 9, 2015.

SELECTED INVITED
TALKS
(2014 FORWARD)

1. *The effect of directed movement on the Allee effect*, SIAM Annual, July, 2021.
2. *Modeling and Analysis of Wealth Dynamics*, SIAM DS21, Virtual, May 2021.
3. *Mathematical models in social complex systems*, Criminology and Criminal Justice Working Group Meeting, CU Boulder, April 2021.
4. *On the relaxation of solutions to a crime model with overcrowding effect*, SIAM Conference on Nonlinear Waves and Coherent Structures (cancelled due to COVID19), Bremen, Germany, July 2020.
5. *An SIR-Hawkes hybrid model for gun violence*, 2020 ASC Annual Meeting, (cancelled due to COVID19), Washington DC, November, 2020.
6. *A story on the ideal free distribution, the Allee effect, and competition through the lens reaction-advection-diffusion equations*. II Simposio de Matematica Pura y Aplicada, Arequipa, Perú, December 2019 (virtual talk).
7. *A story on the ideal free distribution, the Allee effect, and competition through the lens reaction-advection-diffusion equations*. SIAM PDE Conference, La Quinta, CA December 2019.
8. *Plant dynamics: a birth-jump approach*. ICIAM, Valencia, SP, July 2019.
9. *Nonlocal models for birth-jump processes*. SIAM DS19, Salt Lake, UT, May 2019.
10. *PDEs as models for social complex systems*. Penn State, PA. Feb 2019.
11. *Plant dynamics: a birth-jump approach*. CMS Meeting, Vancouver, BC. Dec 2018.
12. *Partial Differential Equations as Models for Social Complex Systems*, Oberwolfach Workshop: Differential Equations arising from Organising Principles in Biology, Oberwolfach, Germany, October 2018.
13. *Plant dynamics: a birth-jump approach*. ICM Sat. Conf., Miami, FL. July 2018.
14. *Position-Jump and Birth-Jump Processes*. AIM Workshop on Nonlocal Differential Equations in Collective Behavior, San Jose, CA., June 2018.
15. *A model for riot dynamics: shocks, diffusion and thresholds*. Tianfu conference in PDEs, Chengdu, China., June 15, 2017.
16. *Heterogeneous models with non-local diffusion*. AIMS sectional meeting, Charleston, SC. March 2016.
17. *On reaction-advection-diffusion models for multi-species segregation*. CMO-BIRS, Oaxaca, Mexico., June 2016.
18. *Periodic outbursts of social activity*. KI-Net Conference on Collective Dynamics in Biological and Social Systems, Durham, NC., November 19-22, 2015.

19. *On the steady-state solutions for a non-local system with cross-diffusion.* The Society for Mathematical Biology, Atlanta, GA., June, 2015.
20. *On the global well-posedness of a two species interaction model with cross-diffusion.* Workshop for Women in Analysis and PDE, Minneapolis, MN. , May 29, 2015.
21. *A model for riot dynamics: shocks, diffusions, and thresholds.* AMS Sectional Meeting, Washington D.C. March 7, 2015.
22. *A stochastic model of riots: diffusion and thresholds.* Modeling and Control in Social Dynamics, Camden, NJ. October 6, 2014.
23. *The effect of social preference, mobility, and the environment on segregation.* Modeling and Control in Social Dynamics, Baltimore, MD. October 15, 2013.
24. *On a nonlocal reaction diffusion equation: applications in ecology, neural networks, and urban crime.* SACNAS 2013, San Antonio, TX. October 5, 2013.
25. *Non-local effects in social phenomena.* BIRS: PDEs in the social and life science, Banff, Canada. April 2, 2013.
26. *Hotspots and diffusion of criminal activity.* CAMS-EHESS, Paris, France. February 13, 2013.
27. *Invasion of hotspots; traveling wave solutions to a reaction-diffusion equation.* 7th Biannual Blackwell-Tapia Conference, ICERM, RI. November 10, 2012.
28. *Commuter criminals and integro-differential equations.* PIMS Hot Topics Workshop on Computational Criminology, Vancouver, BC, Canada. Sep. 20, 2012.
29. *Invasion of hotspots; traveling wave solutions to a reaction-diffusion equation.* BIRS, Banff, CA. July 23-27, 2012.
30. *Global theory for an aggregation equation with degenerate diffusion.* ICIAM, Vancouver, BC, Canada. July 18-22, 2011.
31. *Existence and blow-up of an aggregation equation with degenerate diffusion.* JMM, New Orleans, LA. January 5-9, 2011.
32. *Local existence and blow-up of an aggregation equation with degenerate diffusion.* IPAM Optimal Transport Reunion, Lake Arrowhead, CA. December 12-17, 2010.
33. *Reaction-diffusion models of crime in heterogeneous urban environments.* The American Society of Criminology Annual Meeting, San Francisco, CA. November 19, 2010.
34. *A PDE model for criminal behavior: existence theory.* Infinite Possibilities Conference, Los Angeles, CA. March 2010.
35. *Local existence/uniqueness of solutions to a PDE model for criminal behavior.* Workshop on Analysis and Modeling of Crime, Santiago, Chile. Jan. 4-7, 2010.

INVITED SEMINAR	Stanford University(virtual)	May 2021
TALKS	University of Iowa (virtual)	April 2021
	Florida Atlantic (virtual)	March 2021
	University of Pennsylvania (virtual)	Feb 2021
	University of Washington (virtual)	April 2020
	Colorado School of Mines (to be rescheduled to to COVID19)	March 2020
	Fields Institute (to be rescheduled to to COVID19)	March 2020
	Colorado State University	December 2019
	University of Arizona	November 2019
	Tulane University	October 2019
	University of Pennsylvania	November 2018
	Colorado School of Mines	January 2018
	University of Miami	April 2017
	University of Alberta	October 2016
	Brown University	February 2016

	University of Delaware	November 2015
	Pontifical Catholic University of Rio de Janeiro	May 2015
	North Carolina State University	December 2014
	Duke University	October 2014
	University of Illinois at Urbana Champaign	January 2014
	University of California at Merced	January 2014
	Purdue University Colloquium	December 2013
	UNC Chapel Hill Colloquium	November 2013
	Purdue University Seminar	July 2013
	Rice University Colloquium	April 2013
	University of California at Berkeley PDE Seminar	November 2012
	Santa Clara University Colloquium	May 2012
	University of California at Santa Cruz Colloquium	January 2012
	University of California at Riverside	April 2011
	University of San Diego Seminar	February 2011
	Universidad de Santiago de Chile PDE Seminar	January 2010
SELECTED	<i>What Calculus can tell us about life.</i>	June 2021
SERVICE TALKS	Oglethorpe University High school student summer camp, virtual.	
	<i>What Calculus can tell us about life.</i>	March 2021
	SIAM Front Range student conference, Boulder, CO.	
	<i>What Calculus can tell us about life.</i>	February 2017
	UNC Office of Undergraduate Research, Methods of Inquiry, Chapel Hill, NC.	
	<i>What Calculus can tell us about life.</i>	October 2016
	Graduate Research Opportunities for Women, Northwestern Univ., Evanston, IL.	
	<i>Calculus in social, biological, and ecological phenomena.</i>	June 2016
	Girls Talk Math, Chapel Hill, NC.	
	<i>Calculus in social, biological, and ecological phenomena.</i>	April 4, 2016
	Girls Advancing STEM Conference, Durham, NC.	
	<i>Modeling aggregation.</i>	July 27, 2014
	A talk tailored for students in the MSRI-UP program, Berkeley, CA.	
	<i>American Pi: Changing the Stereotypes in Mathematics.</i>	July 19, 2013
	Keynote for ADVANCE PRiME, Lafayette, IN.	
	<i>Criminal activity, ecology and nerve pulse propagation: my life in math.</i>	April 2013
	A talk tailored towards women and minorities in STEM, Houston, TX.	
	<i>Modeling Urban Crime.</i>	October 25, 2012
	A talk tailored towards undergraduates, Palo Alto, CA.	
AWARDS AND	Stanford University	
FELLOWSHIPS	<ul style="list-style-type: none"> • NSF Mathematical Sciences Postdoctoral Fellowship 	June 2011-June 2014
	<ul style="list-style-type: none"> • AWM-NSF Mentoring Travel Grant 	April 2013
	<ul style="list-style-type: none"> • USD McNair Doctoral Achievement Award 	May 2012
	University of California, Los Angeles	
	<ul style="list-style-type: none"> • UCLA Graduate Division Fellowship 	2010–2011
	<ul style="list-style-type: none"> • NSF VIGRE Fellowship 	2009–2010
	<ul style="list-style-type: none"> • Ford Foundation Fellowship 	2006–2009
	University of San Diego	
	<ul style="list-style-type: none"> • Outstanding Academic Achievement in Mathematics 	May 2006
	<ul style="list-style-type: none"> • Outstanding Service Award in Mathematics 	May 2006
	<ul style="list-style-type: none"> • ISE Outstanding Senior of the Year 	2006
	<ul style="list-style-type: none"> • McNair Scholar 	2004–2006
	<ul style="list-style-type: none"> • Goldwater Fellow 	2003–2006

GRANTS
AWARDED

- NSF CAREER Award: DMS Applied Mathematics: \$ **430,000**, *Role: PI*, 2021-2026
Title: CAREER: Mathematical Frameworks and Theory for Conceptual Models in Economics, Ecology and Criminology
- NSF DMS Applied Mathematics: \$**301,796**, *Role: PI*, 2019-2021
Title: Nonlinear and Non-local Models in Social and Ecological Systems.
- UNC Junior Faculty Development Award: \$**7,500**.
- UNC FIRE Grant: \$**25,000**.
Title: Data-driven Modeling of Gentrification.
- NSF DMS Applied Mathematics: \$**169,999**, *Role: PI*, 2014-2018
Title: Models for Social, Ecological, and Biological Systems: Narrowing the Gap Between Theory and Applications.
- AWM-NSF Mentoring Travel Grant: \$**4,600**, *Role: Co-PI* 2014
Title: Frac. Diff. and Reaction Systems: Globalization Effects on Criminal Activity.
- NSF Mathematical Sciences PRF: \$**135,000**. *Role: PI* 2011-2014
Title: Nonlinear PDE models for Urban Crime.

TEACHING
EXPERIENCE

University of Colorado Boulder	Term	Students	Rating
APPM 5450: Analysis II	S21	16	NA
APPM 5450: Analysis I	F20	14	NA
APPM 2360: Differential Equations/Linear Algebra	F20	52	NA
APPM 5450: Analysis II	S20	14	4.5/6.00
APPM 5450: Analysis II	S19	14	4.5/6.00
APPM 2360: Differential Equations/Linear Algebra	S19	102	4.51/6.00
APPM 5450: Analysis I	F18	17	4.43/6.00
University of North Carolina at Chapel Hill			
MATH 751: Partial Differential Equations	S17	5	N/A
MATH 529: PDEs and Complex Analysis	S17	50	4.18/5.0
MATH 383H: Honors Differential Equations	S17	19	4.24/5.0
MATH 769: Graduate Math Modeling	S17	7	4.33/5.0
MATH 383: Differential Equations	S16	52	3.99/5.00
MATH 769: Graduate Math Modeling	S16	6	4.08/5.0
MATH 383: Honors Differential Equations	S15	17	4.29/5.0
MATH 383: Differential Equations	F14	31	3.97/5.0
Stanford University			
Linear Algebra & Multivariable Calculus	F12	2 classes, ~ 50/class	N/A
Accelerated Calculus & Calculus I	F11	2 classes, ~ 50/class	N/A
St. Quentin Prison, CA.			
MATH 50B: Developmental Math (Lead Instructor)	F13	~ 25	N/A
MATH 50B: Developmental Math	S13	~ 25	N/A

NA: not applicable due to change in FCQ forms.

OTHER TEACHING
EXPERIENCE

Core team member. AIM Summer School on Dynamics, Data and the COVID 19 Pandemic, Virtual, June 22-July 31, 2020.

Mini-Course instructor. CIMPA: Mathematical Models in Biology and Related Applications of Partial Differential Equations, Universidad de la Havana, Cuba, June 2019.

Mini-Course instructor. Modern Math Workshop, SACNAS 2014, Los Angeles, CA., October 2014.

GRADUATE
STUDENT
ADVISING

Trever Manders (**Masters**, CU Boulder Math Department).

David Sterns (**Masters**, CU Boulder), graduated 2021.

Erin Ellefsen (**PhD**, CU Boulder), 4rd year.

Lyndsey Wong (**PhD**, CU Boulder), 4rd year.
Caroline Yang (**PhD**, UNC Chapel Hill): graduated 2018.

DISSERTATION
COMMITTEES

Subekshya Bidari (**PhD**, (**PhD**, CU Boulder- APPM).
Amanda Hampton (**PhD**, (**PhD**, CU Boulder- APPM).
Timothy Thorn, (**Masters**, CU Boulder - APPM).
Subekshya Bidari, (**PhD**, (**PhD**, CU Boulder- APPM).
Ram Ekstrom, (**Masters**, CU Boulder - Mathematics).
Harry Dudley, (**PhD**, CU Boulder- APPM).
Jackeline Wentz, (**PhD**, CU Boulder- APPM).
Joshua Aurand, (**PhD**, CU Boulder- APPM).
Hao Xu, APPM (**PhD**, CU Boulder- APPM).
Sabina Altus APPM (**PhD**, CU Boulder- APPM).
Nikhil Krishnan (**Masters**, CU Boulder- APPM).
Claudia Falcon (**PhD**, UNC Chapel Hill), graduated 2017.
Zeliha Kilic (**PhD**, UNC Chapel Hill), graduated 2018.

IQ BIO
ROTATIONS

Casey Middleton (**PhD**, (**PhD**, CU Boulder- CS).
Kate Bubar (**PhD**, (**PhD**, CU Boulder- APPM).

UNDERGRADUATE
STUDENT
ADVISING

Applied Math Department, University of Colorado Boulder.
Hannan Shahba, Anna Hendircks, Lucas Webb, Alison Reeves, Scott Baker, David
Sterns, Abigail Hause, Amanda Liddle.
Math Department, University of North Carolina Chapel Hill.
Yi Hu, Avishair Halve, Keshav Patel, Shendung Sun, Ali Hassan, Sean Catangui.

JOURNAL REFEREE

Nonlinearity; SIAM Journal on Mathematical Analysis; Nonlinear Analysis Series A: Theory, Methods and Applications; Discrete and Continuous Dynamical Systems; European Journal of Applied Mathematics; Communications in Math Sciences; International Journal of Bifurcation and Chaos; Journal of Mathematical Biology; Journal of Differential Equations; Communications on Pure and Applied Analysis; Physica D: Nonlinear Phenomena; PLOS ONE; Annales Henri Poincaré; SIAM Journal of Applied; Foundations of Data Science; Math; MDPI.

COMMITTEE
SERVICE

University of Colorado Boulder

- Faculty search committee, Spring 2021
- Colloquium co-chair, Spring 2020.
- Colloquium chair, Fall 2019.
- Graduate Committee associate chair, Fall 2019 – present.
- Graduate Committee member, Fall 2018.
- Analysis Prelim Committee chair, Jan 2019, Aug 2019, Jan 2021, & Jan 2022.
- Awards Committee member, Fall 2019 – present.
- Affiliated Committee member, Fall 2019 – present.

University of North Carolina Chapel Hill

- Undergraduate Committee member, Fall 2016 - Spring 2017.
- Math Methods Committee member, Spring 2017.
- Analysis Committee member, Fall 2014- Fall 2016.

- UNIVERSITY SERVICE
- NSF CAREER Commit-to-Submit Writing Program Kickoff Workshop *Panelist*, February 2021.
 - LEAP: Thriving in the First Year: What I Wish I had Known, *Panelist*, September 2020.
 - TCP Inclusion and Diversity Panel, *Panelist*, October 2019.
 - IQ Biology orientation talk, August 2019.
 - UNC Science Fair, April 2017.
 - Recruited UNC's Chancellor's Science Scholars and Morehead Scholars, 2014-2017.
 - Interviewing Member for UNC's Chancellor's Science Scholars, Spring 2015/2016.
- OTHER SERVICE
- NSF-DMS Panel, Summer 2021.
 - NSF-DMS Panel, Spring 2021.
 - AMS short course: "Mathematical and Computational Methods for Complex Social Systems", *Panelist*, JMM, Washington D.C., Jan. 2021.
 - NSF-DMS Panel, Spring 2020.
 - IEEE Big Data Workshop on Data Science for Smart and Connected Communities, Program Committee member, Atlanta, GA., December 2020.
 - "So you are (want to be) a Postdoc: now what?", *Panelist*, JMM 2020.
 - NSF-DMS Panel, Spring 2020.
 - UNC Science Fair, April 2017.
 - Recruited UNC's Chancellor's Science Scholars and Morehead Scholars, 2014-2017.
 - NSF-DMS Panel, Spring 2016.
 - Interviewing Member for UNC's Chancellor's Science Scholars, Spring 2015/2016.
 - Latinos in Mathematics Conference, IPAM, Los Angeles, CA. *Member of Organizing Committee*, Nov. 2013 - April 11, 2014.
 - Beatrice Yormark Distinguished Visitor Lecture, Stanford, CA. *Co-organizer*, Fall 2011–Fall 2014.
 - ¿Así Que Quieres Ser un Matemático? *A Panel Discussion with Latino/a Mathematicians*, Los Angeles, CA. *Panel Member*, April, 2013.
 - Pacific Coast Undergraduate Math Conference, Los Angeles, CA. *Graduate Panel*, March 2010.
 - Infinite Possibilities Conference 2010, Los Angeles, CA. *Invited Panelist*, March 2010.
 - UCLA Latinas Guiding Latinas, Los Angeles, CA. *Volunteer* Sep. 2006 – June 2008.
- WORKSHOPS AND SPECIAL SESSIONS ORGANIZED
- Statistics and Data Science special session, co-organizer, Latinx in the Mathematical Sciences Conference, 2022.
 - Celebrating Women in Complex Systems, co-organizer, Banff, September 2022.
 - Mathematical and Computational Approaches to Social Justice, co-organizer, ICERM, March 2021.
 - AMS special session: "Special Session on Women of Color in Applied Math and Analysis," co-organizer, JMM, Washington D.C., Jan. 2021
- AFFILIATIONS
- Interdisciplinary Quantitative Biology Program.
 - Society for the Advancement of Chicanos and Native Americans in the Sciences.
 - Institute for the Quantitative Study of Inclusion, Diversity, and Equity
- TRAININGS
- ASSETT's Summer Course Design Workshop, May 2020.
 - Inclusive Excellence in the Graduate Admissions Process, Fall 2019.
 - LEAP Introductory Leadership Workshop, Spring 2020.