

**Erika Tatiana Camacho**  
**Curriculum Vitae**  
**November 8, 2023**

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## 1 CONTACT INFORMATION

Dept. of Mathematics  
 Dept. of Neurosci., Dev. and Regen. Bio.  
 College of Sciences  
 The University of Texas at San Antonio (UTSA)  
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## 2 EMPLOYMENT/APPOINTMENTS

- 8/2023–present      **Inaugural Manuel P. Berriozábal, Ph.D. and María Antonietta Berriozábal Endowed Chair**, *The University of Texas at San Antonio (UTSA)*
- 8/2023–present      **Professor**, *Department of Mathematics & Department of Neuroscience, Development and Regenerative Biology (NDRB), UTSA*
- 8/2023–present      **Affiliate Professor**, *School of Mathematical & Statistical Sciences (SoMSS), Arizona State University (ASU)*
- 8/2022–6/2023      **Fulbright Scholar/Visiting Researcher**, *L'Institut de la Vision (IDV), Paris, France, Institut national de la santé et de la recherche médicale (Inserm) and Sorbonne Université. Fulbright Scholar 1/1/2023-6/30/2023.*
- 8/2022–7/2023      **Professor**, *School of Mathematical & Statistical Sciences (SoMSS), Arizona State University (ASU)*
- 9/2019–7/2022      **HSI Program co-lead and Program Director**, and Program Director in the ADVANCE program and Racial Equity in STEM program, Division of Human Resource Development (HRD), Directorate for Education and Human Resources (EHR), *National Science Foundation*
- 8/2020–8/2022      **Professor**, *School of Mathematical & Natural Sciences (SMNS), Arizona State University (ASU)*
- 2/2019–9/2019      Program Director, M.S. in Biological Data Science, *SMNS, ASU*
- 10/2018–9/2019      Program Lead, B.S. in Computational Forensics, *SMNS, ASU*
- 2/2018–present      Faculty Honors Advisor for SMNS, *Barrett, The Honors College, ASU*
- 8/2015–9/2019      Affiliated Faculty, *The Center for Gender Equity in Science and Technology, ASU*
- 8/2014–8/2020      **Associate Professor**, *SMNS, ASU*
- 9/2013–5/2014      Dr. Martin Luther King Jr. Visiting Assistant Professor, *Department of Mathematics, Massachusetts Institute of Technology (MIT)*
- 8/2007–8/2014      **Assistant Professor**, *SMNS, ASU*
- 12/2008–8/2014      Affiliate Faculty Member, *Mathematical, Computational and Modeling Sciences Center (MCMSC), ASU*

Summers 2011–2013	Co-Executive Director, <i>Mathematical &amp; Theoretical Biology Institute (MTBI), ASU</i>
8/2004–8/2007	Assistant Professor, <i>Department of Mathematics, Loyola Marymount University (LMU)</i>
7/2004	Visiting Faculty, <i>Biomathematics summer program, Hope College.</i>
10/2003–12/2007	Co-Director, <i>Applied Mathematical Sciences Summer Institute (AMSSI) LMU &amp; California State Polytechnic University (Cal Poly), Pomona</i>
Summers 2003, 2008–2010	Research Faculty, <i>MTBI, Cornell University/Los Alamos National Laboratory (LANL) /ASU</i>
3/2003–8/2004	Postdoctoral Research Associate, <i>Center for Nonlinear Studies, LANL</i> Advisor: Norman L. Johnson, 8/2003–8/2004 Advisor: Carlos Castillo-Chavez, 3/2003–8/2003
9/2002–3/2003	Lecturer / Instructor, <i>Department of Mathematics, Cal Poly Pomona.</i>
1/2002–5/2002	Teaching Assistant, <i>Department of Mathematics, Cornell University.</i>
6-8/1998–2002	Teaching & Research Assistant, Tutor, <i>MTBI.</i>

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### 3 EDUCATION

- 9/2001–5/2003 *Cornell University, Ithaca, NY*, Ph.D. in Applied Mathematics.  
Title: “Mathematical Models of Retinal Dynamics”  
Advisor: Richard H. Rand
- 8/1997–8/2001 *Cornell University, Ithaca, NY*, M.S. in Applied Mathematics.
- 9/1993–5/1997 *Wellesley College, Wellesley, MA*, B.A. in Mathematics, cum laude.
- 9/1993–5/1997 *Wellesley College, Wellesley, MA*, B.A. in Economics, cum laude.

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### 4 PUBLICATIONS

Notation: \*=undergraduate student at time of work, \*\*=graduate student at time of work

#### 4.1 REFEREED RESEARCH JOURNAL ARTICLES

31. A. Dobрева, **E.T. Camacho**, M. Miranda, 2023. “Mathematical model for glutathione dynamics in the retina”, *Scientific reports*, 13(1).
30. A. Aparicio, **E.T. Camacho**, N.J. Philp, S.A. Wirkus, 2022, “Tracing the impact of GLUT1 expression modulation on rods’ and RPE’s metabolism through *in silico* experiments”, *Scientific Reports*; 12(1).
29. A. Dobрева, **E.T. Camacho**, K. Larripa, A. Rădulescu, D. Schmidt, I. Trejo, 2022, “Analyzing a Mathematical Model for Metabolic Pathways in a Single Cone to Gain Insight into Pathological Mechanisms”, *Bioscience Reports*, 42(3).
28. K. Wifvat\*\*, **E.T. Camacho**, S. Wirkus, T. Léveillard, 2021, “The Role of RdCVFL in a Mathematical Model of Photoreceptor Interactions”, *Journal of Theoretical Biology*, 520, 110642.

27. **E.T. Camacho**, A. Dobрева, K. Larripa, A. Rădulescu, D. Schmidt, I. Trejo\*\*, 2021, “Mathematical Modeling of Retinal Degeneration: Aerobic Glycolysis in a Single Cone”, in *Using Mathematics to Understand Biological Complexity* Springer, pp. 135-178.
26. W.K. Caldwell\*, B. Freedman\*, L. Settles\*, M.M. Thomas\*, **E.T. Camacho**, S. Wirkus, 2019, “The Vicodin abuse problem: A mathematical approach,” *Journal of Theoretical Biology*, 483, 110003.
25. **E.T. Camacho**, D. Brager\*\*, G. Elachouri, T. Korneyeva\*, G. Millet-Puel\*\*, J.-A. Sahel, T. Léveillard, 2019, “A Mathematical Analysis of Aerobic Glycolysis Triggered by Glucose Uptake in Cones”, *Scientific Reports*, 9(1), 4162.
24. **E.T. Camacho**, S. Lenhart, L. Melara, C. Villalobos, S. Wirkus, 2019, “Optimal control with MANF treatment of photoreceptor degeneration”, *Mathematical Medicine and Biology: A Journal of the IMA*, dqz003, <https://doi.org/10.1093/imammb/dqz003>.
23. **E.T. Camacho**, A. Radulescu, S. Wirkus, P. Marshall, 2019, “A Qualitative Analysis of Ubiquitous Regulatory Motifs in *Saccharomyces cerevisiae* Genetic Networks”, *Communications in Nonlinear Science and Numerical Simulation*, 69: 148-167.
22. **E.T. Camacho**, C. Punzo , S. Wirkus, 2016, “Quantifying the Metabolic Contribution to Photoreceptor Death in Retinitis Pigmentosa via a Mathematical Model,” *Journal of Theoretical Biology*, 408: 75-87.
21. **E.T. Camacho**, T. Léveillard, J.-A. Sahel, S. Wirkus, 2016 “Mathematical Model of the Role of RdCVF in the Coexistence of Rods and Cones in a Healthy Eye,” *Bulletin of Mathematical Biology*, 78(7): 1394-1409.
20. **E.T. Camacho**, A. Radulescu, S. Wirkus, 2016, “Bifurcation Analysis of a Photoreceptor Interaction Model for Retinitis Pigmentosa,” *Communications in Nonlinear Science and Numerical Simulation*, 38: 267-276.
19. K.D. Dahlquist, B.G. Fitzpatrick, **E.T. Camacho**, S.D. Entzminger\*, and N.C. Wanner\*, 2015, “Parameter Estimation for Gene Regulatory Networks from Microarray Data: Cold Shock Response in *Saccharomyces cerevisiae*,” *Bulletin of Mathematical Biology*, 77(8): 1457-1492.
18. S. Wirkus, **E.T. Camacho**, P. Marshall, 2015, “Mathematical modeling of fungal infection in immune compromised individuals: The Effect of back mutation on drug treatment,” *Journal of Theoretical Biology*, 385: 66-76.
17. R.L. Brown, **E.T. Camacho**, E.G. Cameron, C. Hamlet, K.A. Hoffman, H-W. Kang, P.R. Robinson, K.S. Williams\*\*, and G.R. Wyrick\*\*, 2015, “A Stochastic Model of the Melanopsin Phototransduction Cascade,” in *Applications of Dynamical Systems in Biology and Medicine*, Springer, pp. 175-196.
16. **E.T. Camacho**, L. Melara, C. Villalobos, S. Wirkus, 2014, “Optimal Control in the Treatment of Retinitis Pigmentosa,” *Bulletin of Mathematical Biology*, 76(2):292-313.

15. **E.T. Camacho**, C. Kribs-Zaleta, S. Wirkus, 2013, "Metering Effects in Population Systems," *Mathematical Biosciences and Engineering*, 10(5-6): 1365-1379.
14. **E.T. Camacho**, 2013, "The Development and Interaction of Terrorist and Fanatic Groups," *Communications in Nonlinear Science and Numerical Simulation*, 18(11): 3086-3097.
13. **E.T. Camacho**, S. Wirkus, 2013, "Tracing the Progression of Retinitis Pigmentosa via Photoreceptor Interactions," *Journal of Theoretical Biology*, 317: 105-118.
12. **E.T. Camacho**, S. Wirkus, P. Marshall, 2011, "Mathematical modeling of fungal infection in immune compromised individuals: Implications for drug treatment," *Journal of Theoretical Biology*, 281(1): 9-17.
11. F. Wang, H. Du, **E.T. Camacho**, K. Xu, W. Lee, Y. Shi, S. Shan, 2011, "On Positive Influence Dominating Sets in Social Networks," *Theoretical Computer Science*, 412(3): 265-269.
10. **E.T. Camacho**, M. Colon-Velez\*, D. Hernandez\*, U. Rodriguez-Bernier\*, J. van Laarhoven\*, S. Wirkus, 2010, "A Mathematical Model for Photoreceptor Interactions," *Journal of Theoretical Biology*, 267(4): 638-646.
9. B. Morin\*\*, L. Medina-Rios\*, **E.T. Camacho**, C. Castillo-Chavez, 2010, "Static Behavioral Effects on Gonorrhea Transmission Dynamics in a MSM Population," *Journal of Theoretical Biology*, 267(1): 35-40.
8. F. Wang, **E.T. Camacho**, K. Xu, 2009, "Positive Influence Dominating Set in Online Social Networks," *Combinatorial Optimization and Applications*, Vol. 5573, Pages 313-321.
7. F. Berezovskaya, **E.T. Camacho**, S. Wirkus, G. Karev, 2008, "'Traveling Wave' Solutions of FitzHugh Model with Cross-diffusion," *Mathematical Biosciences and Engineering*, 5(2): 239-260.
6. J. Abiva\*, **E.T. Camacho**, E. Joseph\*, A. Mikaelian\*, C. Rogers\*, J. Shelton\*\*, S. Wirkus, 2007, "Alcohol's Effect on Neuron Firing," *The Mathematical Scientist*, 32(1): 32-40.
5. **E.T. Camacho**, R. Rand, H. Howland, 2004, "Dynamics of Two van der Pol Oscillators Coupled via a Bath," *International Journal of Solids and Structures*, 41(8): 2133-2134.

#### 4.2 REFEREED RESEARCH CONFERENCE PROCEEDINGS

4. **E.T. Camacho**, R. Rand, T. Li, H. Howland, 2000, "A Mathematical Model of a Retinal Oscillator," *Proceedings of the 2000 ASME International Mechanical Engineering Congress and Exposition, Nov.5-10, 2000, Orlando, FL, in BDE-Vol.48 "2000 Advances in Bioengineering" ed. T.Conway, pp.89-90, ASME.*
3. **E.T. Camacho**, R. Rand, J. Cooke, 1999, "Nonlinear Dynamics of the Bombardier Beetle," *Proceedings of the DETC'99, ASME Design Engineering Technical Conferences, Sept 12-15, paper no. DETC99/ DAC-1234.*

### 4.3 REFEREED MENTORING ARTICLES

2. **E. Camacho**, R. Holmes, S. Wirkus, 2015 “Transforming the Undergraduate Research Experience Through Sustained Mentoring: Creating a Strong Support Network and a Collaborative Learning Environment,” *New Directions for Higher Education*, 171: 63-73.
1. **E. Camacho**, C. Kribs-Zaleta, S. Wirkus, 2013, “The Mathematical and Theoretical Biology Institute—a Model of Mentorship Through Research,” *Mathematical Biosciences and Engineering*, 10(5-6):1351-1363.

### 4.4 NON-REFEREED RESEARCH JOURNAL ARTICLES

- C. McNeely, **E. Camacho**, 2010, “Conceptualizing STEM Workforce Migration in the Modern World Polity,” Social Science Research Network, <http://ssrn.com/abstract=1593393>.

### 4.5 TECHNICAL REPORTS

11. W. Caldwell\*, B. Freedman\*, L. Settles\*, M. Thomas\*, A. Murillo\*\*, **E.T. Camacho**, S. Wirkus, 2013, “Substance Abuse via Legally Prescribed Drugs: The Case of Vicodin in the United States,” Cornell University Library arXiv, <http://arxiv.org/pdf/1308.3673.pdf>.
10. V. Chastain\*, J. Lunsford\*, A. Ortega\*, R. Reyes-Grimaldo\*, **E.T. Camacho**, 2012, “Iron Accumulation in the Cell: A Mathematical Model of Friedreich’s Ataxia,” MTBI-09-02M, MTBI/SUMS Technical Reports, <https://qrlssp.asu.edu/tech-report-2012>.
9. J. Baez\*, T. Gonzalez\*, A. Murillo\*\*, D. Toupo\*, R. Zarate\*, **E.T. Camacho**, 2011, “My  $\beta$ IG Fat Math Model:  $\beta$ -Cell Compensation and Type 2 Diabetes,” MTBI-08-04M, MTBI/SUMS Technical Reports, <https://qrlssp.asu.edu/tech-report-2011>.
8. B. Morin\*\*, L. Medina-Rios\*, **E.T. Camacho**, 2009, “Static Behavior Effects on Gonorrhoea Transmission Dynamics,” MTBI-06-02M, MTBI/SUMS Technical Reports, <https://qrlssp.asu.edu/tech-report-2009>.
7. L. Almada\*, R. Rodriguez\*, M. Thompson\*, L. Voss\*, L. Smith\*\*, **E.T. Camacho**, 2006, “Deterministic and Small-World Network Models of College Drinking Patterns,” <http://www.public.asu.edu/~etcamach/AMSSI/>.
6. J. Hunt\*, L. LaPlace\*, E. Miller\*, J. Pham\*, **E.T. Camacho**, S. Wirkus, 2005, “A Continuous Model of Gene Expression,” California Polytechnic University Department of Mathematics & Statistics Technical Report, pp. 43-63, <http://www.public.asu.edu/~etcamach/AMSSI/>.
5. J. Abiva\*, E. Joseph\*, A. Mikaelian\*, C. Rogers\*, J. Shelton\*\*, **E.T. Camacho**, S. Wirkus, 2005, “Alcohol’s Effect on Neuron Firing,” California Polytechnic University Department of Mathematics & Statistics Technical Report, pp. 139-163, <http://www.public.asu.edu/~etcamach/AMSSI/>.



4. M. Colon-Velez\*, D. Hernandez\*, U. Rodriguez-Bernier\*, J. van Laarhoven\*, **E.T. Camacho**, 2003, "A Mathematical Model of Photoreceptor Interactions," Cornell University, Department of Biological Statistics and Computational Biology Technical Report, BU-1640-M, pp. 25-69, <https://ecommons.cornell.edu/bitstream/handle/1813/32241/BU-1640-M.pdf;sequence=1>.
3. K. Lin\*\*, S. Schirmer\*\*, and **E.Camacho Wirkus\*\***, 1999, "Chemical pattern formation in reaction-diffusion systems," MSRI Summer program on Dynamics of Low Dimensional Continua Technical Report, U.C. Berkeley.
2. **E.Camacho\***, J. Villareal\*, M. Yichoy\*, 1997, "Delinquency Dynamics," Cornell University, Department of Biometrics Technical Report, BU-1504-M, <https://qrlssp.asu.edu/tech-report-1997>.
1. M. Arias\*, **E.Camacho\***, R.Castillo\*, D.Iniguez\*, E.Melon\*, L.Parra\*, 1996, "HIV-1 Replication Rate," Cornell University, Department of Biometrics Technical Report, BU-1367-M, <https://qrlssp.asu.edu/tech-report-1997>.

#### 4.6 NON-REFEREED MENTORING ARTICLES

- **E.Camacho**, S. Wirkus, "The Applied Mathematical Sciences Summer Institute," *Proceedings of the Conference on Promoting Undergraduate Research in Mathematics*, American Mathematical Society, Providence, RI, 2007; <http://www.ams.org/programs/edu-support/undergrad-research/REUproceedings.pdf>.
- S.Bozeman, **E.Camacho**, "Where do we go from here?" Epilogue for the Infinite Possibilities Conference 2005 Proceedings, pp. 71-72, 2006; <http://www.ipcmath.org/pdfs/IPC05Proceedings.pdf>.
- **E.Camacho**, "The Role of Mentoring in the Teaching of Mathematics," Article for Infinite Possibilities, Epilogue for the Infinite Possibilities Conference 2005 Proceedings, p. 69, 2006; <http://www.ipcmath.org/pdfs/IPC05Proceedings.pdf>.

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## 5 RESEARCH COLLABORATIVE AGREEMENTS

- Memorandum of Understanding (MOU) Research Collaboration Agreement effective as of May 10, 2014 and December 31, 2023 (referenced: C14/0120)  
**Between** Arizona Board of Regents for and on behalf of Arizona State University (ASU), Sorbonne Université, Le Centre National de la Recherche Scientifique (CNRS), and L'Institut National De La Santé Et De La Recherche Médicale (INSERM). SORBONNE UNIVERSITE, CNRS and INSERM all acting for and on behalf of Centre De Recherche Institut De La Vision UM 80 17 rue Moreau, 75012, Paris, France directed by Prof. José-Alain SAHEL.  
**Purpose:** To establish scientific collaboration between parties for the performance of a study entitled Biomathematical modeling of the interaction between retinal photoreceptors and underlying metabolic and redox signaling.

**Chief Scientists:** Drs. Thierry Léveillard and Erika Camacho, from Centre De Recherche Institut De La Vision and ASU, respectively, shall be the chief scientists of the study.

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## 6 GRANTS

### 6.1 EXTERNAL

#### 6.1.1 As Principal Investigator (PI)

- *REU Site: Mathematical and Theoretical Biology Institute (MTBI)*, National Science Foundation, \$810,785, DMS-1263374, 5/2013-4/2018; PI E.Camacho, co-PI S.Wirkus. *Stepped down as PI in 5/2014.*
- *Enhancement of the Mathematics Component of the 2009-2010 SACNAS Conferences*, National Security Agency, \$194,937, 7/2009-11/2010; PI E.Camacho, co-PIs S.Wirkus, A.Gallegos.
- *Enhancement of the Mathematics Component of the 2008 SACNAS Conference*, National Security Agency, \$249,072, H98230-08-1-0114, 7/2008-11/2008; PI E.Camacho, co-PI S.Wirkus.
- *Applied Mathematical Sciences Summer Institute (AMSSI)*, National Security Agency, \$254,653, MSPF 07IC-043, 3/2007-2/2009; PI E.Camacho, co-PIs E.Mosteig, R.Swift, S.Wirkus.
- *Applied Mathematical Sciences Summer Institute (AMSSI)*, National Security Agency, \$115,000, MSPF 06IC-022, 3/2006-2/2007; PI E.Camacho, co-PIs E.Mosteig, R.Swift, S.Wirkus.

#### 6.1.2 As co-PI

- *ASU ADVANCE Institutional Transformation*, National Science Foundation, \$2,999,743 HRD-1824260, 9/2018-8/2023; PI E.Wentz, co-PI E.Camacho, L.Dai, M.Gaughan, P.Regier. [https://www.youtube.com/watch?v=RD\\_NLVKN-mg&feature=share&t=1m53s](https://www.youtube.com/watch?v=RD_NLVKN-mg&feature=share&t=1m53s), <https://news.asu.edu/20190221-solutions-nsf-grant-aims-expand-diversity-inclusion-asu-stem-faculty>
- *ASU-Sloan Program for Exceptional Mentoring (PEM)*, ASU Foundation (ASUF 30006275), \$697,079, 7/2014-6/2017; PI C.Castillo-Chavez, co-PI E.Camacho.
- *International Research Experience For Students (IRES) Project Proposal: Population Dynamics And Complex Systems: Challenges And Opportunities*, National Science Foundation, \$179,936, 1261211, 9/2013-8/2016; PI C.Castillo-Chavez, co-PI E.Camacho, S.Wirkus, G.Chowell-Puente.
- *Mathematical and Theoretical Biology Institute (MTBI)*, National Security Agency, \$197,047, MSPF-RE-13-MTBI-0513-asu-2-2-121012, 5/2013-4/2014; PI C.Castillo-Chavez, co-PIs E.Camacho, S.Wirkus.

- *Arizona State University GAANN Fellowships in Applied Mathematics in the Life and Social Sciences*, Graduate Assistance in Areas of National Need (GAANN), Department of Education, \$527,700, P200A120192, 8/2012-8/2017; PI C.Castillo-Chavez, co-PIs E.Camacho, S.Suslov, S.Wirkus.
- *Enhancement of the Mathematics Component of the 2009-2010 SACNAS Conferences*, National Science Foundation \$238,740, DMS-0935993, 6/2009-5/2011; PI S.Wirkus, co-PIs E.Camacho, A.Gallegos.
- *UBM: Analysis of Stress in Biological Systems*, National Science Foundation \$239,460, DMS-0634613 1/2007-12/2009; PI B.Fitzpatrick, co-PIs E.Camacho, G.Kuleck, W.Binder, K.Dahlquist.
- *REU Site: Applied Mathematical Sciences Summer Institute (AMSSI)*, National Science Foundation, \$511,419 to Cal Poly Pomona (PI S.Wirkus, co-PI R.Swift), DMS-0453602, 4/2005-3/2008, co-PI of LMU subcontract of \$129,114 E.Camacho, E.Mosteig,.
- *Applied Mathematical Sciences Summer Institute (AMSSI)*, National Security Agency, \$75,000, MSPF-04IC-227, 3/2005-2/2006, PI S.Wirkus, co-PIs E.Camacho, E.Mosteig, R.Swift.

### 6.1.3 As Senior Personnel/Consultant

- *Collaborative Research: TRAIN (Transfer To Interdisciplinary Natural Sciences): A Community College-University Consortium To Increase Community College Student Transfer And Success*, S-STEM National Science Foundation, \$2,065,515.00, 1/2018-1/2022, PI P.Marshall.
- *SAGE: Situational Awareness for the GTWO (Getting the Word Out) Environment*, Combating Terrorism Technical Support Office (CTTSO) \$100,000, 3/2009-8/2009, PI N.L.Johnson (Referentia Systems Incorporated).

## 6.2 INTERNAL

- *Mathematically Analysis of Photoreceptor Degeneration in Retinal Detachment*, Fall 2016 and Spring 2016, NCUIRE funds for undergraduate student Miriam Goldman; \$625 per semester.
- *A Mathematically Model of Aerobic Glycolysis Triggered by Glucose Uptake in Cones*, Fall 2016, NCUIRE funds for undergraduate student Tatyana Korneyeva; \$625 per semester.
- *Mathematically Modeling Photoreceptor Interaction in Cone-Dense Zebrafish*, PI E.Camacho, 12/2015 - 12/2017, Western Alliance to Expand Student Opportunities (WAESO) Grant, F15UR008/ F2015ur0015, ASU, \$5,400 total. Funds for undergraduate student Javier Urcuyo. Received award for 3 different semesters (\$3,000, \$1,200, \$1,200).
- *Mathematical Modeling Kids at Risk*, PI E.Camacho, 2012 Western Alliance to Expand Student Opportunities (WAESO) Grant, S12UR037/S2012ur0045, ASU, \$3,100. Funds for undergraduate student Augustin Mange.

- *Mathematical Model for Type 2 Diabetes*, PI E.Camacho, 2012 WAESO Grant, S12UR038/S2012ur0047, ASU, \$3,000. Funds for undergraduate student Javier Baez.
- *Mathematical Model for Type 2 Diabetes*, PI E.Camacho, 2011 WAESO Grant, F11UR053/F2011ur0069, ASU, \$3,000. Funds for undergraduate student Javier Baez.
- *Exploring STEM Workforce Migration and Mobility: Modeling Complex Dynamics and Interaction in the World Polity*, PI E.Camacho, 2010 NCIAS SRCA Grant, ASU, \$5,000.
- *Dynamic Modeling of Science and Technology Workforce Migration*, PI E.Camacho, 2009 NCIAS SRCA Grant, ASU, \$5,000.
- *A Mathematical Model of Photoreceptor Interactions*, PI E.Camacho, co-PI S.Wirkus, 2008 NCIAS SRCA Grant, ASU, \$10,000.
- *Modeling Photoreceptor Interactions*, PI E.Camacho, 2005 Summer Research Grant, LMU, \$4000.

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## 7 ACADEMIC AWARDS /HONORS /FELLOWSHIPS

### 7.1 SOCIETY FELLOW

- Selected *Fellow of the American Mathematical Society* (AMS), 2024. [https://www.ams.org/fellows\\_by\\_year.cgi?year=2024](https://www.ams.org/fellows_by_year.cgi?year=2024)

The Fellows of the American Mathematical Society program recognizes members who have made outstanding contributions to the creation, exposition, advancement, communication, and utilization of mathematics.

- Selected *Fellow of the Association for Women in Mathematics* (AWM), 2024. <https://awm-math.org/awards/awm-fellows/2024-awm-fellows/>; also, <https://awm-math.org/wp-content/uploads/2023/10/press-release-AWM-Fellows-2024.pdf>

“For her leadership in the advancement, mentoring, and support of women and underrepresented groups at all levels through the creation of opportunities, collaborative research, and impactful service. Her work brings sustained systemic change, diversity, equity, and inclusion in mathematics, and more broadly in STEM.”

### 7.2 NATIONAL AWARDS

- *2023 AWM Humphreys Award*, Association for Women in Mathematics (AWM). <https://awm-math.org/awards/humphreys-award/humphreys-award-2023/>; also <https://www.wiareport.com/2022/11/erika-tatiana-camacho-to-be-honored-by-the-association-for-women-in-mathematics-for-mentoring/>

In honor of Dr. Gweneth Humphreys to recognize mathematics educators who have exhibited outstanding mentorship.

- Fulbright Scholar Award <https://news.asu.edu/20220726-2-asu-math-professors-earn-prestigious-fulbright-scholar-awards>, <https://m.youtube.com/watch?v=9FKISKwsobE>, (also in Appointments), 1/1/2023 - 6/30/2023
- 2022 NSF Director's Award for Superior Accomplishment. <https://www.youtube.com/watch?v=FMcqGLxR30&t=36m41s>

Citation: For excellence, inclusion, collaboration, integrity, learning, transparency, and public service in creating and bringing to fruition the EHR Racial Equity in STEM Education Program Description, a timely idea whose impact may fundamentally change the scientific endeavor and NSF.
- *SACNAS Presidential Award 2020*, Society for the Advancement of Chicanos and Native Americans in Science (SACNAS). <https://www.sacnas.org/2020/10/22/two-women-in-stem-honored-with-2020-sacnas-presidential-service-awards/>, <https://www.youtube.com/watch?v=LUfmjv3NSGU&t=5s>

Selected by the SACNAS President for representing the highest level of sustained contribution to the organization.
- *2020 AWM Hay Award*, Association for Women in Mathematics (AWM). <https://awm-math.org/awards/hay-award/hay-award-2020/>

In honor of Dr. Louise Hay, this award recognizes leadership and contributions as a mathematical scholar and educator.
- *2019 AAAS Mentor Award*, American Association for the Advancement of Science (AAAS). [https://www.aaas.org/news/mathematical-biologist-erika-camacho-receives-2019-aaas-mentor-award](https://www.aaas.org/news/mathematical-biologist-erika-camacho-receives-2019-aaas-mentor-award;); also <https://news.asu.edu/20190207-asu-new-college-professor-receives-2019-aaas-mentor-award>, <https://www.youtube.com/watch?v=at5Vjt3U1qk>

The Mentor Award honors individuals who during their careers demonstrate extraordinary leadership to increase the participation of underrepresented groups in science and engineering fields and careers.
- *2014 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM)*, Awarded by White House in June 2018. <https://paesmem.nsf.gov/recognition/awardeeProfile/886>; also: <https://www.ams.org/journals/notices/201809/rnoti-p1118.pdf>, <https://mathalliance.org/wp-content/uploads/2018/09/August-2018.pdf#page=3>

The PAESMEM recognizes those who have made significant contributions to mentoring and thereby support the future and productivity of the U.S. science, technology, engineering and mathematics, (STEM) workforce.
- *Honorary Dean of the 2018 Youth Development Master's Institute*, Kids at Hope, 2018 <https://www.youtube.com/watch?v=nmHeDplt2wc>

Previous awardees include Sandra Day O'Connor, Gerda Weissmann Klein, Antwone Fisher, and Raul Yzaguirre.

- *Outstanding Latino/a Faculty in Higher Education: Research/Teaching in Higher Education (Research Institutions)*, American Association of Hispanics in Higher Education (AAHHE), 2018. <https://aahhe.memberclicks.net/university-faculty-award>; also: <https://asunow.asu.edu/20180316-asu-news-erika-camacho-wins-prestigious-national-award>, <https://www.sacnas.org/diversity-news/sacnas-life-member-dr-erika-camacho-has-been-selected-to-receive-an-award-by-the-american-association-of-hispanics-in-higher-education>

This award recognizes an individual who has demonstrated excellence in both research and teaching and has provided significant contributions to his/her academic discipline.

- *2017 HENAAC Education Award*, HENAAC/Great Minds in STEM, 2017. <https://www.youtube.com/watch?v=G9Tx3a0WXSsw&feature=youtu.be>, <https://www.sacnas.org/diversity-news/dr-erika-camacho-awarded-great-minds-in-stem-education-award>

This award was created to honor individuals involved in higher education across the United States. Awarded for involvement in outreach to the Hispanic community and other underserved communities and effectiveness in recruitment of Hispanic students in STEM fields.

- *SACNAS Distinguished Undergraduate Institution Mentor Award*, Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), 2012. <http://www.public.asu.edu/~etcamach/AwardPages/SACNASMentoringAward.html>.

One recipient is selected every year from a national pool of quality nominations. Recipient excels in mentoring at all levels, focusing on undergraduate training and enabling students to advance into the sciences while actively participates in minority education activities at the local and national level.

- *HWC National Latina Leadership Award*, National Hispanic Women's Corporation (HWC), 2011. <http://www.public.asu.edu/~etcamach/AwardPages/HispanicWomensCorporation.pdf>.

HWC annually "recognizes one outstanding national Latina leader whose tireless efforts of leadership and service empowered, inspired, educated, and elevated Hispanic women nationally and gave an effective voice to the U.S. Latino communities."

- *Emerging Scholars 2010*, *Diverse: Issues in Higher Education* magazine, one of 12 nationally and annually selected scholars, January 7, 2010. <https://www.diverseeducation.com/awards-honors/emerging-scholars/2010> and <https://www.diverseeducation.com/awards-honors/emerging-scholars/2010/article/15109721/life-in-absolute-values>; also, [http://www.public.asu.edu/~etcamach/AwardPages/DiverseAward2010\\_smaller.pdf](http://www.public.asu.edu/~etcamach/AwardPages/DiverseAward2010_smaller.pdf). "Since 2002 the magazine *Diverse: Issues In Higher Education's* recognizes and features 12 young rising researchers, thinkers, and leaders in various fields for their research, teaching and overall scholarly contributions from a variety of institutions

and disciplines. Their credentials and accomplishments distinguish them, but it's the level of social consciousness among the members of the 2010 class that makes them truly excellent."

- *Mathematical Biosciences Institute (MBI) Visiting Lecturer Program*, nationally selected as one of 20 to present research talks, 2009.  
<http://www.public.asu.edu/~etcamach/AwardPages/MBILecturer.html>  
"Established in 2009 the program sponsors visits of mathematical biologists to institutions that have large numbers of undergraduates who are members of groups that are under-represented in the mathematical sciences community to deliver a lecture and meet with students and faculty."
- *Leader and Mentor in Undergraduate Research Citation*, National Security Agency (NSA), 2006.
- *Ford Foundation Fellow*
- *Sloan Fellow*
- *Social Science Research Council-Mellon Mays Fellow*
- Elected to Sigma Xi, 2005/2006
- *Leitzel Project NExT (New Experiences in Teaching) Fellow*, Mathematical Association of America

### 7.3 REGIONAL/LOCAL AWARDS

- *Founders' Day Faculty Service Award*, Arizona State University, 2019.  
<https://www.youtube.com/watch?v=gZht5kMdgvk>  
The Faculty Service Award is presented to an ASU faculty member whose service to the university and/or the community has made a significant impact and contributed to the evolution of ASU as a New American University.
- *New College Outstanding Commitment to Diversity*, New College of Interdisciplinary Arts & Sciences, Arizona State University, 2019.  
One award is given each year in recognition of a faculty member's outstanding contributions to diversity.
- *New College Outstanding Community Engagement*, New College of Interdisciplinary Arts & Sciences, Arizona State University, 2018.  
One award is given each year in recognition of a faculty member's outstanding contributions to community engagement.
- *Outstanding Achievement and Contribution Award*, Commission on the Status of Women (CSW), Arizona State University, 2017.  
Awards are given each year in recognition of outstanding achievements towards advancing the status of women in areas such as outstanding advocacy, leadership, mentorship, volunteerism, and research.

- *Grand Marshal*, ASU New College of Interdisciplinary Arts & Sciences (NCIAS) Convocation, 12/2016.

“College Marshals consist of selected faculty members from each college at all ASU campuses. Selection criteria is left to the individual colleges, but faculty who have recently won awards or have received special recognition are given primary consideration.”
- *The Victoria Foundation Higher Education Awards: Dr. William Yslas Velez Outstanding STEM Award*, Arizona, 2016.

<http://www.lavozarizona.com/story/noticias/2016/09/07/educacion-arizona/89968636/>

This award honors a Latino/a faculty in the STEM fields who “champions” the recruitment and graduation of students completing undergraduate and graduate degrees in the STEM fields and is in honor of Dr. William Y. Velez.
- *Outstanding Mentor Award 2016 from Department of Mathematics*, The University of Texas at Arlington, 2016.

Recognition during the GAANN annual conference for outstanding mentoring in mathematical community at all levels.
- *ASU STEM-TRIO Supporter of the Year*, Arizona State University, 2016.

One award is given each year to the faculty or professional for his/her enormous support to STEM students who are first generation, low income, and/or underrepresented minorities and outstanding commitment to the STEM TRIO program.
- *New College Outstanding Service Award*, New College of Interdisciplinary Arts & Sciences, Arizona State University, 2013.

One award is given each year in recognition of a faculty member’s outstanding contributions to service both within NCIAS and outside it.
- *Dr. Manuel Servin Faculty Award*, The Chicano/Latino Faculty and Staff Association (CLFSA), Arizona State University, 2013.

<https://clfsa.asu.edu/awards/dr-manuel-servin-faculty-award>.

One award is given each year in recognition of a faculty member’s excellence and achievement in the combined areas of research, mentorship of Hispanic students, leadership at ASU/in the community, and community service/involvement.
- *Grand Marshal*, ASU New College of Interdisciplinary Arts & Sciences Convocation, 12/2012.

“College Marshals consist of selected faculty members from each college at all ASU campuses. Selection criteria is left to the individual colleges, but faculty who have recently won awards or have received special recognition are given primary consideration.”
- *40 Hispanic Leaders Under 40 Award*, Univision Phoenix & Valle del Sol, 2012.

[https://asunews.asu.edu/20121002\\_camacho\\_awards](https://asunews.asu.edu/20121002_camacho_awards) or  
<http://www.public.asu.edu/~etcamach/AwardPages/40Under40.html>.



“Recipients were selected from across AZ based on their significant impact on the community, strong commitment, and excellence in leadership. They represent corporate, healthcare, government, non-profit and arts and culture sectors.” E. Camacho was the only faculty member in this group of 2012 recipients.

- *Outstanding Mentor Award*, ASU Faculty Women’s Association (FWA), 2011.  
<https://fwa.org.asu.edu/awards/outstanding-mentor-award-recipients> or  
<http://www.public.asu.edu/~etcamach/AwardPages/FWAOutstandingMentor.pdf>.  
 “A mark of a great leader is the support and guidance that they provide to others through mentorship. This award recognizes 3 ASU faculty members who have demonstrated outstanding mentorship to students and/or to other faculty members, particularly women and other underrepresented groups.”
- *Grand Marshal*, ASU New College of Interdisciplinary Arts & Sciences Convocation, 5/2010.  
 “College Marshals consist of selected faculty members from each college at all ASU campuses. Selection criteria is left to the individual colleges, but faculty who have recently won awards or have received special recognition are given primary consideration.”
- *Mentoring Recognition Awards*, Mathematical and Theoretical Biology Institute (MTBI)/ Institute for Strengthening the Understanding of Mathematics and Sciences (SUMS), 8/2009, 8/2011
- *Interdisciplinary Research Award*, LMU Sponsored Projects Office Achievement Award, 2/2007.  
 Awarded to individuals whose research and scholarly work expands disciplines and collaborations across departments.
- *Fulfilling LMU’s Mission Award*, LMU Sponsored Projects Office Achievement Award, 2/2006.  
 Award given to a single entity whose work, service, and leadership has enriched the education community of LMU by encouraging learning, educating the whole person, and promoting justice for all. Awarded mainly because of AMSSIs efforts.

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## 8 MENTORING ACTIVITIES

### 8.1 COLLABORATIVE WORKSHOP SUPERVISOR

1. Project Lead, IPAM Collaborative Workshop for Women in Mathematical Biology, June 17-21, 2019

### 8.2 POSTDOCTORAL SCHOLAR SUPERVISOR

2. Atanaska Dobрева, Ph.D. in Mathematics; 7/2020-6/2022
1. Andrea Aparicio, Ph.D. in Electrical Engineering: Control; 1/2019-6/2020

### 8.3 DOCTORAL DISSERTATION COMMITTEE CHAIR/CO-CHAIR

2. “Computational and Control Approaches in Retinal Degeneration” Kathryn Wifvat, (Applied Mathematics), 10/2018– present; Ph.D. awarded 5/2022.
1. “Modeling and Analyzing the Progression of Retinitis Pigmentosa” Danielle Brager, (Applied Mathematics), 9/2016–8/2020; Ph.D. awarded 8/2020.

### 8.4 DOCTORAL DISSERTATION COMMITTEE MEMBER

9. “Some Stochastic Models,” Mela Hardin, (Applied Mathematics), Ph.D. expected 5/2023.
8. “Mathematical Models of Opinion Dynamics,” Hsin-Lun (Steph) Li, (Applied Mathematics), Ph.D. awarded 5/2021.
7. “Modeling Collective Motion of Complex Systems using Agent-Based Models & Macroscopic Models,” Sarah El Jamous, (Applied Mathematics), Ph.D. awarded 8/2019.
6. “Conceptualizing Agriculture STEM Disciplines,” Yujie Haung, (Youth Development and Agricultural Education, Purdue University), Ph.D. awarded 8/2019.
5. “Interacting Particle Systems in Econophysics,” Stephanie Reed, (Applied Mathematics), Ph.D. awarded 5/2019.
4. “Mathematical Models at Multiple Scales,” Wendy K. Caldwell, (Applied Mathematics), Ph.D. awarded 5/2019.
3. “Effect of External Factors on Epidemics Dynamics,” Maytee Cruz-Aponte, (Applied Mathematics in the Life and Social Sciences), Ph.D. awarded 5/2014.
2. “The Implications of Different Probability Density Functions for Disease Stages in Deterministic Compartmental Epidemiological Models on the Decision of Public Health,” Emmanuel Jesus Morales Butler (Applied Mathematics in the Life and Social Sciences), 2009–2013; Ph.D. awarded 5/2014.
1. “Theoretical Studies on a Two-Strain Model of Drug Resistance: Understand, Predict, and Control the Emergence of Drug Resistance,” Alicia Urdapilleta (Applied Mathematics in the Life and Social Sciences), Ph.D. awarded: 5/2011.

### 8.5 MASTERS THESIS COMMITTEE CHAIR

1. “Parameter Estimation and Bifurcation Analysis of Cone Degeneration,” Roberto Alvarez, (Applied Mathematics), 8/2018–12/2021; M.S. awarded 12/2021.

## 8.6 GRADUATE RESEARCH PROJECTS SUPERVISED

5. “Inferring Reversal of Type 2 Diabetes via a Transcription Factor Regulatory Network Model fo Human Skeletal Muscle,” Anarina Murillo (Applied Mathematics in the Life and Social Sciences, ASU graduate student), **Supervised Fall 2012–Fall 2014; Ph.D. completed 18 months later under a different advisor.**
4. “Modeling  $\beta$ -cell Compensation and Type 2 Diabetes,” Anarina Murillo (Applied Mathematics in the Life and Social Sciences, ASU graduate student), Fall 2011–2013.
3. “Logistic Models with Time-Dependent Coefficients,” Raquel Lopez (Applied Mathematics in the Life and Social Sciences, ASU graduate student), **Supervised 2010–2011; Ph.D. completed 9 months later under a different advisor.**
2. “Static Behavioral Effects on Gonorrhea Transmission Dynamics in a MSM Population,” Liana Medina-Rios (Mount Holyoke undergraduate student), Ben Morin (Applied Mathematics in the Life and Social Sciences, ASU graduate student), 2009–2010.
1. “A Mechanism for Stabilizing Oscillations in Certain Nonlinear Systems Possessing Different time Scales,” Raquel Lopez (Applied Mathematics in the Life and Social Sciences, ASU graduate student), 2008–2009.

## 8.7 UNDERGRADUATE RESEARCH INSTITUTES

- Co-Executive Director, *Mathematical and Theoretical Biology Institute (MTBI)*, Arizona State University, (2011–2013). Co-directed summer research program with Prof. Stephen Wirkus geared for undergraduate Latino and other minority students. Planned syllabus and homework assignments for daily lectures on topics such as nonlinear difference and differential equations, probability, stochastic processes and linear algebra; advised math instructors; lectured on nonlinear ode’s; supervised teaching assistants; helped guide group research projects which culminated in poster and oral presentations as well as MCMSC Technical Reports.
- Co-Director, *Applied Mathematical Sciences Summer Institute (AMSSI)*, Cal Poly Pomona and Loyola Marymount University, (2005–2007). Co-directed summer research program with Prof. Stephen Wirkus geared for undergraduate women and underrepresented minority students. Helped plan syllabus and homework assignments for nonlinear differential equations; co-organized and ran weekly staff meetings; invited guest speakers; co-organized tours of local industries; supervised research assistants; helped guide two group research projects which culminated in poster and oral presentations as well as Department of Mathematics & Statistics Technical Reports; tracked career progress of former AMSSI students.

## 8.8 BARRETT HONORS COLLEGE THESES SUPERVISED

3. “Optimal Control PK/PD Model for Doripenem in a *P. aeruginosa* Strain”, Bryan Sawkins, 2017-2018.

2. “Latina Women in the STEM Majors at ASU”, Liliana Valdivia, 2017-2018.
1. “Mathematical Analysis of Retina Detachment”, Miriam Goldman, 2016-2017.

### 8.9 UNDERGRADUATE RESEARCH PROJECTS SUPERVISED

49. “Sensitivity Analysis for a PK/PD Model of Doripenem in a *P. aeruginosa* Strain”, Bryan Sawkins (ASU Student), Spring 2018.
48. “Optimal Control PK/PD Model for Doripenem in a *P. aeruginosa* Strain”, ASU Barrett Honors Thesis, Bryan Sawkins, Fall 2017.
47. “Modeling the Biochemistry Cascade in Cones Outer Segments Triggered by RdCVF”, Tatyana Korneyeva (ASU student), Fall 2016.
46. “Mathematical Analysis of Retina Detachment”, ASU Barrett Honors Thesis, Miriam Goldman, 2016.
45. “Modeling Density Dependence on Retinitis Pigmentosa,” Miriam Goldman, Ojeen Korkeas (ASU students), 2016.
44. “Analyzing Phagocytosis in the RPE: Overload vs. Auxiliary System,” Celia Schact (ASU student), 2016.
43. “Impact of Collaborative Learning and Research in Mathematics,” Maritza Santana (ASU students), 2016.
42. “Sensitivity Analysis for a PK/PD Model of Doripenem in a *P. aeruginosa* Strain”, Daniel El-Wailly, Jordan Dubois, Kathryn Stefanko (ASU Students), Karaline Petty (Gary K. Herberger Young Scholars Academy), Fall 2016.
41. “Optimal Control PK/PD Model for Doripenem in a *P. aeruginosa* Strain”, Christopher Graham (ASU student), Fall 2016.
40. “Mathematical Investigation of Non-canonical Autophagy in the Retinal Pigment Epithelia,” Miriam Goldman, NCUIRE Research Assistant (ASU student), Spring 2016.
39. “Photoreceptor Death Kinetics in the Zebrafish,” Javier Urcuyo, NCUIRE Research Assistant (ASU student), Spring 2016.
38. “Modeling the Effects of the P300 Wave and Violent Video Games on Neuron Firing,” Rebecca Downing, Christopher Graham, Veronica Hoyo (ASU students), Fall 2015.
37. “Modeling EEG Data of Seizures Using the Izhikevich Spiking Model,” Zack Kenyon, James Howard (ASU students), Fall 2015.
36. “Modeling the Degeneration of Rod Photoreceptors in the Retinal Pigment Epithelium Due to A2E,” Whitney Mgbara, Andrew Pfeifer, Dominique Valdizan (ASU students), Fall 2015.

35. "A Mathematical Model of Photoreceptor Interaction in a Cone-Dense Zebrafish," Javier Urcuyo (ASU student), Fall 2015.
34. "Qualitative Analysis of Various Markets in Economics," Hien Vu (ASU student), Spring 2015.
33. "Substance Abuse via Legally Prescribed Drugs: The Case of Vicodin in the United States," Wendy K. Caldwell, Benjamin Freedman, Luke Settles, Michael M. Thomas (MTBI students), Summer 2013.
32. "Elasticity Analysis of the Effect of Education Level on Productivity," Sarah Huff, Dakoda Peterson (ASU Students), Fall 2012.
31. "Iron Accumulation in the Cell: A Mathematical Model of Friedreich's Ataxia," Vanessa Chastain, Jessica Lunsford, Aaron Ortega, Reynaldo Reyes-Grimaldo, (MTBI Students), Summer 2012.
30. "Mathematical Modeling Kids at Risk," Augustin Mange (ASU Student), Spring 2012.
29. "Mathematical Model for Type 2 Diabetes," Javier Baez (ASU Student), Fall 2011, Spring 2012.
28. "My  $\beta$ IG Fat Math Model:  $\beta$ -Cell Compensation and Type 2 Diabetes," Javier Baez, Traci Gonzalez, Anarina Murillo, Danielle Toupou, Rosalia Zarate, (MTBI students), Summer 2011.
27. "Fanatic Consumerism: A mathematical model on the influence of mass media on a capitalist population," Daniel Burkow, Hershey Kelly (ASU Students), Spring 2011.
26. "A Mathematical Analysis of the Human Photoreceptor Interactions via the Rod-derived Cone Viability Factor (RdCVF)," Jorge Ramos, Samantha Ryan (ASU Students), Spring 2011.
25. "A Mathematical Approach to Binge Drinking in a College Population," Anais Gomez, Eugenio Gutierrez, Cassondra Sutter (ASU Students), Spring 2011.
24. "Mathematical Representation of the Binding of miRNA and mRNA Resulting in Cancer," Tasha Mohseni, Ray Markley (ASU Students), Spring 2011.
23. "Understanding the influence of charismatic leaders through a dynamic network model of the NAZI regime," Robert Bahr (ASU Student), Spring 2011.
22. "Mathematically Modeling the Dynamics of Competing Religious Groups," Eric Prince (ASU Student), Spring 2011.
21. "A Deterministic and Statistical Approach to a Compartmental Model of Campus Drinking," Nick Erwin (ASU Student), Spring 2011.
20. "Examining the Attainment of STEM Doctoral Degrees," Jennifer Bonham (ASU student), Spring 2010.

19. "The Behavior of Koch Islands," Lucas Malin (ASU student), Spring 2010.
18. "Applications of the Gompertz Function in Tumor Growth," Chad Lecki (ASU student), Spring 2010.
17. "Sierpinski Triangle," Daniel Burkow, Bret Herzig (ASU students), Spring 2010.
16. "Physical Applications of Calculus," Catherine Dee, Steven Flavell (ASU students), Spring 2010.
15. "A Mathematical Model for a Gene Regulatory Network Under Calcium Influence," Joseph Doggett (ASU student), Summer 2009, Fall 2009, Spring 2010.
14. "Mathematical Modeling of the Transcriptional Network Controlling the Environmental Stress Response in *Saccharomyces cerevisiae*," Stephanie Kuelbs (LMU student), Spring 2007, Summer 2007.
13. "A Network Model for the *Melting Pot* of Cultures," Kamuela (Wela) Yong (LMU student), Fall 2006, Winter 2007.
12. "A Deterministic Mathematical Model of the *Melting Pot* of Cultures," Marytherese Padberg (LMU student), Fall 2006.
11. "Becoming Greek: Joining the Fraternity Lifestyle," Enrique Schulz-Figueroa (LMU student), Fall 2006.
10. "A Mathematical Model for Gene Expression Under Environmental Stress," Nathan Waner (LMU student), Spring 2006, Fall 2006.
9. "Deterministic and Small-World Network Models of College Drinking Patterns," Supervised Lorenzo Almada, Roberto Rodriguez, Melissa Thompson, Lori Voss (AMSSI students), Summer 2006.
8. "A Mathematical Model of the Effect of Environmental Effects on Long Jump Performance of World Class Athletes," Tade Souaiaia (LMU student), Fall 2005.
7. "Is College Age Drinking Becoming a Problem? - A Mathematical Analysis," Jeannine Abiva (LMU student), Fall 2005.
6. "Is the Varicella-Zoster Vaccination Really Working?" Katie Tyler (LMU student), Fall 2005.
5. "Modeling the Spread of Rumors," Paul Schroeder (LMU student), Fall 2005.
4. "How the African Elephant Population is Beginning to Stabilize," Miguel Aceves (LMU student), Fall 2005.
3. "Alcohol's Effect on Neuron Firing," Supervised Charles Rogers, Jeannine Abiva, Edna Joseph, Arpy Mikaelian (AMSSI students), Summer 2005.

2. "A Continuous Model of Gene Expression," Supervised Elizabeth Miller, Jason Pham, Lissette LaPlace, Joseph Hunt (AMSSI students), Summer 2005.
1. "A Mathematical Model of Photoreceptor Interactions," Supervised Miguel Colon, Daniel Hernandez, Ubaldo Rodriguez-Bernier, Jon van Laarhoven (MTBI students), Summer 2003.

#### 8.10 SELECTED RECOGNITION OF SUPERVISED STUDENT RESEARCH

- "Quantitative Approach to Photoreceptor Growth in Retina Re-attachment," Miriam Goldman (ASU student) *SMNS Salt River Project Science Scholarship*, \$1900 for current research project, ASU, Spring 2018.
  - M.G. briefly profiled (1min) in <https://www.youtube.com/watch?v=vdq2zFCV0xY>.
  - E.C. mentioned at <https://www.youtube.com/watch?v=vdq2zFCV0xY&t=33s>.
- "A Mathematical Analysis of Aerobic Glycolysis Triggered by Glucose Uptake in Cones," Danielle Brager (presenter), Tatyana Korneyeva (ASU students)
  - *SACNAS Oral Presentation Award*, Graduate Oral Presentation Session, Salt Lake City, UT, October 2017.
- "Substance Abuse via Legally Prescribed Drugs: The Case of Vicodin in the United States," Wendy Caldwell (presenter), Benjamin Freedman, Luke Settles, Michael Thomas (MTBI students)
  - *SACNAS Poster Session Award*, Graduate and Undergraduate Poster Session, San Antonio, TX, October 2013.
  - Featured in *MIT Technology Review*, August 29, 2013  
<http://www.technologyreview.com/view/518566/how-to-tackle-the-vicodin-abuse-problem/>
- "Mitochondrial Iron: a Mathematical Model for Iron Regulatory Disease," Vanessa Chastain, Jessica Lunsford (presenter), Aaron Ortega, Ricardo Reyes-Grimaldo (MTBI students)
  - *Outstanding Presentation Award*, JMM Student Poster Session, San Diego, CA, January 2013.
- "My  $\beta$ IG Fat Math Model: -Cell Compensation and Type 2 Diabetes," Javier Baez, Tracy Gonzalez, Anarina Murillo, Danielle Toupo, Rosalia Zarate, (MTBI students)
  - *Best Graduate Student Poster Award*, IPC Poster Session, Baltimore, MD, March 2012.
- "A Mathematical Model for Gene Expression," Nathan Wanner (LMU student)
  - *Synthesis to Systems Poster Session Award*, SDCSB Symposium (he was the only undergraduate presenter), San Diego, CA, January 2007.
  - *Profiled in Argonaut Newspaper*, Weekly Westchester newspaper interview;
  - Profiled in *Vistas Magazine*, LMU, Spring 2007.

- “Deterministic and Small-World Network Models of College Drinking Patterns,” Lorenzo Almada, Roberto Rodriguez, Melissa Thompson, Lori Voss (AMSSI students)
  - *MAA Poster Session Award*, MAA Undergraduate Poster Session, New Orleans, LA, January 2007.
- “Alcohol’s Effect on Neuron Firing,” Charles Rogers, Jeannine Abiva, Edna Joseph, Arpy Mikaelian (AMSSI students),
  - *SIAM Poster Session Award*, SIAM Southeast Atlantic Section Annual Meeting, Auburn, AL, April 2006.
  - *MAA Poster Session Award*, MAA Undergraduate Poster Session, San Antonio, TX, January 2006.
- “A Continuous Model of Gene Expression,” Elizabeth Miller, Jason Pham, Lissette LaPlace, Joseph Hunt (AMSSI students),
  - *MAA Poster Session Award*, MAA Undergraduate Poster Session, San Antonio, TX, January 2006.
- “A Mathematical Model of Photoreceptor Interactions,” Miguel Colon-Velez, Daniel Hernandez, Ubaldo Rodriguez-Bernier, Jon van Laarhoven (MTBI students),
  - *SACNAS Poster Session Award*, Graduate and Undergraduate Poster Session, Albuquerque, NM, October 2003.

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## 9 KEYNOTE/PLENARY PRESENTATIONS

### 9.1 NATIONAL KEYNOTE/PLENARY

#### 9.1.1 National Keynote Addresses

- *Reflections and Insights on the Joys and Challenges of the Professoriate*, Annual **Institute of Teaching and Mentoring**, Compact for Faculty Diversity Institute, Tampa, FL, 1000+ attendees/audience, October 2016.
- *Meta-analysis Perspectives on Interdisciplinary and Applied Learning*, Crossing Boundaries: Transforming STEM Education, **AAC&U STEM Conference**, Seattle, WA, November 2015.
- *The intersection of adversity, resilience, tenacity, and models of photoreceptor degeneration: My story, passion and research*, **Infinite Possibilities Conference**, Oregon State University, March 2015, <http://ipcmath.org/conference.html>
- *Modeling Photoreceptor Death and Rescue*, The Dorothy Wrinch Lecture in Biomathematics, **Women in Math in New England (WIMIN) Conference** at Smith College, MA, September 2014, (also appears in Research Presentations) <http://www.math.smith.edu/~jhenle/wimin14/talks14.html>.



- (Plenary) *Mathematical Models of the Retina and In Silico Experiments: Shedding Light on Vision Loss*, **Mathematical Association of America (MAA) MathFest**, Portland, OR, July 2014, (also appears in Research Presentations), <http://www.maa.org/node/298398/>.
- *Benjamin E. Mays Address: Solidifying Our Understanding of Medical and Physiological Challenges as a Result of New Technologies and Ingenuity*, **Mellon Mays Summer Conference**, Bryn Mawr College, Philadelphia, PA, June 2013.
- *An Indomitable Spirit in the Making*, **Field of Dreams Conference**, Arizona State University, Tempe, AZ, November 2012.  
<http://magazine.amstat.org/blog/2013/05/01/field-of-dreams/>
- *Overcoming Adversity Through Impacting Mentors and Role Models*, 2009 Presidential Awards for Excellence in Science Mathematics and Engineering Mentoring (**PAESMEM Awards Ceremony**), National Science Foundation, Washington, DC, January 2011.
- *Taking the Next Steps*, Annual Biomedical Research Conference for Minority Students (**ABRCMS**), Phoenix, AZ, 2600+ attendees/audience, November 2009.  
<http://www.abrcms.org/documents/2009FinalProgram.pdf> or  
<http://www.public.asu.edu/~etcamach/AwardPages/ABRCMS2009small.pdf>.
- *Mentors and Role Models*, 14th Annual **Institute of Teaching and Mentoring**, Compact for Faculty Diversity Institute, Arlington, VA, 1000+ attendees/audience, October 2007.

### 9.1.2 National Plenary Presentations

- *How STEM education allows individuals to follow their passion, excel even when the odds against this are many, and realize their dreams*, SIAM Speaker for the **Moody's Mega Math Challenge**, New York, NY, April 2017, [https://m3challenge.siam.org/sites/default/files/FINAL\\_M3\\_2017\\_program.pdf](https://m3challenge.siam.org/sites/default/files/FINAL_M3_2017_program.pdf).
- *Incorporating a Global Perspective in STEM Education Through Interdisciplinary Projects*, Association of American Colleges & Universities (**AAC&U TIDES Institute**), Washington, DC, July 2014, <https://www.aacu.org/tides/cultural-competency>.
- *It Takes a Village to Raise a Mathematician*, **Infinite Possibilities Conference**, Baltimore, MD, March 2012.
- *Insights to Success: Real-Life Adventures of SACNAS Scientists*, **SACNAS Annual Conference**, San Jose, CA, October 2011.
- *New Perspectives on the Academy*, Plenary Panel, **Mellon-Mays Annual Graduate Student Summer Conference**, Oberlin, OH, June 2010.
- *Mentoring for Success—A Mathematical Perspective*, **The National Academies Association and Fellowships Advisory Committee**, Woods Hole, MA, June, 2009.

## 9.2 REGIONAL KEYNOTE

- *My Research & Journey in Higher Education*, **WAESO-LSAMP Student Research Conference**, Arizona State University, March 2021.
- *Knocking Down Walls: Fulfilling the Promises of ‘Stand and Deliver’*, **STEM-infused Week for High School and College Students**, Laredo College, Laredo, TX, April 2019.
- *Resilience, Tenacity, and Hard Work: My Story, Your Future, and Our Responsibility to Create a Strong Quantitative Community*, **Science Center Speaker Series**, Smith College, April 2018. <https://www.fivecolleges.edu/calendar-of-events/listings/node/191736>, <https://dailycollegian.com/2018/04/smith-stem-lecture-looks-at-diversity/>
- *Ending Blindness: Where We Are and How Far We Have to Go*, Florida Atlantic University College of Science **Frontiers in Science 2018 Public Lecture Series**, January 2018. <http://science.fau.edu/events/2018frontiersbrochure.pdf>
- *From East LA to the Ivory Tower: My Journey in Higher Education*, **CORE 4 Family Day** University of Texas-San Antonio and San Antonio Hispanic Chamber of Commerce, San Antonio, TX, November 2017.
- *Resilience and Tenacity*, **Kids at Hope** Time Traveler’s Summit, Phoenix, AZ, November 2017.
- *Stranger in a Strange Land: How I Found My Place in Academia*, **Gathering Minorities in Mathematics (GaMMa) Annual Regional Conference**, Williams College, Williamstown, MA, April 2017.
- *Knocking Down Walls: Fulfilling the Promise of Stand and Deliver*, **College of Science Dean’s Distinguished Lecture Series** together with RISE /MARC-U\*STAR /PIVOT for Academic Success, University of Texas-San Antonio, TX, April 2017, <https://www.youtube.com/watch?v=lfAqrYh6z8Y>.
- *My research, passion, and story: the intersection of modeling photoreceptor degeneration, diversifying the mathematical sciences, and contributing to a strong scientific workforce*, **Annual Conference of the Great Lakes Section of SIAM**, Grand Rapids, MI, May 2015. <https://www.gvsu.edu/siamgl2015/keynote-abstracts-20.htm>
- *The Intersection of Adversity, Resilience, Tenacity and Models of Photoreceptor Degeneration: My Story, Passion and Research*, **Opportunities in Mathematical Sciences: A Workshop for Emerging Scholars**, University of California, Irvine, CA, April 2015. [http://www.math.uci.edu/~mathoppworkshop/p\\_address.html](http://www.math.uci.edu/~mathoppworkshop/p_address.html)
- *Resilience, tenacity, and hard work- My story, your future, and our responsibility to create a strong quantitative community*, **AFFIRM Distinguished Lecture** at University of

San Diego, CA, March 2015. [http://www.sandiego.edu/events/detail.php?\\_focus=50198](http://www.sandiego.edu/events/detail.php?_focus=50198)

- *The Power of STEM and How It Changed My Life*, 8th Annual Peach State Louis Stokes Alliance for Minority Participation (LSAMP) **Symposium and Research Conference**, Atlanta, GA, October 2013.  
<http://www.pslsamp.uga.edu/conference-2013.html>
- *The Importance of Mentoring in Overcoming Adversity*, 16th Annual **AEOPP National McNair Scholars Research Conference**, Atlanta, GA, 1000+ attendees/audience, June 2010. <http://www.saeopp-mcnairconference.com/speakers.html> or <http://www.public.asu.edu/~etcamach/AwardPages/McNairSAEOPP.pdf>.
- *My Story of Achievement and the Role Jaime Escalante Played in My Success: Lessons for Faculty*, **Kids at Hope** Annual National Youth Development Master's Institute, Phoenix, AZ, May 2010.
- *Overcoming Adversity*, 10th Annual **Texas National McNair Scholars Research Conference**, University of North Texas, Denton, TX, February 2008.
- *The Importance of Mentoring in Overcoming Adversity*, **Natural Sciences Week** at University of Puerto Rico, Rio Piedras, PR, November 2007.
- *The Role of Mentoring in Pursuit of a Higher Degree*, **PROMISE Success Institute**, University of Maryland's AGEP, August 2007.

### 9.3 LOCAL KEYNOTE/PLENARY

#### 9.3.1 Local Keynote Addresses

- *The Intersection of Adversity, Resilience, Tenacity, and Mathematical Models: My Story, Passion, and Research*, **2019 Creative Arts and Research Symposium**, Texas Women's University, Denton, TX, April 2019.
- *ASU ADVANCE: Igniting Innovation, Inclusivity and Equity*, **STEM Equity Exchange**, Arizona State University West campus, AZ, February 2019.
- *Team Building, Collaboration, and Mentoring, Lean on Me...Getting Ready to Hula in a New Academic Year (Retreat)*, South Mountain Community College, Phoenix, AZ, July 2018.
- *Mechanistic Mathematical Models*, **High School Math Day**, Florida Atlantic University, Florida Atlantic University, Boca Raton, FL, January 2018.
- *Resilience, tenacity, and hard work- My story, your future, and our responsibility to create a strong quantitative community*, **Annual AZWESTOP Student Leadership Conference**, Arizona State University West campus, AZ, April 2018.

- *Stand and Deliver* **Film Screening and Keynote Address**, Barrett Honors College, Arizona State University, AZ, Apr 2017.
- *Becoming a Mathematician*, **STEM Day (for high school)**, Arizona State University West campus, AZ, February 2017.
- *My Journey Through College*, **Camp Catanese for High School Students**, Arizona State University, AZ, May 2016. <http://tntp.org/fishman-prize/winners/fishman-prize-2016/jason-catanese> <https://asunow.asu.edu/20160606-asu-helps-students-get-excited-about-college>
- *Mathematical Models of the Retina and In Silico Experiments: Shedding Light on Vision Loss*, **Public Scientific Lecture**, North Central College, Naperville, IL, May 2016.
- *The intersection of adversity, resilience, tenacity, and models of photoreceptor degeneration: My story*, **Operation Math Girls (OMG) annual conference**, Sam Houston University, Huntsville, TX, February 2016.
- *Resilience, tenacity, and hard work- My story, your future, and our responsibility to create a strong quantitative community*, **Sierna Center and Doctorate in Educational Leadership Program**, California State University Sacramento, CA, October 2014.
- *My Trajectory and Mentors Who Carved My Path*, **College Assistance Migrant Program (CAMP) STEM Migrant Student Leadership Institutes**; two talks for target audiences: (1) 10th and 11th graders (2) 7th through 12th graders, Sacramento, CA, July 2014.
- *Creating New Science through a Diverse Systems Approach*, **LMU McNair Scholars Fall Symposium**, Loyola Marymount University, Los Angeles, CA, September 2013.
- *How Sheer Determination, Resilience and a Few impacting Mentors Can Overcome Adversity*, **Mathapalooza**, Pomona College, Pomona, CA, March 2013.
- *My Path to a Career in Applied Mathematics and as a University Professor*, **2nd Annual Career Fair**, Littleton Elementary School (7th and 8th graders), Avondale, AZ, May 2011.
- *Faculty Going the Extra Mile Can Make All the Difference*, **Fall All College Faculty Meeting**, Scottsdale Community College, Scottsdale, AZ, August 2010.
- *How Going the Extra Mile As a Student Can Make All the Difference in the World*, **Mathematical and Theoretical Biology Institute & Institute for Strengthening the Understanding of Mathematics and Science (MTBI/SUMS)**, Tempe, AZ, August 2010.
- *My Story of Achievement and the Role Jaime Escalante Played in My Success: Strategies for Students*, **Tomorrow's Involved Leaders Today (TILT)**, Phoenix, AZ, May 2010.
- *Overcoming Adversity in Pursuit of Professional Goals*, **Sonia Kovalevsky Day**, ASU, Glendale, AZ, February 2009.

### 9.3.2 Local Plenary Presentations

- *Stranger in a Strange Land: How I Found My Place in Academia*, **Office for Institutional Equity and Diversity**, Raleigh, NC, April 2017.
- *Insights to Success: Before, During, and After Graduate School* (for Students), **Mentoring@Purdue, Annual Invited Lecture Series**, West Lafayette, IN, March 2017.
- *Intentional and Strategic Mentoring* (for Faculty and Staff), **Mentoring@Purdue, Annual Invited Lecture Series**, West Lafayette, IN, March 2017.
- *How Sheer Determination, Resilience and a Few impacting Mentors Can Overcome Adversity*, **Women's Professional and Synergy Academy (WPASA)**, San Antonio, TX, April 2017.
- *Mentoring Presentation*, **Center for Bio-mediated and Bio-inspired Geotechnics**, Arizona State University, Tempe, AZ, November 2016.
- *Leadership and Community Engagement*, **Hispanic Mother Daughter Workshop**, Tempe, AZ, November 2016.
- *Interdisciplinary Research: Making a Successful Transition from Student or Postdoc to Faculty in a Student-Focused Environment*, **University of San Diego AFFIRM Workshop for Faculty**, San Diego, CA, March 2015.
- *The Forces Behind My Drive, Before, During, and After Graduate School*, **MGE@MSA**, ASU, April 2008.
- *My Career Path from East Los Angeles to an Ivy League Doctoral Degree*, **Hispanics and Latinos in the Humanities and Sciences Two Day Interdisciplinary Event**, City University of New York (CUNY)–Queensborough, March 2006.
- *Stand and Deliver: My Experience with Jaime Escalante as Teacher, Role Model, and Mentor*, **Hispanics and Latinos in the Humanities and Sciences Two Day Interdisciplinary Event**, CUNY–Queensborough, March 2006.

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## 10 RESEARCH PRESENTATIONS

### 10.1 International Presentations

- “A mathematical analysis of aerobic glycolysis triggered by glucose uptake in cones,”  
Jul 2018    Society for Mathematical Biology (SMB) Annual Conference,  
**Sydney, Australia.**
- “The Role of RdCVF in Photoreceptor Degeneration,”  
Aug 2015    International Congress on Industrial and Applied Mathematics (ICIAM),  
**Beijing, China.**

- “Mechanistic Models of Retinitis Pigmentosa (RP),”  
Jul 2014 Society for Mathematical Biology, **Osaka, Japan.**
- “Inferring Photoreceptor Death and Rescue in RP from In Silico Experiments,”  
May 2014 Institut de la Vision, **Paris, France.**

## 10.2 National Presentations (National Audience)

- “The Role of Cone Metabolism in Mitigating Blindness,”  
Apr 2021 **Cornell University**, CAM Notable Alumni Lecture Series Speaker  
[https://www.youtube.com/watch?v=-TsX\\_518U40](https://www.youtube.com/watch?v=-TsX_518U40)
- Jan 2021 **AWM 50th Anniversary Inaugural speaker, We Speak: Inspiring Women in Math Speaker Series**, (attendees via Zoom)  
[https://www.youtube.com/watch?v=MK3yj0Ak\\_d8](https://www.youtube.com/watch?v=MK3yj0Ak_d8)  
professionals, faculty, graduate students)
- “Mathematical Modeling of Retinal Degeneration: Aerobic Glycolysis in a Single Cone”  
Oct 2020 **University of Sydney Applied Math Seminar** (via Zoom)
- “Modeling Cone Aerobic Glycolysis,”  
Jan 2020 **Joint Mathematics Meeting (JMM)**, Denver, CO.
- “Modeling the Metabolic Process in Cone Photoreceptors,”  
Oct 2018 **SACNAS Annual Conference**, San Antonio, TX.
- “The Role of RdCVF in the Health of Cone Photoreceptors,”  
Jul 2016 **SIAM Annual Conference**, Boston, MA.
- “Mathematical Models of the Retina and *In Silico* Experiments: Shedding Light on Vision Loss,”  
Aug 2014 **Mathematical Association of America (MAA) Invited Address**,  
MathFest, Portland, OR. (Also in National Keynote Presentations.)  
<http://www.maa.org/meetings/mathfest/program-details/2014/invited-addresses>
- “Modeling Photoreceptor Death and Rescue,”  
April 2015 **Latinos in Mathematics Conference**, IPAM, CA.  
[https://www.youtube.com/watch?v=\\_fvu388UnmM&t=3s](https://www.youtube.com/watch?v=_fvu388UnmM&t=3s)  
<http://www.ipam.ucla.edu/programs/special-events-and-conferences/latinos-in-the-mathematical-sciences-conference/?tab=schedule>
- Nov 2014 **Blackwell Tapia Conference**, IPAM, CA.  
<http://www.ipam.ucla.edu/programs/special-events-and-conferences/blackwell-tapia-conference-and-awards-ceremony/?tab=schedule>
- Sept 2014 **The Dorothy Wrinch Lecture in Biomathematics**, WIMIN Conf.,  
MA. (Also appears in National Keynote Presentations section.)  
<http://www.math.smith.edu/~jhenle/wimin14/>

- “Mechanistic Models of Retinitis Pigmentosa (RP),”  
Jul 2014 **SIAM Annual Conference**, Chicago, IL.  
[https://www.pathlms.com/siam/courses/480/sections/739/thumbnail\\_video\\_presentations/5291](https://www.pathlms.com/siam/courses/480/sections/739/thumbnail_video_presentations/5291)
- “Developing an integrative framework to understand calcium-related diseases through genetic networks,”  
Oct 2013 **SACNAS Annual Conference**, San Antonio, TX.
- “Inferring Gene Regulatory Networks from Mathematical Models,”  
Oct 2013 **SACNAS Annual Conference**, San Antonio, TX.
- “Tracing the Progression of Retinitis Pigmentosa via Photoreceptor Interactions,”  
Oct 2012 **SACNAS Annual Conference**, Seattle, WA; (substitute for Aziz Yakubu, in *Up to the Minute Reports in Mathematical Epidemiology*).  
July 2012 **SIAM Annual Conference**, Minneapolis, MN.  
Mar 2012 **Infinite Possibilities Conference**, IMA Mini-Workshop, Baltimore, MD. <http://www.ipcmath.org/documents/IPC2012Program.pdf>
- “Mathematical Models of the Human Eye,”  
April 2011 **MIT Women in Mathematics Lecture Series**, Cambridge, MA.
- “Two Mathematical Models of a Neuron Firing Under the Influence of Alcohol or Related Drugs,”  
Nov 2007 **Univ. of Puerto Rico, Rio Piedras Natural Sciences Week**, Rio Piedras, PR.  
July 2006 **SIAM Annual Conference**, Boston, MA.
- “Alcohol’s Effect on Neuron Firing,”  
Nov 2007 **Infinite Possibilities Conf.**, North Carolina State Univ., Raleigh, NC.  
Jan 2007 **SIAM Minisymposium at the Joint Math Meetings**, New Orleans, LA.
- “Modeling Biological Rhythms with Differential Equations,”  
July 2006 **SIAM Annual Conference**, Boston, MA.
- “Diversifying the Research Experience: creating an REU environment that is conducive to the education of the whole person,”  
Jan 2006 **Mathematical Association of America**, San Antonio, TX.
- “Chaos in a Generalized Two Person Version of Rock-paper-scissors Game,”  
June 2005 **Social Science Research Council-Mellon Mays Conf.**, NY, NY.  
April 2005 **Infinite Possibilities Conference**, Atlanta, GA.
- “Co-development and Interactions of Interest Groups,”  
Oct 2003 **SACNAS Annual Conference**, Albuquerque, NM.

- “Dynamics of Two van der Pol Oscillator Coupled via a Bath,”  
May 2003 **SIAM Dynamical Systems Annual Conference**, Snowbird, UT.  
Oct 2002 **Ford Annual Conference**, Albuquerque, NM.
- “A Mathematical Model of a Retinal Oscillator,”  
June 2001 **Mellon Fellows Summer Conference**, Durham, NC.
- “Nonlinear Dynamics of the Bombardier Beetle,”  
May 1999 **SIAM Annual Conference**, Atlanta, GA.

### 10.3 National Presentations (Regional Audience)

- “Using Mathematics to Help End Blindness,”  
Jul 2019 **PIMS Public Lecture**, Univ. of British Columbia, Vancouver, Canada.
- “Mathematical Models of the Retina and *In Silico* Experiments: Shedding Light on Vision Loss,”  
Jul 2017 **MSRI-UP Seminar**, Berkeley, CA.
- “The Role of RdCVF in the Health of Cone Photoreceptors,”  
Apr 2017 **Math Department Seminar**, Williams College, Williamstown, MA.
- “The Role of RdCVF and Nutrients in Retinitis Pigmentosa,”  
Apr 2017 **Research Seminar**, University of Texas at San Antonio, TX.  
Apr 2016 **Department of Mathematics**, University of Texas at Arlington, TX.  
[https://www.uta.edu/math/seminars/seminar\\_s16.htm](https://www.uta.edu/math/seminars/seminar_s16.htm)  
May 2016 **AMS Tensor SUMMA: Minorities in Mathematics Speaker Series (MIMSS)**, North Central College, Naperville, IL.
- “How can mathematics help us understand certain diseases of the eye?”  
Jan 2014 **Kids’ Tech University (KTU)**, Virginia Tech, Blacksburg, VA.  
<http://kidstechuniversity.vbi.vt.edu/program> or  
<http://kidstechuniversity.vbi.vt.edu/past-programs>.
- “Understanding Gene Regulatory Interactions Through Recurrent Neural Networks,”  
Nov 2013 **Mathematics Colloquium**, Wellesley College, Wellesley, MA.
- “Insights into Type 2 Diabetes Using Two Different Mathematical Approaches,”  
June 2013 **Summer Math Institute (SMI)**, Cornell University, Ithaca, NY.
- “Mathematical Modeling and *In Silico*,”  
May 2013 **Department of Mathematical Sciences Colloquium**, West Point Academy, West Point, NY.  
Mar 2013 **Department of Mathematics Colloquium**, Pomona College, Claremont, CA.  
Nov 2012 **New Frontiers in Medical Science Biotechnology and Medicine Lecture Series**, AZ Science Center, Phoenix, AZ.



- “Tracing the Progression of Retinitis Pigmentosa via Photoreceptor Interactions,”  
June 2012 **MIT Department of Biology, HHMI Special Research Seminar**,  
Cambridge, MA. [https://biology.mit.edu/outreach\\_initiatives/hhmi\\_special\\_research\\_seminars](https://biology.mit.edu/outreach_initiatives/hhmi_special_research_seminars).
- May 2012 **Cornell University Center for Applied Math Colloquium**, Ithaca,  
NY. *Graduate Students’ Choice Speaker for 2012*.  
[http://events.cornell.edu/event/cam\\_colloquium\\_erika\\_camacho\\_arizona\\_st\\_-\\_tracing\\_the\\_progression\\_of\\_retinitis\\_pigmentosa\\_via\\_photoreceptor\\_interactions](http://events.cornell.edu/event/cam_colloquium_erika_camacho_arizona_st_-_tracing_the_progression_of_retinitis_pigmentosa_via_photoreceptor_interactions)
- April 2012 **Purdue University Math Dept. Colloquium**, West Lafayette, IN.
- “Mathematical Models of the Human Eye,”  
April 2011 **MIT Women in Mathematics Lecture Series**, Cambridge, MA.
- “Compartmental Models and Their Insights to Various Applications,”  
Jan 2012 **What’s Your Passion?, Herberger Young Scholars Academy**,  
Glendale, AZ.
- “Mathematical Models of a Neuron Firing,”  
July 2009 **George Washington Univ. SPWM Program**, Washington, DC.  
June 2007 **SUMSRI REU Colloquium**, University of Miami, OH.

#### 10.4 Local Presentations

- “Mathematical Models of the Retina and *In Silico* Experiments: Shedding Light on Vision Loss,”  
Sept 2014 **Applied & Computational Mathematics Seminar**, ASU West, AZ.
- “The Role of RdCVF in Photoreceptor Coexistence,”  
Oct 2015 **School of Mathematical & Natural Science Seminar**,  
ASU West, AZ.
- “Gene Regulatory Networks and Mathematical Models,”  
Feb 2014 **MLK Jr. MIT Program Talks**, Cambridge, MA
- “Mathematically Modeling Retinitis Pigmentosa,”  
June 2011 **MCMSC Mini-Workshop**, Arizona State University, Tempe, AZ.  
April 2011 **Los Arizona Days**, University of Arizona, Tucson, AZ.
- “Math and Computer Modeling: Insights to Social and Physiological Problems,”  
Sept 2012 **What’s Your Passion?, Herberger Young Scholars Academy**,  
Glendale, AZ.
- “Principles of Compartmental Models and Their Implications in Epidemics,”  
Jan 2012 **What’s Your Passion?, Herberger Young Scholars Academy**,  
Glendale, AZ.
- “Photoreceptors, Evolutionary Games, and Differential Equations,”  
April 2008 **MGE@MSA Workshop/Seminar**, Arizona State Univ, Tempe, AZ.

- Nov 2005 **Whittier College, College of Science & Eng. Colloquium,**  
Whittier, CA.
- June 2005 **Cal Poly Pomona Math & Statistics Dept. Colloquium,**  
Pomona, CA.
- “Modeling Biological Rhythms with Differential Equations,”  
April 2006 **Math Seminar at Pepperdine University,** Malibu, CA.
  - Nov 2005 **Loyola Marymount Math Department Colloquium,** Los  
Angeles, CA.
  - “Two Mathematical Models of Photoreceptor Dynamics,”  
April 2005 **Occidental College Mathematics Dept Colloquium,** Pasadena, CA.
  - “Modeling Circadian Rhythms in the Eye,”  
Feb 2005 **Cal State Univ-San Bernadino Math Dept Colloquium,**  
San Bernadino, CA.

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## 11 OTHER PRESENTATIONS

### 11.1 INVITED SPEAKER

- Society for Mathematical Biology: Diversity, Equity and Inclusion Workshop “*NSF Can Transform Lives: My Story and Broadening Participation to Advance STEM*,” March 2021.
- University of Arizona—UNAM (Mexico) Meeting on Math Education, Speaker, “*Math Education & Latinos*”, August 2018.
- ASU American Society for Biochemistry and Molecular Biology student chapter, Research Seminar Series, Speaker, “*Mathematical Modeling in Biology & Sociology*”, April 2017.
- Inaugural Women of Color STEM Entrepreneurship Conference, *The New Normal: Women of Color Innovations and Achievements through STEM Entrepreneurship*, “Implicit Bias Workshop: It takes a Village to Create a Women of Color in STEM”, SkySong, Scottsdale, AZ , May 2016. <https://cgest.asu.edu/2016conference#tab-id-279-2/>.
- Preparing Undergraduates through Mentoring towards PhDs (PUMP), *CSU Alliance Summer Program in Mathematics*, “My Trajectory and Mentors Who Carved My Path”, Pomona, CA, July 2015.
- UCI Physical Sciences Student Affairs, *Undergraduate Seminar*, “Insights to Success: Before, During and After Graduate School Through my Story”, Irvine, CA, April 2015. <http://www.math.uci.edu/node/23846>
- SACNAS Conference, *Family Engagement Day in STEM*, “My Story and Trajectory at a Glimpse,” San Antonio, TX, October 2013.

- Manzana Foundation Scholars Speaker, “Pursuing Your Dreams,” Phoenix, AZ, November 2012.
- Purdue University Association of Women in Mathematics (AWM) Student Chapter Lecture, “My Story and Professional Trajectory,” West Lafayette, IN, April 2012.
- Leadership Speaker Series, “Overcoming Adversity,” Tempe Chamber of Commerce, February 2012.  
<http://tempechamber.org/wp-content/uploads/2012/11/TBA-Jan-2012.pdf> p11 or  
<http://www.public.asu.edu/~etcamach/AwardPages/TempeChamberssmall.pdf>.
- ASU SIAM Student Chapter Seminar, Invited Guest Speaker for Math Awareness Movie “Stand and Deliver,” Tempe, April 2008.

### 11.2 INVITED PANELIST (Selected Speaking Engagements)

- *Teaching and Mentoring*, Diversity and Inclusion Science Initiative (DISI) Graduate Research Conference, ASU, February 2019.
- *Postdoctoral Workshop in STEM*, Annual Ford Fellows Conference, Irvine, CA, October 2018
- *Work and Life Balance*, Federation of American Societies for Experimental Biology (FASEB), Webinar, December 2018.
- *WAESO Context Diversity Workshop*, Hispanic Research Center, ASU, May 2018.
- *Team Science*, Fusion 2018 Scientific Retreat, Biodesign, ASU, Apr 2018.
- *Leadership Summit*, Faculty Women Association (FWA), ASU, February 2018.
- *Catalyst Awards Roundtable Discussion*, Committee for Campus Inclusion (CCI), ASU, Nov 2017.
- *SACNAS Leadership Opportunities*, SACNAS Annual Conference, Salt Lake City, UT, October 2017.
- *How STEM Professors are Committed to Social Justice*, SUCCESS 2017–Maryland Pipeline Professional Development Conference, Hanover, MD, August 2017.
- *Careers in Mathematics*, Girls in Applied Math, Modeling, and Analysis (GAMMA), Raleigh, NC, April 2017.
- *Power of the Purse: “Empowering STEM Business and Workforce”*, AZ Hispanic Chamber of Commerce, Phoenix, AZ, March 2017.
- *Why You Should Consider Doctoral Education and the Professoriate, Personal Experiences*, WAESO, Tempe, AZ, March 2017.

- *SACNAS Leadership Opportunities*, SACNAS Annual Conference, Long Beach, CA, October 2016.
- *What Can I Do With a STEM Degree?*, SACNAS Annual Conference, Long Beach, CA, October 2016.
- *Those Who Can Do...: Timing, Negotiation and Objectives in Transitioning Your Academic Position to Administration*, Senior Ford Fellows Annual Conference, Washington, DC, September 2016.
- *Creative Collaborations and Interdisciplinary Research*, Ford Fellows Annual Conference, Washington, DC, September 2016.
- *STEM Talks*, 2nd Annual TRIO, Faculty Panelist, ASU, Glendale, AZ, September 2015.
- *Dissertation Workshop*, Physical Sciences, Mathematics, and Engineering Session, Ford Fellows Annual Conference, Irvine, CA, September 2014.
- *Advice from My Experience for Graduate Students and Postdocs* Women in Math Lunch Series, MIT, Cambridge, MA, March 2014.
- *First Generation* Documentary Film, Panel Discussion and Commentary, ASU, Glendale, AZ, December 2012.
- *What Type of Institution is Right for You?* Path of Professorship Workshop, MIT, Cambridge, MA, November 2013.
- *What Type of Institution is Right for You?* Path of Professorship Workshop, MIT, Cambridge, MA, October 2012. <http://odge.mit.edu/development/pop/2012-photo-gallery/>
- *Critical Transitions in Graduate School: Advice for Current and Prospective Graduate Students*, SACNAS Annual Conference, San Jose, CA, October 2011.
- *Balancing Life and Career*, Ford Foundation 2011 Conference, Irvine, CA, October 2011.
- *Sloan Program Director's Workshop*, Compact for Faculty Diversity Institute on Teaching and Mentoring, Atlanta, GA, October 2011.
- *E-Inspiring STEM Leadership Panel, 26th National Hispanic Women's Professional & Leadership Institutes*, Phoenix, AZ, October 2011.
- *Latinas in the STEM Disciplines*, 6th Symposium on Latinas in Higher Education and the Annual 2011 Gender Matters Symposium, Davis, CA, May 2011.
- *Good Intentions are Necessary but Not Sufficient: Steps Toward Best Practices in Mentoring Underrepresented Students*, MAA Panel Discussion, Joint Mathematics Meetings, New Orleans, LA, January 2011.

- *Applying for Scholarships and Fellowships*, Infinite Possibilities Conference, IPAM, Los Angeles, CA, March 2010.
- *Entrepreneurship in the Mathematical Sciences*, Infinite Possibilities Conference, IPAM, Los Angeles, CA, March 2010.
- *Why You Should Consider Doctoral Education & the Professoriate, Personal Testimonials, Part II*, MGE@MSA Student Research Conference, Tempe, AZ, January 2010.
- *Random Bits of Advice*, Nebraska Conference for Undergraduate Women in Mathematics (NCUWM), Lincoln, NE, January 2010.
- *Experiences of Former Scholars in Creating and Engaging a Learning Environment*, 16th Annual Institute on Teaching and Mentoring, Compact for Faculty Diversity Institute, Arlington, VA, October 2009.
- *Mentoring for Postdoctoral Fellows*, 14th Annual Teaching and Mentoring Institute, Compact for Faculty Diversity Institute, Arlington, VA, October 2007.
- *Success in Graduate School*, SACNAS, Tampa, FL, October 2006.
- *The Spectrum of Undergraduate Research Programs*, PURM Conference, Chicago, IL, September 2006.
- *Women in Science and Medicine Panel I: Careers Options*, Wellesley College Alumnae Association's Making Connections ALANA Forum, Wellesley, MA, October 2005.
- *Women in Science and Medicine Panel II: Balancing Family Life and Career*, Wellesley College Alumnae Association's Making Connections ALANA Forum, Wellesley, MA, October 2005.
- *Career Experiences in Math and Science*, Barnard College, Social Science Research Council-Mellon Mays Conference, New York, NY, June 2005.
- *Rewards of Mathematics*, Spelman College, Infinite Possibilities Conference, Atlanta, GA, April 2005.

### 11.3 POSTER PRESENTATIONS

- "Modeling Cone Aerobic Glycolysis," The Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, Poster#: 567-B0029, Vancouver, Canada, April 2019.
- "Modeling Photoreceptor Interactions in the Presence of Retinitis Pigmentosa," The Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, Program#: 6438, Poster#: A331, Fort Lauderdale, FL, May 2012.

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## 12 LEADERSHIP AND SERVICE – NATIONAL SCIENCE FOUNDATION

Served as a Program Officer at the National Science Foundation (NSF) in Alexandria, VA, 9/23/2019 - 7/29/2022. Served a co-lead of the HSI Program and Program Officer in the ADVANCE Program and also in the Racial Equity in STEM Program Description, in addition to other assignments within the NSF; see below. See the next section for service to the profession, university, and community.

### 12.1 NSF HSI PROGRAM CO-LEAD; NSF ADVANCE PROGRAM OFFICER; NSF RACIAL EQUITY IN STEM PROGRAM OFFICER.

- Catalyzed, developed, and wrote the new IUSE: Hispanic-Serving Institution Program solicitation 20-599 and Program Management Plan (PMP).
  - Spearheaded the review and approval of new solicitation (20-599) and PMP for the HSI Program and led all its revisions and reviews. <https://new.nsf.gov/news/nsf-announces-new-opportunities-hispanic-serving>
    - Some presentations on the new HSI solicitation:
      - <https://www.youtube.com/watch?v=P75q6WogRvI>
      - [https://video.ucdavis.edu/media/Clip+of+HSI+Summit+Pt.+1+-+%22A+Call+to+Action%22+%2851+min+31+sec%29/1\\_slv8j1wf/25824272&t=17m11s](https://video.ucdavis.edu/media/Clip+of+HSI+Summit+Pt.+1+-+%22A+Call+to+Action%22+%2851+min+31+sec%29/1_slv8j1wf/25824272&t=17m11s)
      - <https://www.youtube.com/watch?v=RwbhoQ0BH3w&t=9m29s>
- Organized and ran the first ever NSF HSI Program PI meeting that took place 11/2019. (Invited speakers: Victor McCrary, Vice President for Research and Graduate Programs, University of the District of Columbia & member of the National Science Board; Sarita Brown President, Excelencia in Education, Alicia Diaz, HACU Interim Chief Advocacy Officer; Raquel Tamez, CEO of SHPE; Kevin B. Vichcales, President, AHSIE; Sonia Zarate, President, SACNAS; and others.)
- Developed and implemented NSF HSI Program Outreach plan.
- Site visits for ADVANCE
  - Participated in the ADVANCE Resource Coordination Network (ARC Network) site visit, helped identify reviewers, and revised the committee review report and cover letter.
  - Participated in the ADVANCE site visits to Florida International University and Seattle University where we met with the President, Provost and faculty.
- Reviewed and approved Annual Progress Reports (APRs) for the HSI and ADVANCE Programs.
- ADVANCE COVID Challenge; organized the first meeting with HRD programs focused on undergraduate education.
- Reviewed, processed, and oversaw the processing of RAPID HSI Program proposals as well as answered multiple inquiries regarding RAPIDs.

- Attended multiple conferences as HSI co-lead, including Excelencia: 2020 ALASS Institute, Oct.2, 2020; Excelencia Ensuring America's Future: Accelerating Latino College Completion Today and to 2030; Sept. 2 2020.
- Part of team that created the Racial Equity in STEM Program Description funding opportunity; serve as Program Officer for this program.

## 12.2 INTER-AGENCY & INTRA-AGENCY INITIATIVES & ACTIVITIES

### Inter-agency initiatives

- Federal Interagency Working Group on Hispanic Prosperity (formerly, Educational Excellence for Hispanics), member and NSF representative.
- MOU for the ADVANCE NIH Coordination Center: Memorandum of understanding between Department of Health and Human Services National Institutes of Health Office of the Director, Office of Research on Women's Health, and U.S. National Science Foundation;
  - Coordinated efforts around systemic change programs to address gender inequities in the Science, Technology, Engineering, Mathematics and Medicine (STEMM) Workforce, including the Biomedical Research Workforce.

### Across the NSF agency and EHR directorate

- EHR HSI Program Officer representative for Mid-Career Advancement (MCA) Program.
- EHR Post-COVID working group, HRD division representative;
  - Charged to come up with ideas and proactively respond to the many challenges that will be facing our communities on the other side of COVID-19.
- NSF EHR Racial equity working group, HRD division representative;
  - Charged to create funding mechanisms using the current stream of funds to support projects that boldly focus on understanding and addressing systemic racism to move toward racial equity in STEM education research and workforce development.
- Co-developed/ wrote Racial Equity in STEM Program Description.
- Institutional Policy Recruitment/Retention Panel; Equity and Antiracism: A Roadmap to Policy Transformation in Biomedical Engineering (BEM) Summit, 1/2020.
- Science & Technology Centers (STC) reverse site visit for MPS, reviewed as Program Officer and helped identify and recruit reviewers for this site visit held 10/2020.
- Reviewed internally for various programs (outside HSI and ADVANCE) including,
  - the NSF 2036 DCL, Exploring the NSF 2026 Idea Machine (NSF 20-041),
  - EEC Broadening Participation in Engineering (BPE),
  - CISE Division of Computer and Network Systems, and
  - RAPIDS for CISE, HBCU-UP, and NSF INCLUDES.

- Participated in the DMS-Infrastructure virtual panel (in March 2020; and the PO meeting of review discussion and debriefing in April 2020).
- NSF Office of Diversity and Inclusion (ODI) Hispanic Heritage Speaker; **Inaugural Speaker:** “Be Proud of Your Past and Embrace Your Future” (attended by all NSF Staff), 10/2020.
- Featured in Modern Wellness Guide article at the request of the NSF’s Office of Diversity and Inclusion (ODI); Link to article: <https://www.modernwellnessguide.com/hispanic-heritage/how-research-opportunities-for-undergrads-can-change-lives/>
- Presentation on racism and promoting diversity in STEM field, American Society for Biochemistry and Molecular Biology (ASBMB), University of Wisconsin-Madison Student Chapter; request from NSF’s Office of Legislative and Public Affairs (OLPA); open to ASBMB membership and all the public; 10/2020.
- Facilitator for the HBCU-UP and CREST PI Meeting session on collaboration and networking, 2/2021.
- **Keynote address** (co-presented), “Infusing Intersectionality into ADVANCE Institutional Change Projects”, Symposium on Addressing Intersectionality to Transform Leadership, Penn State, 2/2021.

### 12.3 PRESENTATIONS FOR HSI AND ADVANCE PROGRAMS

- Organized Across NSF agency presentations at 2020 SACNAS National Conference (presented in session 2 on ADVANCE and HSI Program)
  - Session 1: Insights on STEM pathways and experiences at NSF; Target Audiences: undergraduate, Graduate and Postdoctoral Students
  - Session 2: Funding opportunities for PIs and the impact of these programs on the institutions we serve; Target Audiences: Faculty and potential PIs
- HSI Program (and sometimes also ADVANCE) Presentations
  - Plenary presentation, The Role of Intersectionality in Gender Equity and Systemic Change: NSF INCLUDES Symposium for Advancing Latinas in STEM Academic Careers symposium; 4/9/2021 UTRGV
  - Upcoming: Hispanic Association of Colleges and Universities (HACU): 26th Annual National Capitol Forum: Funding Opportunities for Hispanic-Serving Institutions (HSIs), presenter, 4/2021
  - Co-presented on EHR Brownbag: ADVANCE overview and program design lessons learned, 4/22/2020.
  - “Funding Opportunities for HSIs”, HACU, 25th Annual National Capitol Forum on Hispanic Higher Education, 4/20/2020.
  - Conference for Rural HSIs, 9/23 (2 sessions); Attendees: Faculty and administrators for rural colleges and universities; Introduced new solicitation with a focus on Track 1: Planning or Pilot projects



- HSI STEM Resource Hub co-host with Texas Hispanic-Serving Consortium (TxH-SIC); 2hr presentation on HSI New solicitation, 10/2; Attendees: HSI community colleges and the Texas HSIs Consortium on the HSI Program new solicitation
- Alliance of Hispanic Serving Institutions Educators (AHSIE) Grant Institute, 10/2020; Attendees: Faculty and educators at HSIs interested in grant opportunities and attending a grant writing institute
- HSI STEM Resource Hub: Preparing a successful grant, 10/2020; postponed; Attendees: HSI community colleges and teaching institutions
- Computer Alliance Hispanic-Serving Institutions (CAHSI) all hands meeting, 10/2020; CAHSI Northern Region Meeting; Attendees: Faculty at HSIs and TCUs; With over 4,000 attendees it's one of the largest conferences for Latinos and Native American in STEM.
- Grantsmanship Institute for Rural HSIs, 10/23; Attendees: Faculty at rural HSIs and HSIs that PUIs and teaching institutions who want to become more successful at grantsmanship and garnering funding.
- Society of Hispanic and Professional Engineers (SHPE) Deans' Convention; Presentation at the Deans Round Table on NSF ADVANCE Program and HSI Program with NSF INCLUDES & BPE, 10/28; Attendees: Deans and other administrators at HSIs and non-HSIs (presentation focused on Track 3: ITP and Track 2: IEP which focus on institution-wide and departmental- or college-wide initiatives and projects, respectively, for the HSI Program).
- Society of Hispanic and Professional Engineers (SHPE) Annual Conference; Faculty Development Symposium, 10/29; Attendees: Faculty at HSIs (presentation focused on Track 1: PPP and Track 2: IEP but all tracks presented).
- HSI Learning Resilience Virtual Conference, 11/2020; Closing presentation; Attendees: All types of HSIs; Faculty and students but mainly faculty.
- 13th Annual AHSIE Best Practices Conference, 3/17
- Joint Math Meetings, NSF Funding Opportunities, presented on ADVANCE and HSI Program, 1/2021

#### **12.4 NSF SEARCH COMMITTEES**

- Chaired the HSI Program PO searchers for both the permanent PO and the rotator PO position,
- Member of the search committee for the ADVANCE Program AAAS fellow search
- Member of the search committee for the Broadening Participation across HRD Programs AAAS fellow search

#### **12.5 LEADERSHIP DEVELOPMENT**

- Participated in Congressional Hispanic Caucus Institute Leadership conference 9/14-9/17/2020

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## 13 SERVICE TO THE PROFESSION, UNIVERSITY, COMMUNITY

See the previous section for service to and while at the National Science Foundation as co-lead of the HSI Program and Program Officer in the ADVANCE Program and the Racial Equity in STEM Program Description.

### 13.1 TO PROFESSION

#### 13.1.1 Advisory Boards

- American Mathematical Society (AMS) Council, <https://www.ams.org/journals/notices/202007/rnoti-p1046.pdf>, 2/2018 - 1/2021.
  - Committee on Education (COE)
    - Steering committee for the AMS COE mini-conference Oct. 2019;
    - Chaired subcommittee on the portfolio review on AMS programs and activities related to graduate students and recent PhDs. I drafted, submitted, and presented the annual report on this review.
- Board of Directors, Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), 1/2016 - 2/2019, <https://www.sacnas.org/board-of-directors>.
  - Scientific Symposium Task Force, Founder and Chair
  - Finance Committee
  - Nomination Committee for Board of Directors
- Academic Advisory Board, TheBestSchools.org, <https://thebestschools.org/about/>, 7/2016 - 9/2019.
- Advisory Board, Underrepresented Students in Topology and Algebra Research Symposium, <http://www.ustars.org/advisory-board.html>, 10/2013 - present.
- Advisory Board, National Institute for Mathematical and Biological Synthesis (NIMBioS), <http://www.nimbios.org/governance/advboard>, 9/2012 - 9/2015.
- Advisory Board, National Alliance for Doctoral Studies in the Mathematical Sciences Regional, the Southwest Region Representative, [http://mathalliance.org/?page\\_id=3445](http://mathalliance.org/?page_id=3445), 2/2012 - 2/2017.
- Advisory Board, Infinite Possibilities Conference (IPC), <http://www.ipcmath.org/about.html>, 5/2007 - 5/2016.
- Advisory Board, Center for Undergraduate Research in Mathematics (CURM), <http://curm.byu.edu/advisoryboard>, 11/2006 - present.

#### 13.1.2 Editorial Boards (Journals, Books)

- Associate Editor, *Bulletin of Mathematical Biology*, 2016-present  
<https://www.springer.com/journal/11538/editors>

- Associate Editor for *SIAM Undergraduate Research Online (SIURO)*, 1/2014-6/2019  
<http://www.siam.org/students/siuro/board.php>

### 13.1.3 Review Panels

- Reviewer, TheBestSchools.org, Best in Education Prize Panel, Escalante-Gradillas Teacher Award Program, <http://www.thebestschools.org/special/prize-panel/>.
- Reviewer, National Science Foundation, Catalyzing New International Collaboration.
- Reviewer, National Science Foundation, Research Training Grant (RTG).
- Reviewer, National Academies of Science, Research Associateship Program (RAP).
- Reviewer, National Science Foundation, Joint NSF/NIGMS Initiative to Support Research at the Interface of the Biological and Mathematical Sciences.
- Reviewer, National Science Foundation, Presidential Awards for Excellence in Science Mathematics and Engineering Mentoring (PAESMEM).
- Reviewer, National Science Foundation, Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics (TUES).
- Reviewer, National Science Foundation, Interdisciplinary Grants in the Mathematical Sciences (IGMS).
- Reviewer, NIMBioS, Postdoctoral Fellowships, Sabbatical Fellowships, Working Groups, and Investigative Workshops, 3-4 reviews per year.
- Reviewer, Ford Foundation Diversity Fellowship Programs, Postdoctoral, Dissertation, Predoctoral Fellowships.

### 13.1.4 Reviewer/Handling Editor (Journals, Books)

- Handling Editor for *PLoS Computational Biology*.
- Refereed manuscripts for
  - *PLoS Computational Biology*,
  - *Bulletin of Mathematical Biology*,
  - *BMC Ophthalmology*,
  - *Epidemiology and Infection*,
  - *Computers and Mathematics with Applications*,
  - *CBE - Life Sciences Education*, and
  - *Proceedings of the WhAM Conference: Applications of Dynamical Systems in Biology and Medicine* (Springer).
- Refereed book prospective for Pearson Education.
- Refereed for *Chicana/ Latina Studies: the Journal of Mujeres Activas en Letras y Cambio Social (MALCS)*.

### 13.1.5 Steering Committees (National)

- Steering Committee Member, 2019 AMS Committee on Education Mini-Conference,
  - Washington, DC, 2019.
- Steering Committee Member, SIAM Conference on Optimization 2017 (OP17)
  - Vancouver, Canada, 2017.
- Steering Committee Member, SIAM ad hoc committee advising on diversity for International Congress on Industrial and Applied Mathematics (ICIAM)
  - Vancouver, Canada, 2011.
- Steering Committee Member, Infinite Possibilities Conference
  - IPAM, Los Angeles, CA, 2010.
  - North Carolina State University, Raleigh, NC, 2007
  - Spelman College, 2005.
- Steering Committee Member, Ford Foundation Conference of Fellows
  - National Academies of Science (NAS), Washington, DC, 2008.
  - NAS, Washington, DC, 2006.
  - NAS, Washington, DC, 2005.
- Steering Committee Co-Chair, Ford Foundation Conference of Fellows
  - Beckman Center of the NAS, Irvine, CA, 2007.

### 13.1.6 Steering Committees (Local)

- Local Committee Member, Society for Mathematical Biology (SMB) Annual Meeting and Conference, Tempe, AZ, 2013.

### 13.1.7 Professional Committees

- Member, SIAM Committee on Science Policy (CSP), 1/2019 - 9/2019.
- Member, SIAM-LS (Life Sciences) Nominating Committee, 1/2018 - 9/2019.
- Member, AWM Nomination Committee, 1/2017 - 1/2019.
- Member, AMS Young Scholars Awards (Epsilon) Committee, <http://www.ams.org/about-us/governance/committees/youngschol-past.html> 7/2016 - 6/2019.
- AMS Representative, *AMS-MAA Mathfest Joint Lecture Committee*, <http://www.ams.org/about-us/governance/committees/comm-all.html#JTMATHFEST>
  - Chair, 1/2016-1/2017.
  - Member, 2/2015-1/2016.
- Member, Planning Meeting of Professional Development Needs of Sloan Scholars Mentoring Network, Alfred P. Sloan Foundation and the Social Science Research Council (SSRC), 9/2015 - 12/2016.

- Member, Diversifying the Faculty Advisory Committee, AAC&U, 10/2015 - 10/2016.
- Member, Society for Industrial and Applied Mathematics (SIAM) Diversity Advisory Committee, [http://www.siam.org/about/com\\_div.php](http://www.siam.org/about/com_div.php), 11/2007 - 11/2013.
- Member, Mathematical Biosciences Institute (MBI) Panel on Undergraduate Math-bio Programs (PUMP) in North America, with support of SIAM and Society of Math Biology (SMB) 1/2009 - 1/2011.

### 13.1.8 Professional Mentoring Blog

- AMS Blog, e-Mentoring Network in Mathematical Sciences. Regular contributor to site designed to address relevant questions that students, postdoctoral researchers and junior faculty may have regarding their own advancement in mathematics. Its goal is to reach as many readers as possible, especially those who may not have sufficient mentoring at their current institution, 2013- 2018.

### 13.1.9 Diversity Committees

- Member, *Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Math Task Force*, 2007-present.
- Member, The Institute for Advanced Study/*Park City Math Institute (PCMI) Diversity Sub-Committee*, 3/2007-1/2017, <http://pcmi.ias.edu/about/#steeringOversight>.
- Member, *Mathematics Biosciences Institute (MBI) Diversity Committee*, <https://mbi.osu.edu/about/standing-committees/diversity-committee/previ/>, 12/2011-12/2016.
- Member, *Deeper Engagement Working Group*, Office of the Dean for Graduate Education, MIT, Cambridge, MA, 11/2011-2013.
- Member, *SIAM Workshop Celebrating Diversity working group*,
  - ICIAM Conference, Vancouver, BC, Canada, 7/2011,
  - SIAM Annual Conference, Denver, CO, 7/2009,
  - SIAM Annual Conference, San Diego, CA, 7/2008.
- Co-Chair, *SIAM Workshop Celebrating Diversity working group*, SIAM Annual Conference, Pittsburgh, PA, 7/2010.

### 13.1.10 Scientific Session Organizer

- Co-Organizer, *Mathematical Biology*, Association of Women in Mathematics (AWM) Research Symposium 2015, University of Maryland, College Park, MD, 4/2015, <https://sites.google.com/site/awmmath/home/awm-research-symposium-2015>.
- Chair and Organizer, *The Eyes Have It: Mathematical Modeling of the Retina*, MAA MathFest, Invited Paper Session, Portland, OR, 8/2014, <http://www.maa.org/node/301304/>.

- Chair and Organizer, *MS55 Workshop Celebrating Diversity (WCD): Dynamical Systems and Its Applications to Biological Models*, SIAM Annual Conference, Minneapolis, MN, 7/2012.
- Chair and Organizer, *MS367 Workshop Celebrating Diversity: Dynamic Modeling in Biology*, ICIAM Conference, Vancouver, BC, Canada, 7/2011.
- Organizer, *Mathematics of Human Biology - Research Talks*, SACNAS Annual Conference, Anaheim, CA, 10/2010.
- Co-Chair and Organizer, *MS49 Workshop Celebrating Diversity: Biofluids and Computational Fluids Session (SIAM-WCD)*; *MS60 Workshop Celebrating Diversity: Modeling Biological Process (SIAM-WCD)*; *MS73 Workshop Celebrating Diversity: Mathematical Applications (SIAM-WCD)*, SIAM Annual Conference, Pittsburgh, PA, 7/2010.
- Chair and Organizer, *New Generation of Mathematics Ph.D.s - Research Talks*, Society for Advancement of Chicano and Native Americans in Science (SACNAS)
  - Annual Conference Dallas, TX, 10/2009.
  - Annual Conference, Kansas City, MO, 10/2007.
  - Annual Conference, Tampa, FL, 10/2006.
  - Annual Conference, Denver, CO, 10/2005.
- Co-Chair and Organizer, *MS49 Workshop Celebrating Diversity: Biofluids and Computational Fluids Session (SIAM-WCD)*, *MS60 Workshop Celebrating Diversity: Modeling Biological Process (SIAM-WCD)*, *MS73 Workshop Celebrating Diversity: Mathematical Applications (SIAM-WCD)*, *MS86 Workshop Celebrating Diversity: Mathematical Approaches in Neuroscience (SIAM-WCD)*, SIAM Annual Conference, Denver, CO, 7/2009.
- Chair and Organizer, *MS57: Women at the Interface of Mathematics and Biology*, SIAM Annual Conference, Boston, MA, 7/2006.
- Chair and Organizer, *Mathematics, Physical Science & Engineering Academic Exchange Session*, Ford Foundation Conference for Fellows, Washington, DC in 9/2005.
- Chair and Organizer, *Interdisciplinary Courses*, MAA Annual Conference: Project NExT, Atlanta, GA, 1/2005.
- Chair and Organizer, *Poster Session*, Ford Foundation Conference for Fellows, Washington, DC in 9/2005.
- Chair and Organizer, *Modeling Our World*, Andrew Mellon Minority Conference, St. Louis, MO, 6/2004.
- Chair and Organizer, *Mathematics, Physical Science & Engineering Academic Exchange Session*, Ford Foundation Conference for Fellows, San Juan, Puerto Rico, 10/2003.

### 13.1.11 Professional Organizations

- American Association for the Advancement of Science (AAAS), *Member*
- Society for Industrial and Applied Mathematics (SIAM), *Member*
- Society for Advancement of Chicanos and Native Americans in Science (SACNAS), *Friend of the Society, Lifetime Member*
- Society for Mathematical Biology (SMB), *Lifetime Member*,
- American Mathematical Society (AMS), *Member, Fellow*
- Association for Women in Mathematics (AWM), *Member, Fellow*
- The Association for Research in Vision and Ophthalmology (ARVO), *Member*
- Mathematical Association of America (MAA), *Member*,
- Sigma Xi, Scientific Research Society, *Member*
- Pi Mu Epsilon, Honorary National Mathematics Society, *Member*
- Faculty Women's Association (FWA) at ASU, *Member*
- Faculty Women of Color Caucus (FWOCC) at ASU, *Member*
- Chicano/Latino Faculty & Staff Association (CLFSA) at ASU, *Member*

### 13.1.12 Professional Workshops Organized

- Session Chair and co-Organizer, *Getting Involved in SACNAS/ Leadership*, SACNAS Annual Conference,
  - Long Beach, CA, 10/2016,
  - Salt Lake City, UT, 10/2017.
- *Critical Transitions in Graduate School: Advice for Current and Prospective Graduate Students* session at SACNAS, San Jose, CA, October 2011.
- *Predocutorial and Dissertation Sciences Workshop*, Ford Foundation Conference of Fellows: "Activism Allied with Scholarship: Marshalling the Tools to Strengthen our Imperiled Communities," The National Academies Beckman Center, Irvine, CA, October 2007.
- *Successful Networking Practices*, Infinite Possibilities Conference, North Carolina State University, Raleigh, NC, October 2007.
- *Predocutorial and Dissertation Sciences Workshop*, Ford Foundation Conference of Fellows: "Enriching Our Communities," The National Academies, Washington, DC, October 2006.
- *Predocutorial Sciences Workshop*, Ford Foundation Conference of Fellows, "Engaging Scholars in Transition," The National Academies, Washington, DC, September 2005.

- *Natural Sciences Dissertation Workshop*, Ford Foundation Conference of Fellows, San Juan, PR, October 2003.

### 13.1.13 Session Judge/Conference Mentor/Scholarship Reviewer

- Judge for
  - Poster Session, Infinite Possibilities Conferences,
  - Association of Women in Mathematics Essay Contest,
  - Poster Sessions, Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Annual Conferences,
  - Undergraduate Poster Session, MAA Annual Conferences.
- Mentor for
  - SMB at Annual Conference,
  - AWM at SIAM Annual Conferences,
  - Math Alliance F-GAP and at Field of Dreams Conferences.
- Reviewer for ACM Richard Tapia Celebration of Diversity in Computing Conference Scholarship.

### 13.2 TO EXTERNAL COMMUNITY

- Partnership for “*Mathematical Physiology and Biomedical Summer Program*,” for 7th and 8th grade local, low-income students and teachers with additional professional development component for teachers; catalyzed by E. Camacho in partnership with ASU’s EOSS E. Hidalgo, S. Symonds, and L. Chavez and proposal written by E. Camacho and K. Watanabe, Glendale, AZ, 8/2018-present.
- Faculty Presenter, Summer Experiences at West (SEW) Program, Learning Community theme “*Exploring Careers in Science, Technology, and Mathematics*,” Glendale, AZ, June 2017.
- 8th Grade Graduation Keynote Speaker, Academia Del Pueblo, Phoenix, AZ, May 2017.
- Dynamical Systems Lecture for 8th graders, Pueblo Del Sol Elementary School, Phoenix, AZ October 2016
- Masterpiece Art Program 2009 Presenter; gave talk on math properties (tessellations, geometric impossibilities, etc.) from works of M.C. Escher and created/organized/ran an art activity, Arrowhead Elementary School, Glendale, AZ April 2009.
- Latino Scholars Day 2006, faculty panelist; for recruitment of prospective LMU students and their parents, Los Angeles, CA, November 2006.
- Amino Leadership Charter High School Dialogue with Teachers, college faculty panelist; one-day meeting on college expectations, Los Angeles, CA, August 2006.
- Expanding Your Horizons Conference, Mt. St. Mary’s College; one-hour innovative/hands-on math seminar for elementary school girls Spring 2006, 2007.



### 13.3 TO UNIVERSITY (ASU)

- Member, Human Factor Collaborative, led by Professor Nina Berman (Director, SILC), Power Structures working group led by Dr. Miki Caul Kittilson. The working group seeks to identify and better understand the key factors that enable and empower societies, communities and individuals to invent, adopt and integrate various technologies. It is part of the Global Futures Initiative at ASU (led by Professor Peter Schlosser); 2019-present;
- Member, Center for Organization Research Design (CORD) Pro Bono Project; led by Drs. Barry Bozeman, Molly Ott, and Monica Gaughan will focus on policies and procedures for improving opportunities and success for women and URMs in university administrative leadership positions; 2019-present;
  - will include landscape analysis of best practices in ASU peer and aspirational institutions, business and non-profit organizations, and government agencies;
  - in concert with ADVANCE team ASU policies, practice, and programs will be identified.
- Member, UCLA visit to center(s) built around mentoring and leadership for both students and faculty; 2018-present;
  - Led by Dean Nancy Gonzales with Vice Provost Deb Clarke and Dean Libby Wentz
  - Landscape analysis of all relevant UCLA programs was conducted by Erika Camacho with assistance from student Lauren Kater.
- Lead of the ASU ADVANCE Professional Development Initiatives and Team, 2018-present.
- Featured Faculty & SMNS Liaison, ASU 2020 Campaign, 2017.
- Member, Dean of New College Search Committee, 2012.
- Mentor, STEM TRIO, ASU 2011-present.
- Interviewed for *CareerWISE*, filmed interview for Regents Professor of Psychology Nancy Felipe Russo and for Professor of Counseling & Counseling Psychology Bianca Bernstein that gives young females potential role models, 2008,
  - The Opportunity to be a Jack of All Trades, <https://careerwise.asu.edu/watch-her-stories/erika-camacho-phd-opportunity-be-jack-all-trades>
  - Hidden Differences in Academic Culture, <https://careerwise.asu.edu/?q=herstories/hidden-differences-in-academic-culture-extended>
  - Awkward Social Interactions, <https://careerwise.asu.edu/watch-her-stories/erika-camacho-phd-awkward-social-interactions>
  - We're Having a Baby, <https://careerwise.asu.edu/watch-her-stories/erika-camacho-phd-were-having-baby>
- Participant, ADVANCE STEM Doctoral Enhancement Workshop for Developing Pipeline Initiatives with California State University system, January 2008.

### 13.4 TO NEW COLLEGE (ASU)

- **Organizer**, Interdisciplinary Research Group (IRG) for SSBS & SMNS faculty, 2018-present.
- Member, MS Degree Program Development Committee, 2015-2019.
- Speaker, Road to the University Recruitment Day, 12/2015.
- Representative, SMNS Faculty, Homecoming Table for NCIAS, 2015.
- Judge, ASU West Student Research and Creative Expo Poster Session, 2010.
- Member, NCIAS General Education Learning Outcomes Committee, 2010-2011.
- Recruiter/ faculty panelist for New University College Freshmen in AZ, ASU West, Glendale, AZ, 2009.
- Recruiter, Sneak Preview, West Coast states recruitment for potential ASU students (currently in high school) on behalf of New College, 2009.
- Member, Ad Hoc Committee of Student Research and Creative Performance Exhibition, 2008-2009.
- Member, Graduate Committee, 2008-2010.

### 13.5 TO SMNS (ASU)

- **Chair**, Forensic Science Open Rank Search Committee (for 2 positions), 2018-2019.
- **Chair**, Statistics Assistant/Associate Professor Search Committee, 2017-2018.
- **Chair and Catalyst**, B.S. Degree in Computational Forensics Development Committee (catalyzed degree creation), 2017-2018.
- Member, SMNS Promotion & Tenure Peer Review Committee (Fall, 2018).
- **Founder & Organizer**, Research in Applied Math (RAM) group for students and faculty research advisors, 2016-present.
- **Founder & Organizer**, Interdisciplinary Research Group (IRG) for SMNS faculty, 2016-present.
- Representative, SMNS Faculty Open Door, 2016, 2017.
- Member, Mathematics Instructor Hiring Committee, 2017.
- **Co-Organizer** with J. Nishimura, 2016 & 2017, Faculty participant, 2/2010 Sonia Kovalevsky Day, which promotes and fosters math awareness in middle school girls.
- Member, SMNS M.S. Degree Development Committee, 2016-2018.

- Member, Bylaws Committee, 2016.
- Member, SMNS Three Year Pre-tenure Review Peer Review Committee (Fall, 2016).
- **Co-Organizer** with A. Suzuki, Faculty Panelist, *Pizza, Professors, and Professions*, 1/2016.
- Member, SMNS Personnel Committee, responsible for Faculty Annual Reviews, 2014-2016.
- Member, ad hoc committee to revamp Applied Mathematics degree, 2014 -2015.
- Member, Applied Mathematics Assistant Professor Search Committee, 2012-2013.
- Member, Internship Guidelines Committee, 2012-2013.
- **Founder & Organizer**, SMNS Weekly Coffee Hour, to build a community among faculty and staff, 2009-2017.
- Member, Mathematics Lecturer Hiring Committee, 2008.

### 13.6 TO LOYOLA MARYMOUNT UNIVERSITY

- Member, Intercultural Faculty Committee
- Member, LMU Latina Collective
- Member, LMU Latino Spiritual Retreat 2005, Organizing Committee
- Member, College of Science & Engineering Presidential Position in Biomath Search Committee
- Member, Careers Committee
- Faculty Advisor, Pi Mu Epsilon
- Faculty Advisor, Math Club
- Member, Colloquium Committee
- Co-founder and Advisor of SIAM Student Chapter.

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## 14 FEATURED IN ARTICLES/ MEDIA INTERVIEWS/ PODCASTS

- Profiled *San Antonio Express News* in <https://www.expressnews.com/news/article/utsa-berrioz-bal-endowed-chair-stand-and-deliver-18334989.php#photo-24186969>
- Podcast for *Texas Math Mundo* by Saul Cantu, Feb 12, 2023, <https://youtu.be/WBTvB30CvAA>.
- *How I Became Interested in Math*, part of the AMS Doing the Math | Mathematical Moments #156, <https://www.youtube.com/watch?v=TKwbwLp8Veo&t=6m0s>

- Interview for Public Affairs segment on *Horizonte*, aired on KAET Public TV, September 26, 2019 in Phoenix, AZ, <https://azpbs.org/horizonte/2020/03/enfoque-erika-camacho/>.
- Profiled as part of ASU ADVANCE grant: [https://www.youtube.com/watch?v=RD\\_NLVKN-mg](https://www.youtube.com/watch?v=RD_NLVKN-mg)
- Podcast for *Lathisms: Latinxs and Hispanics in the Mathematical Sciences*, MAA Tensor-SUMM project honoring Latinx mathematicians, September 2018. <https://www.listennotes.com/podcasts/lathisms-podcasts/erika-camacho-glV0NM8Wwno/>
- Podcast for *The Most Addictive Theorem in Applied Mathematics: My Favorite Theorem (podcast)*, Radio Public, by Evelyn Lamb and Kevin Knudson, July 2018. <https://kpknudson.com/my-favorite-theorem/2018/9/12/episode-26-erika-camacho>. <https://blogs.scientificamerican.com/roots-of-unity/the-most-addictive-theorem-in-applied-mathematics/>
- Interview for award: Honorary Dean of the 2018 Youth Development Master's Institute, Kids at Hope, 2018. <https://www.youtube.com/watch?v=nmHeDplt2wc&t=53s>.
- Interviewed for *Women's Business Conference To Focus On Latinas In STEM Careers*, by Lauren Gilger, March 15, 2017. <http://kjzz.org/content/446987/womens-business-conference-focus-latinas-stem-careers>
- Profiled in *Sloan Scholars Mentoring Network*, 2017. <https://sloan-scholars.ssrc.org/sloan-scholars/spotlights-features/erika-camacho-on-mentoring-in-service-of-diversity/>
- Interviewed by *Math4Science*, 2016. <https://math4science.org/erika-camacho/>.
- Filmed for *VME/PBS Series for Latino Youth and STEM Careers*, 2016. <http://www.vmetv.com/generacion-stem-episodio-5>
- Profiled in *AMS Hispanic Heritage Month project*, "Lathisms (Latin@s and Hispanic in the Mathematical Sciences)" project & AMS Notice October issue, 2016, <http://lathisms.org/> or <http://lathisms.org/sunday-september-18th.html>
- Profiled in *CAM Featured Alumna: Erika Camacho*, 2015 <https://www.cam.cornell.edu/spotlights/cam-featured-alumna-erika-camacho>
- Interviewed by *ImprovScience*, 2014, <https://www.youtube.com/watch?v=L501BtHgSsc>.
- Profiled in *New College Blog*, "Women in STEM – Erika Camacho Discusses Applied Mathematics & Real-World Problems", 2013, <http://www.youtube.com/watch?v=Tr3Mw4M1vMY>.
- Profiled in *Research Matters*, "ASU women honor STEM role models," ASU Knowledge Enterprise Development, 2013, <http://www.public.asu.edu/~etccamach/AwardPages/ASUwomenSTEM.pdf>.

- Profiled in *SACNAS News*, “Fixing the Leaky Faucet: A Discussion of Women of Color in STEM...with Children,” Winter 2013, <http://www.public.asu.edu/~etcamach/AwardPages/LeakyFaucet.html>.
- Profiled in *Voces*, “I am the American Dream: Erika Tatiana Camacho Ph.D.,” Raza Development Fund, Issue 9, August 2012, <http://www.public.asu.edu/~etcamach/AwardPages/Voces.html>.
- Interview for Public Affairs segment on *Horizonte*, aired on KAET Public TV, September 29, 2011 in Phoenix, AZ, [https://www.youtube.com/watch?v=o\\_rmX94FSrI](https://www.youtube.com/watch?v=o_rmX94FSrI).
- Profiled in *SACNAS News*, “Building Confidence,” Summer/Fall 2011, <http://www.public.asu.edu/~etcamach/AwardPages/BuildingConfidence.html>.
- Two Part Interview on “Erika Camacho’s Inspirational Story,” aired on *Univision’s Evening News*, February 28-March 1, 2011 in Los Angeles, CA; and aired on *Univision’s Nightly News*, March 7-8, 2010 in Phoenix, AZ.
- Profiled in *SIAM News*, “The Intersecting Lives of Two Mathematicians in East LA,” 43(4), May 2010, [http://www.public.asu.edu/~etcamach/AwardPages/SIAM\\_EastLA.html](http://www.public.asu.edu/~etcamach/AwardPages/SIAM_EastLA.html).
- Interview on Jaime Escalante, *Univision’s Aqui y Ahora*, aired April 6, 2010.
- Interview on Jaime Escalante, *Hispanic Link Weekly Report*, “East Los Angeles Calculus Teacher Jaime Escalante Dies at Age 79,” 28(11), April 5, 2010, [http://www.public.asu.edu/~etcamach/AwardPages/HispanicLink\\_small.pdf#page=2](http://www.public.asu.edu/~etcamach/AwardPages/HispanicLink_small.pdf#page=2).
- Interview on Jaime Escalante, *New York Times* Obituary of Jaime Escalante, April 1, 2010, <http://www.nytimes.com/2010/04/01/us/01escalante.html> or [http://www.public.asu.edu/~etcamach/AwardPages/NYT\\_Escalante.pdf](http://www.public.asu.edu/~etcamach/AwardPages/NYT_Escalante.pdf).
- Interview on Jaime Escalante, *NBC Nightly News*, March 31, 2010, <https://www.youtube.com/watch?v=SXnaa0Ed3aI>.
- Interview on Jaime Escalante, *As It Happens* radio interview, March 31, 2010, <http://www.cbc.ca/asithappens/episode/2010/03/31/march-31-2010/>, part 3.
- Interview on Jaime Escalante, *Hispanic Link Weekly Report*, “Edward Olmos ‘Stands and Delivers’ for Teacher He Portrayed,” 28(8), March 15, 2010, <http://www.public.asu.edu/~etcamach/AwardPages/HispanicLink2small.pdf>.
- Profiled in *ASU’s State Press*, “Once uninspired student, math professor finds passion in teaching,” March 9, 2010, <http://www.public.asu.edu/~etcamach/AwardPages/StatePress.html>.
- Interview on Jaime Escalante, *CBS Evening News*, March 4, 2010, <https://www.youtube.com/watch?v=EgcgerHTWB4>.

- Profiled for Leadership Skills in *SACNAS News*, “They May Not Call Themselves Leaders: Profiles of Leadership in Action,” Spring 2007; [http://www.public.asu.edu/~etcamach/AwardPages/SACNASarticle\\_sp07.pdf](http://www.public.asu.edu/~etcamach/AwardPages/SACNASarticle_sp07.pdf).
- Interviewed for AMSSI in *La Opinion* Los Angeles Spanish Newspaper in Section Vida y Estilo, “Mas Latinos En las Matematicas: Un instituto de ciencias ofrece oportunidades de aprendizaje y trabajo a estudiantes de minorias etnicas,” written by Patricia Prieto, (Translation: “More Latinos in Mathematics: An institute in the sciences offers opportunities in learning and future careers for underrepresented minority students”), 11/21/2005; <http://www.public.asu.edu/~etcamach/AMSSI/LaOpinion112105.htm>.

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## 15 DEVELOPMENT/TRAINING

### 15.1 LEADERSHIP DEVELOPMENT

- *Leadership Academy, Exploring Leadership Series (ELS)*, Tempe, AZ, 2017-2019.
  - Self-Awareness and Accountability by Mike Bear, February 2019.
  - Transformational Leadership by David Waldman, October 2018.
  - How to be a Strong Leader without Being a Jerk by May Busch and Minu Ipe, April 2018.
  - Delegation by Kim McKinnon, April 2018.
  - Managing Up by Tamara Deuser & Margaret Nelson, October 2017.
- *SACNAS Advanced Leadership Institute*, Washington, DC, June 2018.
- *peerLA cohort V*, ASU Leadership Academy, Tempe, AZ, 2017-2018.
- *Women’s Leadership Success in Higher Education*, Academic Impressions, Orlando, FL, November 2017.
- *Linton-Poodry SACNAS Leadership Institute (LPSLI)*, Washington, D.C., July 2017.

### 15.2 PROFESSIONAL DEVELOPMENT

ASU’s Knowledge Enterprise Development (KED) advances research, innovation, strategic partnerships, entrepreneurship, economic development and international development.

- *KED 2019 NIH: R You Ready? Workshop* with Meg Bouvier, Tempe, AZ, March 2019.
- *Committee for Campus Inclusion (CCI) Identifying & Disrupting Non-Inclusive Dominant Norms Workshop* by Jennifer Chandler, ASU Poly campus, Mesa, AZ, February 2019.
- *KED Implicit Bias Workshop*, by Office of Equity and Inclusion at ASU, Tempe, AZ, January 2019.

- *ASU FWA Leadership Summit*, Faculty Women's Association (FWA), Tempe, AZ, February 2019.
- *KED 2019 Faculty Workshop* about KED resources and service; networked with institute and initiative leaders; learned from faculty with successful research careers; Tempe, AZ, February 2019.
- *KED Grant Storyboarding Workshop*, Tempe, AZ, August 2017.
- *KED Grant Writing Workshop Series*, Glendale, AZ, 2016-2017.
- *Innovation Event (IE) Mining Lab Workshop*, SkySong, Phoenix, AZ, December 2016.
- *The dynamics of small non-human social networks*, [http://www.nimbios.org/workshops/WS\\_socialnet](http://www.nimbios.org/workshops/WS_socialnet), National Institute for Mathematical and Biological Synthesis (NIMBioS), Knoxville, TN, March 06-08, 2014.
- *WhAM! A Research Collaboration Workshop for Women in Applied Mathematics, Dynamical Systems with Applications to Biology and Medicine*, Institute of Mathematics and Its Applications (IMA), Minneapolis, MN, September 09-13, 2013.
- *Perspectives On Successfully Mentoring More Underrepresented Postdoctoral Researchers: Strategies and Tactics that Work*, 2nd Annual MGE@MSA Postdoctoral Mentoring Institute, Tempe, AZ, 1/2010.
- *OLEG (Online Education Group)* at ASU, 2009.
- *1-2-3; Success in the Early Years* Workshop at ASU.
- *Center for Teaching Excellence workshops*, LMU, 2005, 2006.
- 2nd year faculty Pedagogy Workshops on *Creating the Inclusive Classroom at LMU*, 2006.
- *BioQUEST Curriculum Consortium workshop: Investigating Interdisciplinary Interactions*, at Beloit College, June 11-19, 2005. (Applicants were accepted on a competitive basis.)
- *Project NExT (New Experiences in Teaching)*. (Applicants were accepted on a competitive basis.)

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## 16 COURSES TAUGHT

### 16.1 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

- 18.01 Calculus

## 16.2 ARIZONA STATE UNIVERSITY

- MAT 210 Brief Calculus
- MAT 211 Math for Business Analysis
- MAT 270 Calculus with Analytical Geometry I
- MAT 271 Calculus with Analytical Geometry II
- MAT 275 Modern Differential Equations
- MAT 421 Applied Computational Methods
- MAT 450 Mathematical Models in Biology
- MAT 452 Nonlinear Dynamics and Chaos
- MAT 462 Applied Partial Differential Equations
- MAT 493 Honors Thesis
- MAT 499 Individualized Instruction (Capstone Course)
- AML 590 Reading and Conference
- AML 592 Research (Graduate)
- AML 790 Reading and Conference (Graduate, doctoral)
- AML 792 Research (Graduate, doctoral)
- APM 792 Research (Graduate, doctoral)

## 16.3 LOYOLA MARYMOUNT UNIVERSITY

- MATH 102 Quantitative Skills for the Modern World
- MATH 112 Mathematical Analysis for Business II
- MATH 122 Calculus for the Life Sciences I
- MATH 123 Calculus for the Life Sciences II
- MATH 245 Ordinary Differential Equations
- MATH 355 Methods of Applied Mathematics
- MATH 357 Complex Variables
- MATH 495 Mathematical Modeling



**16.4 CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA**

- MATH 115 Analytic Geometry and Calculus II

**16.5 CORNELL UNIVERSITY**

- MATH 1910 Calculus for Engineers