Anarina Le Murillo, Ph.D.

anarina_murillo@brown.edu
www.anarinalm.com

EDUCATION

Arizona State University — Tempe, AZ
Doctor of Philosophy, Applied Mathematics, Concentration in Statistics — 2010–2016

Arizona State University — Tempe, AZ
Master of Science, Applied Mathematics — 2010–2013

Arizona State University — Tempe, AZ
Bachelor of Science, Psychology — 2006–2010

POSTGRADUATE TRAINING

Visiting Scholar, Data Science Initiative and Division of Applied Math — Providence, RI
Brown University — 2019

Postdoctoral Research Associate, Simon A. Levin Mathematical, Computational and Modeling Sciences Center — Tempe, AZ
Arizona State University — 2019

Visiting Researcher, Center for Policy Informatics, Decision Theater — Tempe, AZ
Arizona State University — 2018

NIH T32 Postdoctoral Fellow, Department of Biostatistics and Nutrition Obesity Research Center (NORC) — Birmingham, AL
Statistical Genetics Training Program (NHLBI T32HL072757; PI: Tiwari)
Obesity Training Program (NIDDK T32DK062710; PI: Allison)
University of Alabama — 2016–2019

ACADEMIC APPOINTMENTS

Faculty Affiliate — Providence, RI
Data Science Institute — 2025–present

Assistant Professor of Biostatistics, Teaching Scholar Track — Providence, RI
Brown University School of Public Health — 2022–present

Visiting Assistant Professor of Biostatistics — New York, NY
New York University School of Global Public Health — 2021–2022

Assistant Professor of Pediatrics, Research Track — Providence, RI
Brown University Warren Alpert Medical School — 2019–2021

Senior Biostatistician, Center for Statistical Sciences — Providence, RI
Brown University School of Public Health — 2019–2021

OTHER PROFESSIONAL APPOINTMENTS

Instructor — Tempe, AZ
Joaquin Bustoz Math Science Honors Program — Summer 2019
Arizona State University

Instructor — Tempe, AZ
Mathematical and Theoretical Biology Institute — Summer 2018–2019
Arizona State University

Graduate Research Assistant (Statistician) — Tempe, AZ
Behavioral Neuroscience Conditioned Feeding Lab — 2014–2015
Arizona State University

Teaching Assistant — Tempe, AZ
Joaquin Bustoz Math Science Honors Program — Summer 2012–2015
Arizona State University

Research Affiliate — Scottsdale, AZ
Center for Metabolic and Vascular Biology — 2012–2014
Mayo Clinic

Research Intern — Tempe, AZ
Mathematical and Theoretical Biology Institute — Summer 2010–2011
Arizona State University

Program Assistant in Research and Evaluation (Statistician) — Tempe, AZ
Wellness and Health Promotion, Campus Health Services — 2009–2010
Arizona State University

Director of Health and Wellness — Tempe, AZ
Undergraduate Student Government — 2008–2009
Arizona State University

Peer Advisor — Tempe, AZ
Career Services Center — 2006–2008
Arizona State University

PUBLICATIONS

PEER-REVIEWED

* Indicates Student or Fellow

1. Vera DM, Hora RA, **Murillo A**, Wong JF, Torre AJ, Wang D, Boulay D, Hancock K, Katz JM, Ramos M, Loayza L, Quispe J, Reaves EJ, Bausch DG, Chowell G, and Montgomery JM. "Assessing the impact of public health interventions on the transmission of pandemic H1N1 influenza a virus aboard a Peruvian navy ship." *Influenza and other respiratory viruses* (2014).

2. Murillo D, Holechek SA, **Murillo AL**, Sanchez F, and Castillo-Chavez C. 'Vertical transmission in a two-strain model of dengue fever." *Letters in Biomathematics* (2014).

3. Bichara D, Holechek SA, Castro JV, **Murillo AL**, and Castillo-Chavez C. "On the dynamics of dengue disease 2 with residence times and vertical transmission." *Letters in Biomathematic* (2016).

4. **Murillo AL**, Safan M, Castillo-Chavez C, Capaldi Phillips ED, and Wadhera D. "Modeling eating behaviors: the role of environment and food association learning via a ratatouille effect." *Mathematical Biosciences and Engineering* (2016).

5. Safan M, **Murillo AL**, Wadhera D, and Castillo-Chavez C. "Modeling the diet dynamics of children: the roles of socialization and school environments." *Letters in Biomathematics* (2018).

6. Murillo D, **Murillo AL**, and Lee S. "The role of vertical transmission in the control of dengue fever." *International Journal of Environmental Research and Public Health* (2019).

7. **Murillo AL**, Li J, and Castillo-Chavez C. "A dynamic model of glucose, insulin, and free fatty acids with time delay: the impact of bariatric surgery on type 2 diabetes mellitus." *Mathematical Biosciences and Engineering* (2019).

8. Cedillo YE*, **Murillo AL**, Fernandez JR. "The association between allostatic load and anthropometric measurements among a multiethnic cohort of children." *Pediatric obesity* (2019).

9. **Murillo AL**, Affuso O, Peterson CM, Li P, Wiener HW, Tekwe CD, and Allison DB. "Illustration of measurement error models for reducing biases in nutrition and obesity research using 2D body composition data." *Obesity (Silver Spring)* (2019).

10. **Murillo AL**, Kaiser K, Smith DJ, Peterson CM, Affuso O, Tiwari HK, and Allison DB. "A Systematic Scoping Review of Surgically Manipulated Adipose Tissue and the Regulation of Energetics and Body Fat in Animals." *Obesity (Silver Spring)* (2019).

11. Almonte-Vega L*, Colon-Vargas M*, Luna-Jarrin L*, Martinez J*, Rodriguez-Rincon J*, Patil R*, Espinoza B, Thakur M, **Murillo AL**, Arriola L, Viswanathan A, and Mubayi A. "A cost-effective analysis of treatment strategies for the control of HSV-2 infections in the U.S.: a mathematical modeling-based case study." *Mathematical Biosciences* (2020).

12. Bagheri M, Tiwari HK, **Murillo AL**, Al-Tobasei R, Arnett DK, Kind T, Barupal DK, Fan S, Fiehn O, O'Connell J, Montasser M, Aslibekyan S, and Irvin MR. "A lipidome-wide association study of the lipoprotein insulin resistance index." *Lipids in health and disease* (2020).

13. MacDonell-Yilmaz R*, Panicker C, **Murillo AL**, Welch J. "Evaluation of Knowledge and Comfort With Opioid Prescribing Among Pediatric Hematology/Oncology Fellows." *Pediatrics Blood and Cancer* (2020).

14. Ogbunugafor CB, Miller-Dickson MD, Meszaros VA, Gomez LM, **Murillo AL** and Scarpino SV. "Variation in microparasite free-living survival and indirect transmission can modulate the intensity of emerging outbreaks." *Scientific Reports* (2020).

15. Towers S, Cole S, Iboi E, Montalvo C, Navas MG, Pringle JAM, Saha K, Thakur M. Velazquez-Molina J, Castillo-Chavez C, Helitzer D, **Murillo AL**, and Norcross JC. "How long do people stick to a diet? A digital epidemiological approach to estimating temporal trends in diet persistence." *Public Health Nutrition* (2020).

16. Musial S, Abioye A, **Murillo AL**, Eskander J, Sykes O, Rodriguez L, Friedman JF, Bancroft B, Golova N. "Introducing Juice and Sugar-Sweetened Beverages in Early Infancy: Parental Knowledge and Intended Behaviors." *Clinical Pediatrics* (2021).

17. Shakiba N, Edholm C, Emerenini B, **Murillo AL**, Peace A, Saucedo O, Wang X, and Allen LJS. "Effects of environmental variability on superspreading transmission events in stochastic epidemic models for MERS and Ebola." *Infectious Disease Modeling* (2021).

18. Morris DB*, Gruppuso PA, McGee HA, **Murillo AL**, Grover A, and Adashi EY. "Diversity of the National Medical Student Body: Forty Years of Persistent Inequities." *New England Journal of Medicine* (2021).

19. Silva B, Kamath S, Panicker C, Puranam S, Lewis C, **Murillo AL**, and Watts D. "Comparisons of resident and faculty screening for social determinants of health in an academic pediatric practice." *Rhode Island Medical Journal* (2021).

20. McKinney RL, Napolitano N, Levin JJ, Kielt M, Abman SH, Guaman MC, Rose RS, Courtney SE, Matlock D, Agarwal A, Leeman K, Sanlorenzo LA, Sindelar R, Collaco JM, Baker CD, Hannan K, Douglass M, Eldredge L, Lai K, McGrath-Morrow S, Tracy MC, Truog W, Lewis T, **Murillo A**, and Keszler M. "Ventilatory strategies in infants with established severe bronchopulmonary dysplasia: A multicenter point prevalence study." *The Journal of pediatrics* (2022).

21. **Murillo AL**, Sun T, Aroke H, Bratberg J, Kogut S, Marshall BD, Yedinak JL, Rich, JD, Lebeau R, Hogan JW and Buchanan A. "Novel Application of a Multistate Model to Evaluate the Opioid Use Disorder Care Cascade: A Retrospective Cohort Study." *medRxiv* (2022).

22. Little RB*, **Murillo AL**, Van Der Pol WJ, Lefkowitz EJ, Morrow CD, Yi N, Carson TL. "Diet Quality and the Gut Microbiota in Women Living in Alabama,." *American journal of preventive medicine* (2022).

23. Golova N, Eskander J, Pho A, Chu TC, **Murillo AL**, Friedman JF, Musial S. "Preventing the Early Introduction of Juice and Sugar-Sweetened Beverages in Infants' Diets: A Randomized Controlled Trial." *Clinical Pediatrics* (2023).

24. MacDonell-Yilmaz RE*, **Murillo AL**, and Welch JG. "A randomized controlled trial to examine the effect of the Pediatric Opioid Analgesia Self-Instruction System (PedOASIS) tool on pediatric hematology/oncology trainee education." *Pediatric Blood & Cancer* (2023).

25. Quon RJ, Feler J, Wang Z, Leary OP, **Murillo A**, Fridley JS. "Weather patterns forecast the severity of cervical spinal cord injuries." *Scientific reports* (2025).

26. Goodman MS, Lopez A*, **Murillo AL**, Pierce KA. "A comparison of methods for coding race in linear and logistic regression models." *Annals of Epidemiology* (2025).

27. Porto CM., Hagan MJ, Schroeder C, Thakrar R, Taman M, **Murillo A**., ... & Fridley J.S. "National Trends in Time to Surgery for Traumatic Spinal Cord Injury in the United States: An Analysis of the National Trauma Data Bank." *Journal of Neurotrauma* (2025).

28. **Murillo AL**, Maytin A*, "Teaching Regression Calibration to Correct for Measurement Error to Develop Statistical Thinking." *IASE 2025 Satellite Conference - Statistics and Data Science Education in STEAM* (2026).

ABSTRACTS

1. Panicker C, Kamath S, Silva B, Puranam S, Lewis C, **Murillo AL** and Watts D. "Language spoken and social determinants of health in pediatric primary care." *Pediatric Academic Society Conference* (2020).

2. Silva B, Kamath S, Panicker C, Sravanthi Puranam, Puranam S, Lewis C, **Murillo AL**, and Watts D. "Comparisons of resident and faculty screening for social determinants of health in an academic pediatric practice." *Pediatric Academic Society Conference* (2020).

3. Berk J, Garbitelli B, Taranto N, **Murillo AL**, Williams P, and Watto M. "All Ears, Who is listening to Internal Medicine Podcasts." *Society of General Internal Medicine Conference* (2020).

THESIS AND DISSERTATION

1. **Murillo AL**. "A Theoretical Approach: Inferring the Reversal of Type 2 Diabetes and Proposing a Transcription Factor Network of Skeletal Muscle Post Exercise." *Master's Thesis* (2013).

2. **Murillo AL**. "Type 2 Diabetes and Obesity: A Biological, Behavioral, and Environmental Context." *Dissertation* (2016).

BOOK CHAPTERS

1. Edholm C, Emerenini B, **Murillo AL**, Saucedo O, Shakiba N, Wang X, Allen LJS, and Peace A. "Searching for superspreaders: identifying epidemic patterns associated with superspreading events in stochastic models." *In Understanding Complex Biological Systems with Mathematics, pp. 1-29. Springer, Cham.* (2018).

2. **Murillo AL**, Tiwari HK, and Affuso O. "Analysis of the High School Longitudinal Study to evaluate associations among mathematics achievement, mentorship and student participation in STEM programs." *In New Frontiers of Biostatistics and Bioinformatics, pp. 269-290. Springer, Cham.* (2018).

3. Evans E, Guo W, Genctav A, Tari S, Domeniconi C, Murillo A, ... & El-Zehiry N. "Role detection and prediction in dynamic political networks." *Advances in Data Science, 233-252.* (2021).

OTHER NON-PEER REVIEWED

Indicates *co-first authors, **undergraduate, ***graduate student

1. *Foster A, *Hendryx E, ***Murillo A**, and *Salas M. "Extensions of the cable equation incorporating spatial dependent variations in nerve cell diameter," MTBI-07-01M, 2010.

2. *Baez J, *Gonzalez T, ***Murillo A**, *Toupo D, and *Zarate R. "My βIG fat math model: beta-cell and type 2 diabetes," Mathematical and Theoretical Biology Institute, MTBI-08-04M, 2011.

3. **Caldwell WK, **Freedman B, **Settles L, **Thomas MM, **Murillo A**, Camacho E, and Wirkus S. "Substance abuse via legally prescribed drugs: the case of Vicodin in the U.S.," Mathematical and Theoretical Biology Institute, MTBI-10-02M, 2013.

4. **Almonte-Vega L, **Colon-Vargas M, ***Luna-Jarrin L, **Martinez J, **Rodriguez-Rincon J, ***Patil R, Espinoza B, **Murillo AL**, Arriola L, Viswanathan A, and Mubayi A. "A cost-effective analysis of treatment strategies for the control of HSV-2 infections in the U.S.: a mathematical modeling-based case study," Mathematical and Theoretical Biology Institute, 2018.

5. **George SS, **Mora-Mercade LO, **Oroz CY, **Tallana-Chimarro DX, Melendex-Alvarez JR, **Murillo AL**, Castillo-Garsow CW, and Rios-Soto KR. "The effect of GNRH on the menstrual cycle: a mathematical model," Mathematical and Theoretical Biology Institute, 2018.

6. *Alanis J, *Brown MM, *Kitchens J, *Magaña J, *Velastegui C, **Thakur M, Espinoza B, **Murillo AL**, Rodriguez-Messan M, Koester R, and Castillo-Garsow C. "Topography and behavior based movement models for missing hikers in land-wilderness settings," Mathematical and Theoretical Biology Institute, 2019.

7. *Rodriguez BA, *Chau B, *Chavez DMP, *Jaime-Yepez U, *Wang Z, **Yu F, **Murillo AL**, ..., Rios-Soto K, and Mubayi A. "The Role of variation in mate choice and Wolbachia infection on the Aedes Aegypti population dynamics," Mathematical and Theoretical Biology Institute, 2019.

HONORS, AWARDS, AND FELLOWSHIPS

Fellowships/Scholarships

Fellow, Sheridan Junior Faculty Teaching Fellows Program — Providence, RI
Brown University — 2024–2025

Scholar, Center for Improving Care Delivery for the Aging — Philadelphia, PA
Leonard Davis Institute of Health Economics, NIH National Institute of Aging — 2022–2023
University of Pennsylvania
Project: "Spatial Inequities in Health Service Use Among Medicare-enrolled Patients"

Scholar, Research in Implementation Science for Equity Program — San Francisco, CA
Programs to Increase Diversity among Individuals Engaged — 2020–2021
in Health-Related Research
NIH National Heart, Lung, and Blood Institute
University of California, San Francisco
Project: "Evaluating Asthma Morbidity, Spatial, and Social Environmental Factors"

NIH T32 Postdoctoral Fellowship — Birmingham, AL
Department of Biostatistics and Nutrition Obesity Research Center (NORC) — 2016–2019
University of Alabama at Birmingham

Fellowship — Tempe, AZ
Alfred P. Sloan Foundation Minority PhD Program — 2013–2016
Arizona State University

Fellowship — Tempe, AZ
NSF Louis Stokes Alliance for Minority Participation Bridge to the Doctorate — 2010–2012
Western Alliance to Expand Student Opportunities (WAESO)
Arizona State University

Scholarship — Los Angeles, CA
Infinite Possibilities Conference Oracle College Scholarship — 2010
University of California, Los Angeles

Selected Awards

Travel Award, Fostering Diversity in Biostatistics Workshop, ENAR, Atlanta, GA — 2018

Travel Award, IISA International Conference in Statistics, Gainesville, FL — 2018

The Obesity Society Rolls-Simons Travel Award, Obesity Week, National Harbor, MD — 2017

Travel Award, 5th Workshop on Biostatistics and Bioinformatics — 2017
Georgia State University, Atlanta, GA

Third place (oral), Postdoctoral Research Day, University of Alabama, Birmingham, AL — 2017

Travel Award, Workshop on the Interface of Statistics and Optimization (WISO), Statistical and Applied Mathematical Sciences Institute (SAMSI), Duke University, Durham, NC — 2017

Extraordinary First Year Postdoc Award, Office of Postdoctoral Education, University of Alabama, Birmingham, AL — 2016

Travel Award, MPE 2013+ Mathematics of Planet Earth Workshop on Education, National Institute for Mathematical and Biological Synthesis, University of Tennessee, Knoxville, TN — 2015

Travel Award, Fostering Diversity in Biostatistics Workshop, ENAR, Miami, FL — 2015

Recognition of Service, Society for Industrial and Applied Mathematics 2014

First place (poster), 10th Annual More Graduate Education at Mountain State Alliance Student Conference, Arizona State University, Tempe, AZ 2012

NSF Diversity Fellowship Travel Award, Short Course on Network Analysis: Systems Biology Analysis Methods for Genomic Data, University of California, Los Angeles, CA 2012

First place (poster), Infinite Possibilities Conference, UCLA 2012

First place (oral), NSF Emerging Researchers National Conference, Washington, D.C. 2012

Travel Award, Workshop on Mathematical Challenges in Neural Network Dynamics, Mathematical Biosciences Institute (MBI), Ohio University, Columbus, OH 2012

Second place (poster), NSF Emerging Researchers National Conference, Washington, D.C. 2012

Travel Award, Fostering Diversity in Biostatistics Workshop, ENAR, Miami, FL 2011

Outstanding Services Member of the Year, Undergraduate Student Government, Arizona State University, Tempe, AZ 2009

Travel Award, Fostering Diversity in Biostatistics Workshop, Joint Statistical Meeting, DC 2009

Beaming Leadership, Career Services Center, Arizona State University, Tempe, AZ 2008

GRANTS

R25 HL126146 (Bibbins-Domingo) 11/01/20-10/31/21
NIH/NHLBI PRIDE UCSF Research in Implementation Science for Equity (RISE-2)
Spatial multi-level risk factor analysis to predict asthma morbidity in urban multiethnic children
Role: Mentored Independent Research

U54 GM115677 (PI: Padbury) 07/01/16-04/30/21
NIH/NIGMS RI-Center for Clinical Translational Science
Advance Clinical and Translational Research is a statewide consortium of universities, hospital systems and non-profit agencies that provides the infrastructure to support, train and educate investigators conducting clinical and translational research.
Role: Biostatistician

P20 GM121298 (PI: Sharma) 04/01/17-02/28/22
NIH/NIGMS COBRE for Reproductive Health
The project involves providing biostatistical expertise and collaboration to investigators affiliated with the Biomedical Research Excellence (COBRE) for Reproductive Health IDeA grant awarded from the National Institute of General Medical Sciences (NIGMS).
Role: Biostatistician

8UG1OD024951 (PI: Dennery/Chun/Laptook) 09/23/16-08/31/25
NIH/NIGMS Rhode Island Child Clinical Trials Collaborative (RICCTC) (ECHO ISPCTN)
The objective of the RICCTC is to participate in a network to advance the field of Pediatric Medicine through a collaboration of academic centers that perform multi-center clinical trials research, assuring the participation of children living in rural or underserved communities located in Institutional Development Award (IDeA) states to investigate efficacy of treatment and management strategies to care for children. The 5 focus areas of the ECHO program are pre-, peri-, and postnatal outcomes; obesity, upper and lower airways, neurodevelopment and positive health.
Role: Biostatistician

NIH/NIDDK T32DK062710 (PI: Allison) 05/16-05/17
University of Alabama at Birmingham, Birmingham, AL
Goal: To obtain collaborative research experience in biostatistics and nutrition.
Role: Postdoctoral Trainee

NIH/NHLBI T32HL072757 (PI: Tiwari) 05/17-03/19
University of Alabama at Birmingham, Birmingham, AL
Goal: To obtain methodological research experience in statistical genetics and bioinformatics.
Role: Postdoctoral Trainee

Alfred P. Sloan Foundation Career Development Grant (PI: Murillo) 06/18-08/18
Sloan Scholars Mentoring Network
Goal: To perform patient-centered research involving the analysis of continuous glucose monitor (CGM) data to improve the management of type 1 diabetes using open source platforms.
Role: Principal Investigator

Structured Quartet Research Ensembles (SQuaREs) 01/19-01/21
American Institute of Mathematics
Goal: To develop and analyze stochastic models of the demographic and environmental factors super-spreaders. and their roles in Ebola and MERS.
Role: Co-Principal Investigator (with Allen, Edholm, and Wang)

Structured Quartet Research Ensembles (SQuaREs) 01/19-01/21
American Institute of Mathematics
Goal: To develop and analyze agent-based models to study the spatial influence of Ebola and MERS epidemic dynamics.
Role: Team Member

PRESENTATIONS

International

1. 12th International Conference on Teaching Statistics (ICOTS) Brisbane, Australia
   Contributed Oral Presentation 2026
   "Can Generative AI Tools Promote Statistical Thinking and Data Literacy?"

2. International Association for Statistics Education (IASE) Satellite Meeting Muenster, Germany
   Contributed Oral Presentation 2026
   "Teaching Regression Calibration to Correct for Measurement Error to Develop Statistical Thinking"

3. UK Conference on Teaching Statistics (UKCOTS) Glassgow, Scotland
   Contributed Poster Presentation 2026
   "Teaching Measurement Error Models to Develop Statistical Thinking"

4. Open Problems in Math Epidemiology Vancouver, BC, Canada
   Invited Oral Presentation 2011
   "A transcription factor network responsible for gene expression changes following exercise in human skeletal muscle"

National

1. Brown University, SPH Pedagogical Methods Working Group — Providence, RI
   Invited Presentation — 2025
   "Using Generative AI to Teach Statistical Thinking and Data Literacy in Public Health "

2. Wake Forest University, Department of Statistical Sciences — Winston-Salem, NC
   Invited Seminar — 2025
   "Teaching Measurement Error Models in Introductory Biostatistics Courses to Develop Statistical Thinking"

3. Brown University, ICERM Go Get Math Program — Providence, RI
   Invited Oral Presentation — 2025
   "Introduction to Data Science"

4. NIH-Funded "Statistical Methods, Developments, and Challenges in Geroscience" Meeting — Indianapolis, IN
   Invited Oral Presentation (Declined) — 2025
   "Measurement Error Models in Aging Research"

5. Brown University, ICERM Girls Get Math Program — Providence, RI
   Invited Oral Presentation — 2024
   "Introduction to Data Science"

6. Brown University, Division of Maternal Fetal Medicine, Women & Infants Hospital — Providence, RI
   Invited Guest Lecture — 2024
   "Basics and Applications of Survival Analysis in Clinical Research"

7. Community-Engaged Data and Evaluation Collaborative (CEDEC) Community Partner Workshop — Providence, RI
   Invited Guest Lecture — 2023
   "Statistical Planning"

8. NIH-Funded Short Course on Mathematical Sciences in Obesity — Bloomington, IN
   Invited Oral Presentation — 2023
   "Measurement Error Models in Obesity Research"

9. Brown University, ICERM Girls Get Math Program — Providence, RI
   Invited Oral Presentation — 2023
   "Introduction to Data Science"

10. NIH-Funded Short Course on Mathematical Sciences in Obesity — Virtual
    Invited Oral Presentation — 2021
    "Measurement Error Models in Obesity Research"

11. Eastern North American Region (ENAR) International Biometric Society Spring Meeting — Houston, TX
    Invited Oral Presentation — 2022
    "A Spatial Risk Factor Analysis of Asthma Morbidity and Obesity in a Multiethnic Cohort of Children"

12. Joint Statistical Meetings (JSM) — Washington, DC
    Invited Oral Presentation — 2022
    "Spatial Analysis Predicting Asthma Morbidity in Multiethnic Urban Rhode Island Children"

13. Joint Statistical Meetings (JSM) — Washington, DC
    Invited Oral Presentation — 2022
    "Social Network Model of School Nutrition Programs Incorporating Social Heterogeneity and Hierarchy"

14. Brown University, ICERM Girls Get Math Program — Providence, RI
Invited Oral Presentation — 2022
"Introduction to Data Science"

15. Indiana University, Department of Epidemiology and Biostatistics — Bloomington, IN
Invited Seminar — 2021
"Multilevel Framework Combining Statistical Inference and Modeling Studies to Address Health Disparities"

16. Harvard University, Center for Biostatistics and AIDS Research — Boston, MA
Invited Seminar — 2021
"Multilevel Framework Combining Statistical Inference and Modeling Studies to Address Health Disparities"

17. Brown University, ICERM Girls Get Math Program — Providence, RI
Invited Oral Presentation — 2021
"Introduction to Data Science"

18. Texas Tech University, Department of Mathematics and Statistics — Lubbock, TX
Invited Seminar — 2020
"Applications of Statistical and Mathematical Models to Evaluate Childhood Obesity and Nutrition Policies"

19. Joint Mathematics Meetings (JMM) — Baltimore, MD
Invited Oral Presentation — 2019
"Modeling the Diet Dynamics of Children: the Roles of Socialization and the School Environment"

20. NIH-Funded Short Course on Mathematical Sciences in Obesity — Virtual
Invited Oral Presentation — 2019
"Open Problems in Modeling Behavior Responses in Obesity"

21. Lehman College, Department of Mathematics — Bronx, NY
Invited Seminar — 2019
"A Mathematical, Statistical, and Computational Modeling Approach to Obesity and Diabetes Research"

22. IISA International Conference on Statistics — Gainesville, FL
Invited Oral Presentation — 2018
"Measurement error methods to improve estimates relating 2D body composition data with physical activity status"

23. International Symposium on Biomathematics and Ecology Education and Research — Tempe, AZ
Invited Oral Presentation (travel award) — 2018
"Developing Mathematical Models to Evaluate the Effectiveness of School Nutrition Programs to Reduce Childhood Obesity"

24. Society for American Chicanos/Native Americans Conference (SACNAS) — Houston, TX
Invited Oral Presentation (travel award) — 2018
"Applications of Mathematical Modeling and Statistical Tools to Evaluate the Effects of Nutrition and Metabolism in Diabetes"

25. University of Alabama, Department of Mathematics — Huntsville, AL
Invited Seminar — 2018
"A dynamic model of free fatty acids, glucose, and insulin metabolism"

26. 13th Annual More Graduate Education at Mountain State Alliance Conference — Tempe, AZ
Contributed Poster Presentation (travel award) — 2018
"Measurement error correction methods to improve parameter estimation in a model relating 2D body composition data with physical activity"

27. Eastern North American Region (ENAR) International Biometric Society Spring Meeting — Atlanta, GA
Invited Oral Presentation — 2018
"Analysis of the High School Longitudinal Study to evaluate associations among mathematics achievement, mentorship and student participation in STEM programs"

28. Mathematical Biosciences Institute — Columbus, OH
Contributed Poster Presentation — 2018
"Measurement error models in public health and epidemiology"

29. Duke University, Statistical and Applied Mathematical Sciences Institute — Durham, NC
Workshop on the Interface of Statistics and Optimization (WISO) — 2018
Contributed Poster Presentation (travel award)
"A mathematical model to evaluate the role of free fatty acids on the progression of type 2 diabetes"

30. University of Alabama at Birmingham Postdoctoral Research Day — Birmingham, AL
Contributed Oral Presentation (presentation award) — 2017
"Estimating physical activity from 2D body composition data using regression calibration methods for measurement error correction"

31. 12th Annual More Graduate Education at Mountain State Alliance Conference — Tempe, AZ
Contributed Poster Presentation (presentation and travel award) — 2018
"Estimating physical activity from 2D body composition data using regression calibration methods for measurement error correction"

32. 5th Workshop on Biostatistics and Bioinformatics — Atlanta, GA
Contributed Poster Presentation (travel award) — 2017
"Estimating physical activity from 2D body composition data using regression calibration methods for measurement error correction"

33. StatFest — Atlanta, GA
Contributed Poster Presentation — 2017
"Predicting type 2 diabetes risk and physical activity from 2D body composition data corrected for measurement error"

34. ObesityWeek — National Harbor, MD
Contributed Oral Presentation (travel award) — 2017
"Regression calibration to adjust estimates relating Body Composition to Relative Risk of Diabetes"

35. University of Alabama at Birmingham, Department of Mathematics — Birmingham, AL
Invited Seminar — 2017
"A dynamic model of free fatty acids, glucose, and insulin metabolism"

36. Society for American Chicanos/Native Americans Conference (SACNAS) — Long Beach, CA
Contributed Oral Presentation — 2016
"A model to assess the role of free fatty acids on the progression of type 2 diabetes"

37. University of Alabama at Birmingham, Department of Nutrition — Birmingham, AL
Invited Seminar — 2016
"A model for evaluating the role of free fatty acids on the progression of type 2 diabetes"

38. Arizona State University, Department of Psychology — Tempe, AZ
Invited Guest Lecture in an Introductory Psychology Class — 2015
"Mathematical applications to type 2 diabetes and eating behaviors, and tips for preparing for graduate school"

39. MPE 2013+ Mathematics of Planet Earth Workshop on Education for the Planet Earth of Tomorrow — Knoxville, TN
Contributed Poster Presentation (travel award) — 2015
"Modeling eating behaviors: the environment and food association learning via a ratatouille effect"

40. International Symposium on Biomathematics and Ecology Education and Research — Normal, IL
Contributed Poster Presentation — 2015
"Modeling eating behaviors: the environment and food association learning via a ratatouille effect"

41. International Symposium on Biomathematics and Ecology Education and Research — Normal, IL
Contributed Poster Presentation — 2015
"Modeling eating behaviors: the environment and food association learning via a ratatouille effect"

42. 1st International and Interdisciplinary Workshop on Ecology, Evolution, and Dynamics of Dengue — Tempe, AZ
Contributed Poster Presentation — 2014
"Vertical transmission in a two-strain model of dengue fever"

43. Society for Industrial and Applied Mathematics (SIAM) Workshop — Minneapolis, MN
Invited Oral Presentation — 2013
"Modeling beta-cell compensation and the reversal of type 2 diabetesr"

44. 11th Annual More Graduate Education at Mountain State Alliance Conference — Tempe, AZ
Contributed Poster Presentation — 2013
"A transcription factor network responsible for gene expression changes following exercise in human skeletal muscle"

45. Society for Mathematical Biology Meeting — Tempe, AZ
Contributed Poster Presentation — 2013
"A transcription factor network responsible for gene expression changes following exercise in human skeletal muscle"

46. 10th Annual More Graduate Education at Mountain State Alliance Conference — Tempe, AZ
Contributed Poster Presentation — 2012
"My BIG fat math model: beta-cell compensation and type 2 diabetes"

47. NSF Joint Annual Meeting — Washington, DC
Contributed Poster Presentation (travel award) — 2012
"A mathematical modeling approach to beta-cell compensation and the reversal of type 2 diabetes"

48. NSF Joint Annual Meeting — Washington, DC
Contributed Poster Presentation (travel award) — 2012
"A mathematical modeling approach to beta-cell compensation and the reversal of type 2 diabetes"

49. Infinite Possibilities Conference — Baltimore, MD
Contributed Poster Presentation (presentation and travel award) — 2012
"Modeling beta-cell compensation and the reversal of type 2 diabetes"

50. Emerging Researchers National Conference — Atlanta, GA
Contributed Oral Presentation (presentation and travel award) — 2012
"My BIG fat math model: beta-cell compensation and type 2 diabetes"

51. Arizona State University, oaquin Bustoz Math-Science Honors Program — Tempe, AZ
Invited Guest Lecture — 2011
"Math-bio research opportunities"

52. Unraveling Complex Systems: Math Biology Minisymposium — Tempe, AZ
Invited Oral Presentation — 2011
"Extensions of the cable equation incorporating spatial dependent variations in neurons"

53. Annual Joint Mathematics Meeting — New Orleans, LA
Contributed Poster Presentation (travel award) — 2011
"Extensions of the cable equation incorporating spatial dependent variations in nerve cell diameter"

54. 9th Annual More Graduate Education at Mountain State Alliance Conference — Tempe, AZ
Contributed Poster Presentation — 2011
"Extensions of the cable equation incorporating spatial dependent variations in nerve cell diameter"

55. Emerging Researchers National Conference — Washington, DC
Contributed Poster Presentation — 2011
"Extensions of the cable equation: spatial dependent variations in nerve cell diameter"

56. Field of Dreams Conference — Tempe, AZ
Contributed Poster Presentation — 2011
"My BIG fat math model: beta-cell compensation and type 2 diabetes"

57. Society for American Chicanos/Native Americans Conference (SACNAS) — Anaheim, CA
Contributed Poster Presentation — 2010
"Extensions of the cable equation incorporating spatial dependent variations in nerve cell diameter"

58. Leading Edge Academy — Gilbert, AZ
Guest Lecture in High School Ecology Class — 2009
"Nutrition and health"

PROFESSIONAL SERVICE

University Committees

Brown University Department of Biostatistics Intro Courses Committee — 2022–2023, 2026–present
Brown University Department of Biostatistics Nominations Committee — 2025–present
Brown University School of Public Health Delta Omega Honor Society Faculty Advisor — 2024–present
Brown University School of Public Health Community Advisory Board — 2024–present
Brown University Department of Biostatistics Diversity, Equity, Inclusion (DEI) Committee — 2022–present
Brown University Department of Biostatistics Master's Degree Admissions Committee — 2022–present
Co-organizer, CSS/Biostatistics Statistical Seminar Series AY 2023-2024 — 2023–2024
Arizona State University Career Services Advisory Committee — 2007–10
Arizona State University Campus Health Advisory Board — 2008–09
Arizona State University Residential Review Board — 2008

International/National Committees

American Statistical Association, Section on Statistics and Data Science Education, At-Large Executive Committee Member — 2024–present
American Statistical Association, Committee on Minorities in Statistics, Member — 2024–present
Regional Advisory Board, Eastern North American Region (ENAR), International Biometric Society, Member — 2024–present

DataFest, Eastern North American Region (ENAR), International Biometric Society, Chair 2024–present
American Statistical Association, Student and Young Professional Group 2022–2023
of the Justice, Equity, Diversity, and Inclusion (JEDI) Outreach Group, Chair

Editorial Activities

Associate Editor, Journal of Statistics and Data Science Education 2024–present
Ad Hoc Reviewer, Annuals of Epidemiology 2025–present
Ad Hoc Reviewer, Statistics in Medicine 2025–present
Ad Hoc Reviewer, Clinical Pediatrics 2021–2023
Ad Hoc Reviewer, PLoS One 2017–2023
Ad Hoc Reviewer, American Journal of Reproductive Immunology 2020–2021
Ad Hoc Reviewer, Mathematical Biosciences and Engineering 2018–2021
Ad Hoc Reviewer, Journal of Nutrition Science 2018–2021
Ad Hoc Reviewer, Revista de Matemática: Teoría y Aplicaciones 2018–2021
Ad Hoc Reviewer, Obesity 2017–2021
Ad Hoc Reviewer, Clinical Obesity 2017–2021
Ad Hoc Reviewer, JAMA 2016
Ad Hoc Reviewer, Nature Medicine 2016
Ad Hoc Reviewer, Nature Reviews Disease Primers 2016
Ad Hoc Reviewer, Science 2016

Conference and Workshop Activities

Invited Session Chair, ENAR Spring Meeting Indianapolis, IN
"DataFest" 2026

Panelist, ICERM Applied Math in Statistics and Data Science Education Workshop Providence, RI
"Teaching Programming" 2025

Invited Session Chair, ENAR Spring Meeting New Orleans, LA
"DataFest" 2025

Invited Session Chair, Annual Joint Statistical Meetings Nashville, TN
"Journal of Statistics and Data Science Education: Promoting Innovative and Inclusive Approaches in Statistics and Data Science Education" 2025

Panelist, ENAR Spring Meeting Foster Diversity in Biostatistics Workshop New Orleans, LA
"Careers Panel" 2025

Panelist, JSM Diversity Mentoring Program Toronto, Canada
"Navigating Working Remotely and Mentoring" 2023

Panelist, Electronic Undergraduate Statistics Research Conference (eUSR) Virtual Meeting
"Graduate Information Session" 2021

Invited Session Chair, Annual Joint Statistical Meetings Seattle, WA
"Innovative Methods for Predicting Public Health Outcomes and Informing Policy" 2021

Panelist, Field of Dreams Conference Virtual
"Fields of Success from Math Alliance Alumni" 2020

Invited Session Chair, IISA International Conference in Statistics — Gainesville, FL
"Recent Microbiome Research Methods" — 2018

Organizing Committee

"ICERM Applied Math in Statistics and Data Science Education," Co-Organizer — 2025 "ENAR DataFest," Planning Committee Chair — 2024–present
"ASA StatFest Conference," Planning Committee — 2021-2025
Chair (2025), Vice Chair (2024), Planning Committee Member (2021–2023)
"Joint SIAM Student Conference," Georgia Tech University, Planning Committee — 2021
"AWIS JumpStarting STEM Careers Symposium," Planning Committee — 2016
"AWIS JumpStarting STEM Careers Symposium: Scientific Writing," Planning Committee — 2015
"1st International & Interdisciplinary Workshop on the Dynamics of Dengue," Co-Chair — 2014
"Unraveling Complex Systems: Math Biology Minisymposium," Co-Chair — 2011

Undergraduate and Graduate Level Education and Outreach

Panelist, "Biostatistics Academic Career Panel," Harvard University, Department of Biostatistics, Cambridge, MA 2026 Judge and Mentor, ENAR Spring Meeting DataFest (various locations) — 2025–2026
Mentor Judge, Brown School of Public Health Research Day, Providence, RI — 2023
Mentor Judge, Brown School of Public Health Research Day, Providence, RI — 2022
Mentor Judge, SACNAS Conference, San Antonia, TX — 2018
Mentor Judge, SACNAS Conference, Long Beach, CA — 2016
Panelist, "AWIS Seminar: STEM Careers and Pathways," Arizona State University, Tempe, AZ — 2011
Volunteer, Informal Science Communication, Arizona State University, Tempe, AZ — 2012–2014
Panelist, "Summer REUs," Field of Dreams Conference, Arizona State University, Tempe, AZ — 2011

K through 12th Level Education and Outreach

Poster Judge, American Statistical Association Fall Data Challenge for High School Students — 2022
Lecturer, ICERM GGM Program, Brown University, Providence, RI — 2021–2026
Co-organizer (2024 – 2026)
Volunteer, Girl Scouts Technology STEM Series, Arizona State University, Tempe, AZ — 2014
Panelist/Math Grader, Sonia Kovalevsky Day, Arizona State University, Tempe, AZ — 2010–2013

Service

Contributor to the Obesity and Energetics Offerings, University of Alabama, Birmingham, AL — 2016–2017
Secretary, Association for Women in Science Chapter, Arizona State University, Tempe, AZ — 2014–2016
Representative, Association of All Graduate Students, SHESC ASU, Tempe, AZ — 2013–2014
Society for Industrial and Applied Mathematics ASU Chapter, Tempe, AZ — 2010–2013
Vice President (2012-13), Secretary (2011-12), Representative (2010-11)
Member, Colleges Against Cancer, Arizona State University, Tempe, AZ — 2007–2009
Member, Students for a Cure, Arizona State University, Tempe, AZ — 2006–2009
Volunteer, American Cancer Society, Sherman Oaks, CA — 2005–2006

MENTORING

Thesis and Research Advising

Undergraduate Thesis Advisor, Raghav Pantav, Brown University Applied Mathematics, "Modeling the Transmission Dynamics of Respiratory syncytial virus (RSV) in Childcare Settings," Graduated in 2022

Undergraduate Research Mentor, Melanie Morales, Brown University Health and Human Biology, "Investigating pediatric health disparities in obesity and asthma," 2021–2022

Undergraduate Research Mentor, Presidential Scholars Program, Brown University Elise Togneri, Applied Mathematics, "Mathematical Modeling with Applications to Biology and Ecology," Summer 2021

Graduate Research Mentor, Rachel Gaither, Brown University Epidemiology, "Spatial analysis of pediatric health disparities in obesity and asthma," Summer 2021

Graduate Research Mentor, Ariana Lopez, New York University Master's in Public Health, "Race Coding Methods in American Community Survey data," Spring 2022
Undergraduate Research Mentor, Avery Maytin, Brown University Computational Biology, "Measurement Error Methods for Blood Pressure NHANES data," Spring 2024
*Funded by Brown Undergraduate Teaching and Research Awards (UTRA)

Thesis Advisor, Victoria Grase, Brown University Biostatistics Master's student, "Race Coding Methods to Evaluate Blood Pressure Using NHANES data," Graduated in Spring 2024
*NextGen Scholar

Thesis Reader, Alitzel Serrano Laguna, Brown University Biostatistics Master's student, "Joint Modeling of Prothrombin Biomarker for Liver Cirrhosis," Graduated in Spring 2024
*NextGen Scholar

Thesis Advisor, Michael Stewart, Brown University Biostatistics Master's student, "Measurement Error Models for Correcting Bias to Evaluate the Association Between Diet and Hypertension," Graduated in Spring 2025 *NextGen Scholar

Thesis Advisor, Yingxi Kong,Brown University Biostatistics Master's student, "Longitudinal Data Analysis Evaluating Childhood Behavioral Problems in the Future of Families and Child Wellbeing Study (FFCWS)," Graduated in Spring 2025

Thesis Advisor, Tianna Chan, Brown University Biostatistics Master's student, "Measurement Error Models Evaluating Childhood Depression in the Future of Families and Child Wellbeing Study (FFCWS)," Graduated in Spring 2025

Undergraduate Research Mentor, Chris Kourkoulakos, Brown University Statistics "Survival Analysis Tutorial," Spring 2024
*Funded by Brown Undergraduate Teaching and Research Awards (UTRA)

Thesis Advisor, Yiyun Wan, Brown University iostatistics Master's student, "Application of Bayesian Models to Correct Measurement Errors in Dietary Data in HCHS/SOL ," Graduated in Spring 2026

Thesis Reader, Shuyan Luo, Brown University Biostatistics Master's student, "Exploring consequences of error in EHR-based asthma sub-phenotyping by analytic role of the phenotype," Graduated in Spring 2026

Thesis Advisor, Torre Lloyd, Brown University Biostatistics Master's student, "Dietary Patterns Among Patients with Chronic Pelvic Pain," Expected Graduation in Spring 2027
*NextGen Scholar

Summer Mentored Research Programs

Faculty Mentor, "Introduction to Biostatistics," "Introduction to Probability and Statistics," and "Introduction to Epidemic Modeling" New York University

Summer 2022

- Format: Summer REU, Pathways into Quantitative Aging Research Summer Program for 8 weeks
- Enrollment: 25–30 students in the program
- Level: undergraduate in math or biology
- Software: R for analyzing data
- Description: Met weekly with 3 students and 1 graduate student to complete a project for "Social Determinants of Health in Alabama Women" to give an oral presentation, write report, and present poster at the SACNAS 2022 Conference.

Guest Lecturer and Faculty Mentor, "Introduction to Biostatistics," "Introduction to Probability and Statistics," and "Introduction to Epidemic Modeling" Arizona State University

Summer 2019

- Format: Summer REU, Mathematical and Theoretical Biology Institute (MTBI). Daily lectures and labs 5 days a week for 8 weeks
- Enrollment: 25–30 students
- Level: undergraduate in math or biology
- Software: Matlab, R, Maple, for analyzing models
- Description: Introduces discrete and continuous mathematical models with applications to public health and biology. Mentored 2 teams of 3-4 students and 2 graduate students to complete projects.

Guest Lecturer and Faculty Mentor, "Introduction to Biostatistics" and "Introduction to Probability and Statistics" Arizona State University

Summer 2018

- Format: Summer REU, Mathematical and Theoretical Biology Institute (MTBI). Daily lectures and labs 5 days a week for 8 weeks
- Enrollment: 25–30 students
- Level: undergraduate in math or biology
- Software: Matlab, R, Maple, for analyzing models
- Description: Introduces discrete and continuous mathematical models with applications to public health and biology. Mentored 2 teams of 3-4 students and 2 graduate students to complete projects.

Academic Advising

Brown University, First-year biostatistics master's students 2022–present
3 students (2022–2023), 3 students (2023–2024), 6 students (2024–2025), 3 students (2025–2026)

Brown University, Exploratory Advisor, Freshman and Sophomore 2024–2026
6 students

Brown University, First-year biostatistics doctoral student 2023–2024
1 student

New York University, First-year biostatistics master's students 2021-2022
20 students

TEACHING

Brown University: Undergraduate, Graduate, and Faculty Level

Instructor, PHP 1511 – Applied Regression Analysis Brown University
Spring 2026

- Format: Two lectures per week
- Enrollment: 20 students (Spring 2026)
- Level: undergraduate in statistics and public health
- Teaching Team: 1 teaching assistant
- Software: R for data analysis and interpretation
- Description: Regression techniques with emphasis on theory, conceptual understanding, and application.

Co-Instructor, PHP 2508 – Biostatistics and Data Analysis II Brown University
Spring 2026, Spring 2025

- Format: Two lectures per week and four labs
- Enrollment: 54 students (Spring 2026), 51 students (Spring 2025)
- Level: master's in public health
- Teaching Team: co-taught with epidemiology professor, 4 teaching assistants
- Software: Stata for data analysis and interpretation
- Description: Regression techniques with emphasis on theory, conceptual understanding, and application.

Instructor, PHP 1501 – Essentials of Data Analysis Brown University
Fall 2025, Fall 2024, Fall 2023, Fall 2022

- Format: Two lectures per week and four labs
- Enrollment: 109 (Section 01 and 02, Fall 2025), 84 (Section 01 and 02, Fall 2024), 87 (Section 01 and 02, Fall 2023), 75 (Section 01 and 02, Fall 2022, co-taught)
- Level: undergraduate in statistics, public health, pre-med, economics, and other
- Teaching Team: 4 teaching assistants
- Software: R for data analysis and interpretation
- Description: Basic concepts of statistics and the statistical methods commonly used in the social sciences and public health with an emphasis on applications to real data.

Co-Instructor, PHP 2507 – Biostatistics and Data Analysis I Brown University
Fall 2025

- Format: Two lectures per week and four labs
- Enrollment: 60 students (Fall 2025)
- Level: master's in public health
- Teaching Team: co-taught with epidemiology professor, 4 teaching assistants
- Software: Stata for data analysis and interpretation
- Description: Statistical principles as well as the applied skills necessary to answer public health questions using data, including: data acquisition, data analysis, data interpretation and the presentation of results.

Guest Lecturer, "Introduction to Survival Analysis in Clinical Research" Brown University
Summer 2024

- Enrollment: 5 fellows
- Level: Pediatric Fellows Division of Maternal Fetal Medicine, Women & Infants Hospital

Instructor, PHP 2511 – Applied Regression Analysis Brown University
Spring 2025, Spring 2024, Spring 2023

- Format: Two lectures per week and three labs
- Enrollment: 37 students (Spring 2025), 39 students (Spring 2024), 73 students (Spring 2025)
- Level: master's and doctoral in public health
- Teaching Team: 3 teaching assistant
- Software: R for data analysis and interpretation
- Description: Regression techniques with emphasis on theory, conceptual understanding, and application.

Instructor, PHP 2516 – Applied Longitudinal Data Analysis Brown University
Spring 2024, Spring 2023

- Format: Two lectures per week
- Enrollment: 26 students (Spring 2024), 28 students (Spring 2023)
- Level: master's in biostatistics
- Teaching Team: 1 teaching assistant
- Software: R for data analysis and interpretation
- Description: Exploratory analysis, study design, GLM for longitudinal data, covariance structures, generalized linear models for longitudinal data, marginal models and mixed effects.

Instructor, PHP 2517 – Applied Multilevel Modeling Brown University
Spring 2024, Spring 2023

- Format: Two lectures per week
- Enrollment: 24 students (Spring 2024), 26 students (Spring 2023)
- Level: master's in biostatistics
- Teaching Team: 1 teaching assistant
- Software: R for data analysis and interpretation
- Description: Structure of multilevel data, basic multilevel linear models, multilevel GLM, model testing and evaluation, and missing data imputation.

Guest Lecturer, "Statistical Planning" Brown University
Summer 2023

- Presentation in the Community Partner Workshop with Community-Engaged Data and Evaluation Collaborative (CEDEC)

Guest Lecturer, "Incorporating Statistical Planning into the Research Strategy" Brown University
Spring 2020

- Enrollment: 9 fellows
- Level: Pediatric Fellows Core Curriculum

Guest Lecturer, "Statistical Planning for the IRB Proposal" Brown University
Spring 2020

- Enrollment: 15 faculty and fellows total
- Level: Faculty and fellows total, CME credit option provided; Pediatric Faculty Development Series

Instructor, Advance-CTR "Virtual Learning in R Module Series" Brown University
Spring 2020

- Format: Online course
- Enrollment: 20 clinicians
- Level: junior faculty

New York University: Undergraduate and Graduate Level

Instructor, GPH–GU 5995 – Biostatistics for Public Health New York University
Spring 2022, Fall 2021

- Format: Two lectures per week and 4 labs
- Enrollment: 70 students (Spring 2022), 50 students (Fall 2021)
- Level: master's in biostatistics and public health
- Teaching Team: 2 teaching assistants
- Software: R and Stata for data analysis and interpretation
- Description: Covers basic probability, descriptive and inferential statistics, and the role of biostatistics in the practice of public health. Specific attention will be given to common probability distributions in public health and medicine, t-tests, Analysis of Variance, multiple linear and logistic regression, categorical data analysis, and survival analysis.

Instructor, GPH–GU 2353/3353 – Regression I New York University
Spring 2022

- Format: Two lectures per week
- Enrollment: 70 students
- Level: master's in biostatistics and public health
- Teaching Team: 2 teaching assistants
- Software: R for data analysis and interpretation
- Description: Regression techniques with emphasis on theory, conceptual understanding, and application.

Instructor, UGPH–GU 20 – Biostatistics for Public Health New York University
Spring 2022, Fall 2021

- Format: Two lectures per week
- Enrollment: 35 students (Spring 2022), 35 students (Fall 2021)
- Level: undergraduate in global health
- Teaching Team: 3 teaching assistants
- Software: R for data analysis and interpretation
- Description: Introduces basic concepts and techniques in the analysis of public health data. It is an applied course, emphasizing use, interpretation and limits of statistical analysis. Real world examples are used as illustrations, and computer-based data analysis is integrated into the course.

Arizona State University: Undergraduate Level

Guest Lecturer, "Continuous Models for Life and Social Sciences" Arizona State University
Fall 2016

- Format: three lectures
- Enrollment: 20 students
- Level: undergraduate in math or biology
- Software: Matlab
- Description: Introduces continuous mathematical models with applications to public health and biology.

Guest Lecturer, "Elementary Statistics" Arizona State University
Spring 2015

- Format: four lectures total
- Enrollment: 30 students
- Level: undergraduate in public health
- Description: Introduces elementary statistics.

Teaching Assistant Arizona State University
Summer 2013

- Format: Summer REU, Mathematical and Theoretical Biology Institute (MTBI). Daily lectures and labs 5 days a week for 8 weeks
- Enrollment: 30 students
- Level: undergraduate in public health
- Software: Matlab
- Description: Introduces continuous mathematical models with applications to public health and biology.

Graduate Mentor Arizona State University
Fall 2011

- Format: Weekly lectures as part of the Joaquin Bustoz Math Science Honors Program (JBMSHP)
- Enrollment: 4 students
- Level: undergraduate in math
- Software: Matlab
- Description: Introduces continuous mathematical models with applications to public health and biology.

Guest Lecturer, "Brief Calculus" Arizona State University
Spring 2011

- Format: two lectures total
- Enrollment: 40 students
- Level: undergraduate
- Description: Introduces basic calculus.

Guest Lecturer, "Calculus I" Arizona State University
Fall 2010

- Format: two lectures total
- Enrollment: 30 students
- Level: undergraduate
- Description: Introduces basic calculus.

High-School Level

Co-Instructor, "Introduction to Applied Mathematics" Brown University
Summer 2019

- Format: Daily lectures and labs 5 days a week for 8 weeks Joaquin Bustoz Math Science Honors Program (JBMSHP)
- Enrollment: 8 high school students
- Level: High-school level
- Software: Matlab for analyzing models
- Description: Introduces to discrete and continuous mathematical models with applications to public health and biology.

Teaching Assistant and Primary Mentor, "Introduction to Applied Mathematics" Brown University
Summer 2012, Summer 2014, Summer 2015

- Format: Daily lectures and labs 5 days a week for 8 weeks Joaquin Bustoz Math Science Honors Program (JBMSHP)
- Enrollment: 6 students
- Level: High-school level
- Software: Matlab for analyzing models

- Description: Introduces to discrete and continuous mathematical models with applications to public health and biology.