

ANGELA LYNN PEACE

Assistant Professor, Department of Mathematics and Statistics, Texas Tech University
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RESEARCH INTERESTS

Mathematical Modeling, Applied Dynamical Systems, Differential Equations, Population dynamics, Theoretical Ecology, Mathematical Biology, Ecological Stoichiometry

EDUCATION

- Ph.D. Applied Mathematics** Aug 2014
Arizona State University, Tempe
Advisor: Yang Kuang
Dissertation: Stoichiometric Producer-Grazer Models Incorporating the Effects of Excess Food-Nutrient Content on Grazer Dynamics
- M.A. Mathematics** May 2011
Arizona State University, Tempe
- B.S. Computational Mathematical Sciences** May 2009
Arizona State University, Tempe

PROFESSIONAL EXPERIENCE

- Assistant Professor** Began Aug 2015
Department of Mathematics and Statistics
Texas Tech University, Lubbock
- Postdoctoral Fellowship** Aug 2014–July 2015
NIMBioS: National Institute for Mathematical and Biological Synthesis
University of Tennessee, Knoxville
Project Title: Stoichiometric food web models: How food quality affects population structures
- Mathematician Consultant** 2010 – 2014
Math Ecology, LLC, Phoenix AZ www.mathecology.com
I worked on epidemiology modeling. My role was to develop, analyze, and simulate systems of ordinary differential equations.
- Laboratory Research Assistant** 2009–2012
School of Life Science, Arizona State University
I was involved in lab research in James Elser's lab on the stoichiometric approach to understanding population growth and the interactions between species. I maintained algal chemostats and zooplankton cultures and performed chemical analysis of carbon and phosphorus in organisms.
- Field Research** 2009
Center of Ecological and Evolutionary Synthesis, University of Oslo
I did ecological field work collecting zooplankton at several different lakes throughout Norway. At the ecology lab at the University of Oslo I performed chemical analysis to measure alkaline phosphatase activity in zooplankton.

AWARDED GRANTS

NSF Division of Mathematical Sciences

Fall 2020

Role: PI, Amount: \$17,750

Title: XVIII Red Raider Minisymposium on Modeling in a Heterogeneous World

Co-PIs: Linda Allen, Kenneth Schmidt, Joshua Padgett, Wenjing Zhang, Texas Tech University

NSF EEID Directorate for Biological Sciences

June 2018 - May 2023

Role: Senior Personnel, Amount: \$2,494,511 (my TTU budget: \$165,356)

Title: Transmission pathways and immunological factors that affect invasion potential of the recently discovered pathogen, *Batrachochytrium salamandrivorans*

PI: Matt Gray, University of Tennessee, Knoxville

NSF Division of Mathematical Sciences

Sept. 2018 - Aug. 2021

Role: Co-PI, Amount: \$80,000

Title: Collaborative Research: Linking Pharmacokinetics to Epidemiological Models of Vector-Borne Diseases and Drug Resistance Prevention

NSF Division of Mathematical Sciences

Sept. 2016 - Aug. 2019

Role: PI, Amount: \$341,316

NSF Grant #: 1615697

Title: Robust Mathematical Models of Ecotoxicological Dynamics Subject to Stoichiometric Constraints

Co-PI: Gregory Mayer, The Department of Environmental Toxicology, TTU

Texas Tech University Seed Grants for Interdisciplinary Research

June. 2017 - Dec. 2018

Role: Co-PI, Amount: \$75,000

Title: TTURTLES: TTU Research Team Linking Education and Sciences

PI: Celine Godard, Department of Environmental Toxicology, TTU; Co-PI: Jerry Dwyer, College of Education, TTU

National Institute for Mathematical and Biological Synthesis, NSF

January 2018

Role: Workshop Organizer, Amount: travel expenses for 34 people

Investigative Workshop: Modeling Ecotoxicological Dynamics Subject to Stoichiometric Constraints

Co-Organizer: Paul Frost, Trent University, Canada

JOURNAL PUBLICATIONS

* denotes students authors

32. Asik*, L., Chen, M., & Peace, A. (2020). The effects of excess food nutrient content on a tritrophic food chain model in the aquatic ecosystem. *Journal of Theoretical Biology*, 491, 110183.
31. Awoyemi*, O. M., Subbiah, S., Thompson*, K., Velazquez, A., Peace, A., & Mayer, G. D. (2020). Trophic-level interactive effects of phosphorus availability on the toxicities of cadmium, arsenic, and their binary mixture in media-exposed *scenedesmus acutus* and media and dietary-exposed *daphnia pulex*. *Environmental Science & Technology*.
30. Islam*, M. R., Peace, A., Medina, D., & Oraby, T. (2020). Integer versus fractional order seir deterministic and stochastic models of measles. *International Journal of Environmental Research and Public Health*, 17(6), 2014.

29. Chen, M., Asik*, L., & Peace, A. (2019). Stoichiometric knife-edge model on discrete time scale. *Advances in Difference Equations*, 2019(1), 1–16.
28. Peace, A., & Wang, H. (2019). Compensatory foraging in stoichiometric producer–grazer models. *Bulletin of mathematical biology*, 81(12), 4932–4950.
27. Hassan*, M. N., & Peace, A. (2019). Mechanistically derived toxicant-mediated predator-prey model under stoichiometric constraints. *Mathematical biosciences and engineering: MBE*, 17(1), 349–365.
26. Peace, A., ORegan, S. M., Spatz, J. A., Reilly, P. N., Hill, R. D., Carter, E. D., ... Gray, M. J. (2019). A highly invasive chimeric ranavirus can decimate tadpole populations rapidly through multiple transmission pathways. *Ecological Modelling*, 410, 108777.
25. Asik*, L., Kulik*, J., Long, K. R., & Peace, A. (2019). Seasonal variation of nutrient loading in a stoichiometric producer–consumer system. *Bulletin of Mathematical Biology*, 1–15.
24. Hassan*, M. N., Asik*, L., Kulik*, J., Long, K., & Peace, A. (2019). Environmental seasonality on predator–prey systems under nutrient and toxicant constraints. *Journal of theoretical biology*.
23. Shaw, A. K., Igoe, M., Power, A. G., Bosque-Pérez, N. A., & Peace, A. (2019). Modeling approach influences dynamics of a vector-borne pathogen system. *Bulletin of mathematical biology*, 1–18.
22. Asik*, L., & Peace, A. (2019). Dynamics of a producer–grazer model incorporating the effects of phosphorus loading on grazers growth. *Bulletin of mathematical biology*, 1–17.
21. Dissanayake, C., Juan, L., Long, K. R., Peace, A., & Rana, M. M. (2019). Genotypic selection in spatially heterogeneous producer-grazer systems subject to stoichiometric constraints. *Bulletin of mathematical biology*, 1–17.
20. Manore, C. A., Teboh-Ewungkem, M. I., Prosper, O., Peace, A., Gurski, K., & Feng, Z. (2019). Intermittent preventive treatment (ipt): Its role in averting disease-induced mortality in children and in promoting the spread of antimalarial drug resistance. *Bulletin of mathematical biology*, 81, 193-234.
19. Hassan*, M. N., Thompson*, K., Mayer, G., & Peace, A. (2018). Effects of excess food nutrient on producer-grazer model under stoichiometric and toxicological constraints. *Mathematical biosciences and Engineering*, 16(1), 150-167.
18. Rana*, M., Dissanayake, C., Juan, L., Long, K. R., & Peace, A. (2018). Mechanistically derived spatially heterogeneous producer-grazer model subject to stoichiometric constraints. *Mathematical biosciences and Engineering*, 16(1), 222-233.
17. Chen, M., Fan, M., Xie, C., Peace, A., & Wang, H. (2018). Stoichiometric food chain model on discrete time scale. *Mathematical biosciences and Engineering*, 16(1), 101-118.
16. Asik*, L., Kulik*, J., Long, K., & Peace, A. (2018). Dynamics of a stoichiometric producer-grazer system with seasonal effects on light level. *Mathematical Biosciences and Engineering*, 16(1), 501-514.
15. Edholm, C., Emerenini, B., Murillo, A., Saucedo, O., Shakiba, N., Wang, X., ... Peace, A. (2018). Understanding complex biological systems with mathematics. In (p. 1-29). Springer.

14. Murphy, C. A., Nisbet, R. M., Antczak, P., Garcia-Reyero, N., Gergs, A., Lika, K., ... Peace, A. (2018a). Incorporating sub-organismal processes into dynamic energy budget models for ecological risk assessment. *Integrated environmental assessment and management*.
13. Murphy, C. A., Nisbet, R. M., Antczak, P., Garcia-Reyero, N., Gergs, A., Lika, K., ... Peace, A. (2018b). Linking adverse outcome pathways to dynamic energy budgets: A conceptual model. In *A systems biology approach to advancing adverse outcome pathways for risk assessment* (pp. 281–302). Springer.
12. Shaw, A. K., Peace, A., Power, A. G., & Bosque-Pérez, N. A. (2017). Vector population growth and condition-dependent movement drive the spread of plant pathogens. *Ecology*, *98*, 2145–2157.
11. Peace, A., Poteat, M. D., & Wang, H. (2016). Somatic growth dilution of a toxicant in a predator–prey model under stoichiometric constraints. *Journal of theoretical biology*, *407*, 198–211.
10. Elser, J. J., Kyle, M., Learned, J., McCrackin, M. L., Peace, A., & Steger, L. (2016). Life on the stoichiometric knife-edge: effects of high and low food c: P ratio on growth, feeding, and respiration in three daphnia species. *Inland Waters*, *6*(2), 136–146.
9. Peace, A. (2015). Effects of light, nutrients, and food chain length on trophic efficiencies in simple stoichiometric aquatic food chain models. *Ecological Modelling*, *312*, 125–135.
8. Yamamichi, M., Meunier, C. L., Peace, A., Prater, C., & Rúa, M. A. (2015). Rapid evolution of a consumer stoichiometric trait destabilizes consumer–producer dynamics. *Oikos*, *124*(7), 960–969.
7. Teboh-Ewungkem, M. I., Prosper, O., Gurski, K., Manore, C. A., Peace, A., & Feng, Z. (2015). Intermittent preventive treatment (ipt) and the spread of drug resistant malaria. In *Applications of dynamical systems in biology and medicine* (pp. 197–233). Springer.
6. Peace, A., Wang, H., & Kuang, Y. (2014). Dynamics of a producer–grazer model incorporating the effects of excess food nutrient content on grazers growth. *Bulletin of mathematical biology*, *76*(9), 2175–2197.
5. Burgess, C., Peace, A., Everett, R., Allegri, B., & Garman, P. (2014). Computational modeling of interventions and protective thresholds to prevent disease transmission in deploying populations. *Computational and mathematical methods in medicine*, *2014*.
4. Diakite, I., Edwards, D. A., Emerick, B., Panaggio, M., Peace, A. L., Raymond, C., & Zumbrum, M. (2014). Improving a fuel cell assembly process. *Mathematics-in-Industry Case Studies*, *6*(1).
3. Peace, A., Zhao, Y., Loladze, I., Elser, J. J., & Kuang, Y. (2013). A stoichiometric producer–grazer model incorporating the effects of excess food-nutrient content on consumer dynamics. *Mathematical biosciences*, *244*(2), 107–115.
2. Elser, J. J., Loladze, I., Peace, A. L., & Kuang, Y. (2012). Lotka re-loaded: modeling trophic interactions under stoichiometric constraints. *Ecological Modelling*, *245*, 3–11.
1. Elser, J. J., Peace, A. L., Kyle, M., Wojewodzic, M., McCrackin, M. L., Andersen, T., & Hessen, D. O. (2010). Atmospheric nitrogen deposition is associated with elevated phosphorus limitation of lake zooplankton. *Ecology letters*, *13*(10), 1256–1261.

PAST DOCTORAL STUDENTS

Md Nazmul Hassan PhD August 2019
Department of Mathematics and Statistics, Texas Tech University

Dissertation Title: Environmental Variations in Stoichiometric Predator-Prey Models
Committee members: Angela Peace (chair), Linda Allen, Wenjing Zhang

Lale Asik PhD May 2020
Department of Mathematics and Statistics, Texas Tech University

Research: Environmental variation in ecological stoichiometry of predator-prey models
Committee members: Angela Peace (chair), Linda Allen, Wenjing Zhang, Katharine Long

PAST MASTERS STUDENTS

Monir Uz Zaman MS Summer 2018
Department of Mathematics and Statistics, Texas Tech University

Report title: Parameter Sensitivity Analysis on a Delay Differential Equation Model of Cancer
Committee members: Angela Peace (chair), Victoria Howle

Md Shah Alam MS Fall 2018
Department of Mathematics and Statistics, Texas Tech University

Report title: Parameter Sensitivity Analysis of Dynamics of Ovarian Tumor Growth Model
Committee members: Angela Peace (chair), Aminur Rahman

CURRENT GRADUATE STUDENTS

Md Rafiul Islam PhD expected 2021
Department of Mathematics and Statistics, Texas Tech University

Research: Analyzing Epidemic Models with Multiple Stages of Infection

Ramiro Ramirez PhD expected 2020
Department of Mathematics and Statistics, Texas Tech University

Research: Incorporation of the Benthic level in aquatic food web models

Dilini Fonseka PhD expected 2020
Department of Mathematics and Statistics, Texas Tech University

Research: Dynamics of Plants, pollinators, and herbivores

TEACHING EXPERIENCE

Assistant Professor
Department of Mathematics and Statistics, Texas Tech University

Calculus II, class size 112 Spring 2020

Biomathematics for Undergraduates, Honors Spring 2019

Calculus I, class size 124 Fall 2018

Calculus II, class size 110 Spring 2018

Honors Calculus II Fall 2017

Graduate Course: Biomathematics I, Stochastic Models Spring 2017

Graduate Course: Biomathematics II, Deterministic Models Fall 2016

Honors Calculus II Spring 2016

Honors Calculus I

Fall 2015

Teaching Assistantship

School of Mathematical and Statistical Sciences, Arizona State University

Primary Instructor:

Math for Business Analysis

Summer 2014

Brief Calculus for Business Majors

Summer 2013

Calculus I

Fall 2011, Spring 2012

Lab/Recitation Instructor:

Modern Differential Equations Matlab Labs

Fall 2013, Spring 2014

Applied Linear Algebra Matlab Labs

Fall 2012

Calculus II recitation

Fall 2010

Calculus I recitation

Spring 2010

TA Training

August 2013

School of Mathematical and Statistical Sciences, Arizona State University

I was selected to help run a week long teacher training workshop to prepare incoming graduate students for undergraduate teaching

UNDERGRADUATE RESEARCH MENTOR

Reagan Collins

Summer 2017- current

Department of Mathematics and Statistics, Texas Tech University, Honors College

Project: Anti-angiogenic treatment of tumors using Agent-Based models in NetLogo.

Adam Harper

2015-2016

Department of Mathematics and Statistics, Texas Tech University, PRISM REU

Poster Title: Predicting how Ranavirus Affects the Chiricahua Leopard Frog

CONFERENCE/SEMINAR PRESENTATIONS

7th International Conference on Math Modeling and Analysis of Populations in Biological Systems

Oct 2019

Arizona State University

Tempe, AZ

Talk title: Compensatory foraging in stoichiometric producer-grazer models

AFS and TWS joint Annual Meeting

Sept 2019

American Fisheries Society, Wildlife Society

Reno Nevada

Talk title: Multiple Transmission Pathways in Mathematical Models of Bsal

SMB Annual Meeting

July 2019

Society of Mathematical Biology

Montreal, Canada

Minisymposium title: Resource explicit population models

Workshop on Ecological Stoichiometry and Ecotoxicology

August 28, 2018

Texas Tech University

Lubbock, TX

Talk title: Modeling population dynamics under the theory of Ecological Stoichiometry

GRC: Unifying Ecology Across Scales

July 24, 2018

Gordon Research Conference

Maine, USA

Talk title: Mathematical Modeling of Evolutionary Dynamics Subject to Stoichiometric Constraints

SMB Annual Meeting

Society of Mathematical Biology

July 15, 2018

Sydney, Australia

Talk title: Modeling the role of superspreaders in infectious disease outbreaks

ICMB Annual Conference

International Conference on Mathematical Biology

June 25, 2018

Beijing, China

Talk title: Intermittent preventive treatment (IPT) and the spread of drug resistant malaria

Stoichiometric Ecotoxicology Investigative Workshop

NIMBioS National Institute for Mathematical and Biological Synthesis

Jan 2018

University of Tennessee

Workshop Organizer

Talk title: Stage Structures Subject to Stoichiometric and Toxicological Constraints

SETAC annual meeting

Society of Environmental Toxicology and Chemistry

Nov 2017

Minneapolis, MI

Talk title: Modeling concurrent nutrient and toxicant stressors under dynamic energy budget theory

SIAM TTU Faculty Research

Department of Mathematics and Statistics

Oct 2017

Texas Tech University, Lubbock

Talk title: Modeling Trophic Interactions Under Stoichiometric Constraints

SMB annual meeting

Society of Mathematical Biology

July 2017

Salt Lake City, TU

Poster title: Ecotoxicological Models under Stoichiometric Constraints

Biomathematics Seminar

Department of Mathematics and Statistics

April 2016

Texas Tech University, Lubbock

Talk title: Tutorial on XPPAUT: Numerical Bifurcation Diagrams for ODEs

Online course on ranavirus biology

Ranaviruses: Emerging Pathogens of Ectothermic Vertebrates

March 2016

Global Ranavirus Consortium

Guest Lecture title: SIR models of Ranavirus Spread

Applied Maths Seminar

Department of Mathematics and Statistics

Nov 2015

Texas Tech University, Lubbock

Talk title: Concurrent nutrient and contaminant stressors in predator prey systems

International Symposium on Biomaths and Ecology Education and Research

Intercollegiate Biomathematics Alliance

Oct 2015

Illinois State University

Talk title: Co-occurring nutrient and contaminant stressors in a predator-prey model

Biomathematics Seminar

Department of Mathematics and Statistics

Sept 2015

Texas Tech University, Lubbock

Talk title: Stoichiometric food web models: How food quality affects population structures

Fishheads Seminar

Oak Ridge National Laboratory

July 2015

Oak Ridge, Tennessee

Talk title: Ecotoxicological Stoichiometric model of Methylmercury bioaccumulation in Daphnia.

Conference on Biological Stoichiometry

June 2015

Trent University

Peterborough, Ontario, Canada

Talk title: Modeling the effects of co-occurring nutrient and contaminant stressors in aquatic systems

Micro and Macro Systems in Life Sciences Conference

June 2015

Stefan Banach International Mathematical Center

Bedlewo, Poland

Talk title: Somatic growth dilution: Toxin predator-prey model under stoichiometric constraints

The Third SIAM Gators Conference

March 2014

SIAM

University of Florida

Poster presented: A stoichiometric producer-grazer model: incorporating the effects of excess food-nutrient content on consumer dynamics

2013 Workshop for Young Researchers in Mathematical Biology (WYRMB) Aug. 2013

Mathematical Biosciences Institute

The Ohio State University

Talk title: A stoichiometric producer-grazer model incorporating the effects of excess food-nutrient content on consumer dynamics. Travel support awarded by the Mathematical Biosciences Institute.

AARMS Mathematical Biology Workshop

July 2013

Atlantic Association for Research in the Mathematical Sciences *St John's, Newfoundland Canada*

Talk title: Stoichiometric producer-grazer models. Travel support awarded by NSF.

Society for Mathematical Biology

June 2013

Annual Meeting and Conference

Arizona State University

Talk title: The effects of excess food nutrient content on consumer dynamics in a Lotka-Volterra type model.

Association for the Sciences of Limnology and Oceanography

Feb 2013

ASLO 2013 Aquatic Science Meeting

New Orleans, Louisiana

Talk title: A stoichiometric producer-grazer model incorporating the effects of the knife-edge.

WORKSHOPS AND TUTORIALS ATTENDED

Superspreaders and their role in epidemics: a stochastic modeling approach Jan 2019

American Institute of Mathematics, SQuaRE

San Jose, CA

Working with collaborators to explore the effect of demographic and environmental variability on human-to-human disease transmission rates among superspreaders.

Optimizing pollination strategies

Jan 2019, June 2019

The New Zealand Institute for Plant & Food Research Limited

New Zealand

External collaborator team member

SESYNC workshop on disease and ecosystem processes

Nov 2018, Nov 2019, June 2019

National Socio-Environmental Synthesis Center

Annapolis, MD

Member of multi-disciplinary group working to create models that couple disease and nutrient ecology

WAMB! Women Advancing Mathematical Biology: Understanding Complex Buillogical Systems with Mathematics

April 2017

Mathematical Biology Institute

The Ohio State University

Co-leader with Dr. Linda Allen of a project entitled: Stochastic modeling of infectious diseases

Dynamic models to link molecular perturbations to individual impacts for ecological risk assessment of chemicals April 2016

NIMBioS National Institute for Mathematical and Biological Synthesis University of Tennessee

Member of multi-disciplinary group of molecular biologists, systems biologists, DEB and AOP modelers, ecotoxicologists and mathematicians with interest and expertise in developing dynamic, mechanistic models to predict impacts on individuals from high throughput assays used to screen chemicals for potential risk.

Vector Movement and Disease Working Group March 2015, March 2016

NIMBioS National Institute for Mathematical and Biological Synthesis University of Tennessee

The goals of this working group are to (i) develop a general understanding of how vector movement is driven by vector population dynamics, characteristics of host plants and landscapes, and community dynamics, and (ii) investigate the implications of vector movement for the dispersal of vector-borne plant pathogens.

Malaria-Leishmania Co-infection Investigative Workshop May 2015

NIMBioS National Institute for Mathematical and Biological Synthesis University of Tennessee

The focus of this workshop was to identify challenges for the control of malaria-leishmaniasis co-infections in South Asian and the African continent. The workshop also modeled the complexity involved in the propagation of these co-infections in resource limited regions

Woodstoich August 2014

5 days of peace and stoichiometry Sydney, Australia

A workshop on ecological stoichiometry and the related framework nutritional geometry. I participated on a team project on exploring connections between ecological stoichiometry and rapid evolution. Travel support awarded by NSF.

Evolutionary Quantitative Genetics Tutorial August 2014

NIMBioS National Institute for Mathematical and Biological Synthesis University of Tennessee

This workshop reviewed the basics of theory in the field of evolutionary quantitative genetics and its connections to evolution observed at various time scales.

WhAM! A Research Collaboration Workshop for Women in Applied Math Sept 2013

Institute for Mathematics and its Applications University of Minnesota

A workshop on dynamical systems with applications to biology and medicine. I participated on a team project on 'Intermittent Preventive Treatment and the Spread of Drug Resistance to Malaria'. Travel support awarded by Institute for Mathematics and its Applications.

Mathematical Problems in Industry June 2013

29th Annual Workshop Worcester Polytechnic Institute, Massachusetts

I participated on a team project collaborating with the company Pall on Changes in Capture Efficiency Due to Folding. Pall makes very fine porous filter media and are interested in predicting the changes that may occur in the ability of the membrane to capture particles of various sizes when the filter is folded. Travel support awarded by Institute for Mathematics and its Applications.

European Study Group with Industry April 2013

91st Annual Study Group University of Bristol, England

I participated on a team project collaborating with the Norwegian company Teknova/Elkem on modeling heat transfer and solidification in the process of continuous casting of silicon. Travel support awarded by Oxford Center for Collaborative Mathematics.

UK Graduate Modelling Camp 2013

5th Annual Modelling Camp

April 2013

St. Anthonys College Oxford, England

I participated on a team project on assessing molecular properties for oral drug delivery. Travel support awarded by Oxford Center for Collaborative Mathematics.

Mathematical Problems in Industry

28th Annual Workshop

June 2012

University of Delaware

I participated on a team project on Fuel Cell Assembly Process Flow for High Productivity. Travel support awarded by Institute for Mathematics and its Applications.

Graduate Student Mathematical Modeling Camp

9th Annual Modeling Camp

June 2012

Rensselaer Polytechnic Institute, New York

I participated on a team project on exploring models for advection and/or diffusion in the context of population dynamics models for adult and larval stage barnacles. Travel support awarded by NSF.

JOURNAL EDITOR

Invited Editor for Mathematical Biosciences and Engineering (MBE)

2018

Special Issue: Resource Explicit Population Models, Vol: 16(1) 2019

JOURNAL REVIEWS

Reviewer for Journal of Theoretical Biology

2017, 2018

Reviewer for Mathematical Biosciences

2016

Reviewer for Bulletin of Mathematical Biology (BMB)

2015, 2017, 2018

Reviewer for Journal of Applied Sciences

2016

Reviewer for Discrete and Continuous Dynamical Systems Series-B (DCDS-B)

2015

Reviewer for Journal of Biological Systems (JBS)

2015

Reviewer for Mathematical Biosciences and Engineering (MBE)

2013, 2014, 2015, 2018

MATH OUTREACH

Association for Women in Mathematics (AWM) student chapter, faculty mentor 2019-2020

Texas Tech University

Main faculty mentor for the AWM Raiders, a local chapter of the AWM.

Enhancing Diversity in Graduate Education (EDGE) Program Instructor Summer 2018

Texas Tech University

Linear Algebra Instructor for young women preparing for graduate school in Mathematics

Shake Hands with Your Future summer camp

July 2017

Texas Tech University

Summer camp for middle school students including lectures/labs on mathematical toxicology

15th Emmy Noether High School Mathematics Days May 2017
Texas Tech University, Department of Mathematics and Statistics

Organized and conducted an educational workshop for high school girls entitled: Mathematical Toxicology: How can we predict the effects of pollutions?

South Plains Mathematics Fellows (SPMF) Program Fall 2016
Texas Tech University, Department of Mathematics and Statistics

Mentor for undergraduate mathematics major

14th Emmy Noether High School Mathematics Days May 2016
Texas Tech University, Department of Mathematics and Statistics

Organized and conducted an educational workshop for high school girls entitled: Can Math Help Prevent the Spread of Infectious Diseases?

Adventures in STEM Girls Camp July 2015
NIMBioS, Knoxville, TN

Educational summer day program for middle school-aged girls including Interviews with scientists and mathematicians.

8th Annual Mathematical Field of Dreams Conference Nov 2014
Phoenix, AZ

Educational talk for undergraduates on research in the mathematical sciences at the Field of Dreams Conference organized by the National Alliance for Doctoral Studies in the Mathematical Sciences.

6th Undergraduate Research Conference at the Interface of Biology and Math Nov 2014
Knoxville, TN

Moderated session of undergraduate student talks and participated in networking activities.

SACNAS Annual Meeting Oct 2014
Los Angeles, CA

Mentored and judged at the the annual SACNAS (Society for Advancement of Hispanics/Chicanos and Native Americans in Science) meeting, Gave an educational talk in the Ecology and Evolution seminar.

Applied Math Bicycle Ride March 2014
Tempe Bicycle Action Group, AZ

Organized an applied math bicycle ride for Tempe Bicycle Action Group's Science Sunday Rides.

ASU Night of the Open Door March 2014
School of Mathematical and Statistical Sciences, Arizona State University

Volunteered as a member of the LogaRhythms Band to help present the applications of math to music at ASU's Night of the Open Door.

CryptoRally 2013 Nov 2013
School of Mathematical and Statistical Sciences, Arizona State University

Volunteered at ASU's CryptoRally 2013 undergraduate rally competition on cryptography

Sundevil Family Night at the AZ Science Center Oct 2012
School of Mathematical and Statistical Sciences, Arizona State University

Volunteered at Science, Technology, Engineering, and Mathematics (STEM) Sun devil Family Night at the AZ science center sponsored by ASU School of Life Sciences.

ACTIVITIES

Group Health Ride

July 2012

Finisher in the Group Health Seattle to Portland bicycle ride, 204 miles in 2 days.

Covenant Health Knoxville Half Marathon

March 2015

Finisher in the Half Marathon run of 13.1 miles through scenic Knoxville, TN.