Katherine R. McCance Guess, Ph.D.

Postdoctoral Fellow
Department of Educational Leadership and Policy Studies
The University of Texas at San Antonio
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EDUCATION

2021 **Ph.D. Learning and Teaching in STEM (Focus: Science Education)**
North Carolina State University, Raleigh, NC
Dissertation: *Investigating the potential of interdisciplinary collaborations between education and science/engineering in higher education.*
Advisor: Margaret R. Blanchard, Ph.D.

2019 **M.Ed. Science Education**
North Carolina State University, Raleigh, NC
Advisor: Soonhye Park, Ph.D.

2015 **B.S. Biochemistry, Spanish minor*, Magna Cum Laude***
Southwestern University, Georgetown, TX
Honors Thesis: *Influence of plant maturity on anthocyanin concentrations, phenolic composition, and antioxidant properties of 3 purple basil (Ocimum basilicum L.) cultivars.* Advisor: Emily D. Niemeyer, Ph.D.

RESEARCH AND PROFESSIONAL EXPERIENCE

2023 - **Postdoctoral Fellow**
NSF HSI Institutional Transformation Project: STEM Undergraduate Education through a Hispanic Student Success Framework
The University of Texas at San Antonio

2021 - 2023 **Postdoctoral Fellow and Program Manager**
USDA Preparing Diverse and Rural Students and Teachers to Meet the Challenges in the Bioproducts and Bioenergy Industry; NSF Future Eco Manufacturing of Recyclable Soft Electronics
North Carolina State University

2018 - 2021 **Graduate Research Assistant**
USDA Preparing Diverse and Rural Students and Teachers to Meet the Challenges in the Bioproducts and Bioenergy Industry
North Carolina State University

2018 - 2021 **Program Coordinator**
Burroughs Wellcome: After-School STEM Career Club Program
North Carolina State University

2017 - 2019 **Graduate Research Assistant**
Department of STEM Education
North Carolina State University

2015 - 2017 **Program Coordinator**
Howard Hughes Medical Institute Grant: Transforming STEM Pedagogy Through Active Learning
Southwestern University

2013 - 2015 **Undergraduate Research Assistant**
Analytical Chemistry - Department of Chemistry and Biochemistry
Southwestern University

PUBLICATIONS

Peer-Reviewed Articles

1. **McCance, K. R.,** & Blanchard, M. R. (2024) Measuring the interdisciplinarity and collaboration perceptions of U.S. scientists, engineers, and educators. *AERA Open.* https://doi.org/10.1177/23328584231218952
2. **McCance, K. R.,** Topliceanu, A., Echeverria, D., McAlexander, S. L., Blanchard, M. R., & Venditti, R. A. (2023). Fluffy, fluffier, and fluffiest: Creating and testing biodegradable starch packing peanuts*. Journal of Chemical Education, 100*(10), 4031-4039*.* https://doi.org/10.1021/acs.jchemed.3c00510
3. Collier, K. M., **McCance, K. R**., Jackson, S., Topliceanu, A., Blanchard, M. R., & Venditti, R. A. (2023). Observing microplastics in the environment through citizen science-inspired laboratory investigations. *Journal of Chemical Education, 100*(5), 2067-2079. https://doi.org/10.1021/acs.jchemed.2c01078
4. **McCance, K. R.**, Teeter, S. D., Blanchard, M. R., & Venditti, R. (2023). Using Activity Theory to understand the interactions of a university interdisciplinary team of scientists and science educators. *Studies in Higher Education, 48*(6), 892-909*.* https://doi.org/10.1080/03075079.2023.2172564
5. McAlexander, S. L., **McCance, K. R.,** Blanchard, M. R., & Venditti, R. A. (2022). Investigating the Experiences, Beliefs, and Career Intentions of Historically Underrepresented Science and Engineering Undergraduates Engaged in an Academic and Internship Program. *Sustainability*, 14*(3)*. https://doi.org/10.3390/su14031486
6. McAlexander, S. L., Noble, S. M., **McCance, K. R.,** Blanchard, M. R., & Venditti, R. A. (2021). Measuring Undergraduate Students' Beliefs about and Career Interest in Bioproducts and Bioenergy. *BioResources, 16*(3), 5679-5693. https://ojs.cnr.ncsu.edu/index.php/BioRes/article/view/BioRes_16_3_5679_McAlexander_Measuring_Student_Belief_Career_Bioproduct
7. **McCance, K. R.**, Suarez, A., McAlexander, S. L., Davis, G., Blanchard, M. R., & Venditti, R. (2021). Modeling a biorefinery: Converting pineapple waste to bioproducts and biofuel. *Journal of Chemical Education, 98*(6), 2047-2054*.* https://doi.org/10.1021/acs.jchemed.1c00020
8. Kite, V. J., Park, S, **McCance, K. R.,** & Seung, E. (2020). Secondary science teachers'

understandings of the epistemic nature of science practices. *Journal of Science Teacher Education*, *32*(3), 243-264. https://doi.org/10.1080/1046560X.2020.1808757

9. **McCance, K. R.,** Weston, T., & Niemeyer, E. D. (2020). Classroom observations to characterize active learning within introductory undergraduate science courses. *Journal of College Science Teaching, 49*(4).
10. **McCance, K. R.,** Flanigan, P. F., Quick, M. M., & Niemeyer, E. D. (2016). Influence of plant maturity on anthocyanin concentrations, phenolic composition, and antioxidant properties of 3 purple basil (*Ocimum basilicum* L.) cultivars. *Journal of Food Composition and Analysis, 53*, 30-39. https://doi.org/10.1016/j.jfca.2016.08.009

Book Chapters

1. Blanchard, M. R., Venditti, R. A., McAlexander, S. L., **McCance, K. R**., & Collier, K. M. (2021). An interdisciplinary model to diversify STEM participation: College, high school, & industry partnerships. In D. Farland-Smith (Ed.), *Handbook of research on student, scientist, & teacher partnerships* (pp. 95-132). IGI Global. https://doi.org/10.4018/978-1-7998-4966-7.ch007

Manuscripts in Review, Revision, or Preparation

1. Sansone, V. A., **McCance, K. R.,** Hernandez, M., Cantu, M., Guilfoyle, V., Lerma, A., & Hernandez, B. (2024). It's a vibe: Student experiences with STEM inclusivity at a Hispanic-Serving Institution.
2. Topliceanu, A., **McCance, K. R**., Sollinger, J., & Blanchard, M. R. (2024). International graduate students as STEM role models for high school students.
3. **McCance, K. R.**, Blanchard, M. R., & Venditti, R. (2024). Understanding science/engineering graduate students' perceptions of an interdisciplinary collaboration with education: Developing community and navigating boundaries.
4. Blanchard, M. R., Collier, K. M., Rajwade, A., **McCance, K. R.,** & Venditti, R. A. (2024). Navigating cyber-attacks, COVID, and ethanol: Understanding factors that influenced the implementation of classroom labs and activities.
5. **McCance, K. R**., Collier, K. M., Blanchard, M. R., & Venditti, R. A. (2024). Measuring rural high school students' beliefs about the bioeconomy and career interests.

Proceedings and Abstracts

1. Blanchard, M. R., Collier, K. M., Rajwade, A., **McCance, K. R.,** McAlexander, S. L., Venditti, R. A. (2022). *Understanding teacher implementation of Bioeconomy activities through the lens of expectancy value theory.* Electronic Proceedings of the ESERA 2021 Conference.
2. **McCance, K. R**. & Niemeyer, E. D. (2017). *Transforming the undergraduate chemistry experience through active learning: Evaluating pedagogical reforms within general and organic chemistry*. American Chemical Society National Meeting Book of Abstracts. Vol. 253, CHED-126.
3. **McCance, K. R.** & Niemeyer, E. D. (2015). *Influence of plant maturity on anthocyanin levels, phenolic composition, and antioxidant properties of purple basil (Ocimum basilicum* L.*)*. American Chemical Society National Meeting Book of Abstracts. Vol. 249, AGFD-78.
4. **McCance, K. R.** & Niemeyer, E. D. (2014). *Influence of plant maturity on anthocyanin levels, phenolic composition, and antioxidant properties of 3 purple basil (Ocimum basilicum* L.*) cultivars.* American Chemical Society National Meeting Book of Abstracts. Vol. 247, AGFD-80.

Other

1. McCance, K. R. (2022). *Field trip to New Bern sparks interest in soft biodegradable electronics.* https://research.cnr.ncsu.edu/sustainablebioproducts/2022/06/22/field-trip-to-new-bern-sparks-interest-in-soft-biodegradable-electronics/

PRESENTATIONS

Research Presentations

1. **McCance, K. R.** (February 2025). *Supporting engineering graduate students to create inclusive learning environments: A professional development program at a Hispanic-Serving Institution*. Paper to be presented at the Collaborative Network for Engineering & Computing Diversity (CoNECD), San Antonio, TX.
2. Sansone, V. A., **McCance, K. R.**, Hernandez, M., Cantu, M., Lerma, A., & Guilfoyle, V. (November 2024). *It's a vibe: Student experiences with STEM inclusivity at a Hispanic-Serving Institution.* Paper to be presented at the Association for the Study of Higher Education (ASHE) annual conference, Minneapolis, MN.
3. **McCance, K. R.,** Sansone, V., Appleford, M., Montoya, A., Millwater, H., Herbert, F., & Shipley, H. (June 2024). Work in progress: Transforming STEM undergraduate education through a Hispanic student success servingness framework. Poster to be presented at the American Society of Engineering Education Annual Conference & Exposition, Portland, OR.
4. Topliceanu, A., **McCance, K. R.,** Sollinger, J., Blanchard, M. R. (March 2024). *International Graduate Students as STEM Role Models for High School Students.* Paper presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Denver, CO.
5. **McCance, K. R.,** & Blanchard, M. R. (September 2023). *Exploring the perceptions of interdisciplinarity and collaboration of U.S. scientists, engineers, and educators: A national survey.* Poster presented at the San Antonio Postdoctoral Research Forum, San Antonio, TX.
6. **McCance, K. R.** (September 2023). *Exploring the role of motivation in interdisciplinary collaborations.* Poster presented at the UTSA Postdoctoral Research Showcase, San Antonio, TX.
7. Topliceanu, A., Sollinger, J., **McCance, K. R.,** & Blanchard, M. R. (September 2023). *International graduate STEM students as role models: Reflections on Zoom visits to high school students' classrooms.* Paper presented at the Mid-Atlantic Association of Science Teacher Education (MA-ASTE), Kingsport, TN.
8. **McCance, K. R.,** Collier, K. M., Blanchard, M. R., & Venditti, R. A. (April 2023). *Measuring rural high school students' beliefs about the bioeconomy and career interests.* Paper presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Chicago, IL.
9. Blanchard, M. R., Collier, K. M., Rajwade, A., **McCance, K. R.,** & Venditti, R. A. (January 2023). *Investigating high school science teachers' motivations for implementing bioeconomy activities.* Paper presented at the annual meeting of the Hawaii International Conference for Education, Honolulu, HI.
10. **McCance, K. R.,** Teeter, S. D., Blanchard, M. R., & Venditti, R. A. (October 2022). *Investigating the interactions of an interdisciplinary team of scientists and science educators: An activity theory analysis.* Paper presented at the annual Southwest ASTE regional meeting, San Marcos, TX.

11. Collier, K. M., Blanchard, M. R., Rajwade, A., **McCance, K. R.,** & Venditti, R. A. (2022, September). *Understanding the difference in teacher implementation of bioeconomy based laboratory exercises and activities through expectancy-value theory.* Paper presented at the annual meeting of the Mid-Atlantic Association for Science Teacher Education, West Portsmouth, OH.
12. **McCance, K. R.,** & Blanchard, M. R. (March 2022). *Understanding Scientists,' Engineers,' and Educators' Perceptions of Collaboration and Interdisciplinarity: National Survey Validation and Results.* Paper presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Vancouver, BC.
13. **McCance, K. R.,** Teeter, S. D., Blanchard, M. R., & Venditti, R. A. (March 2022). *Analyzing an Interdisciplinary Education and Science/Engineering Team's Interactions Using Activity Theory*. Poster presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Vancouver, BC.
14. McAlexander, S. L., **McCance, K. R**., Blanchard, M. R. & Venditti, R. A. (2022, March). *An Interdisciplinary Approach to Develop Interest for Bioproduct Careers with Historically Underrepresented STEM Undergraduates.* Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST), Vancouver, BC.
15. Blanchard, M. R., Collier, K. M., Rajwade, A., **McCance, K. R.,** McAlexander, S. L., Venditti, R. A. (January 2022). *Utilizing expectancy-value theory to interpret high school teachers' implementation of bioeconomy-based laboratories and activities*. Paper presented at the Association of Science Teacher Education (ASTE) Annual International Conference, Greenville, SC.
16. **McCance, K. R.,** & Blanchard, M. R. (September 2021). *Exploring scientists', engineers', and educators' perceptions of interdisciplinarity and collaboration: Results from a national survey*. Paper presented at the annual meeting of the Mid-Atlantic Association of Science Teacher Education (MA-ASTE), Blowing Rock, NC.
17. **McCance, K. R.**, Teeter, S. D., Blanchard, M. R., & Venditti, R. (August 2021). *Analyzing an interdisciplinary team's interactions through an activity theory lens.* Paper presented at the European Science Education Research Association (ESERA) International Conference. Virtual due to COVID-19.
18. Blanchard, M. R., Collier, K. M., Rajwade, A. M., **McCance, K. R.**, McAlexander, S. L., & Venditti, R. A. (August 2021). *Understanding teacher implementation of bioeconomy activities through the lens of expectancy value theory.* Paper to be presented at the European Science Education Research Association (ESERA) International Conference. Virtual due to COVID-19.
19. McAlexander, S. L., Noble, S. M., **McCance, K. R.**, Scouse, A., Blanchard, M. R., & Venditti, R. A. (August 2021). *Measuring undergraduate students' beliefs about bioproducts, bioenergy, and related careers.* Paper to be presented at the European Science Education Research Association (ESERA) International Conference. Virtual due to COVID-19.
20. **McCance, K. R.**, & Blanchard, M. R. (April 2021). *Investigating perceptions, experiences, and collectivism within interdisciplinary collaborations: A national survey.* Poster presented at the National Association of Research in Science Teaching (NARST) Annual International Conference. Virtual due to COVID-19.
21. **McCance, K. R.**, Teeter, S. D., Blanchard, M. R., & Venditti, R. (April 2021). *Using Cultural-Historical Activity Theory to Understand An Interdisciplinary Team's Co-Development of High School Lab Activities*. Paper presented at National Association of Research in Science Teaching

(NARST) Annual International Conference. Virtual due to COVID-19.

22. Blanchard, M. R., Collier, K. M., Rajwade, A. M., **McCance, K. R.**, McAlexander, S. L., & Venditti, R. A. (April 2021). *Analyzing whether teachers' task values influenced their implementation of bioeconomy-focused lessons: A pilot study*. Paper presented at the National Association of Research in Science Teaching (NARST) Annual International Conference. Virtual due to COVID-19.
23. **McCance, K. R.** & Blanchard, M. R., & Venditti, R. (June 2020). *Graduate Students' Perceptions of Participating in a Science/Engineering and Education Interdisciplinary Collaboration: Developing Community and Navigating Boundaries.* Paper presented at the Australasian Science Education Research Association (ASERA) Annual International Conference. Virtual due to COVID-19.
24. McAlexander, S. L., **McCance, K. R.,** Blanchard, M. R., & Venditti, R. A. (June 2020). *How Recent Community College to University Transfer Students Experience Supported Science & Engineering Internships.* Paper presented at the Australasian Science Education Research Association (ASERA) Annual International Conference. Virtual due to COVID-19.
25. **McCance, K. R.** & Blanchard, M. R. (March 2020). *When Differences Don't Divide: Graduate Students' Perceptions of Participating in an Interdisciplinary Collaboration.* Paper presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Portland, OR (Cancelled due to COVID-19).
26. **McCance, K. R.** & Park, S. (March 2020). *Characteristics of Effective Professional Development for Undergraduate Science Instructors: A Critical Review of the Literature*. Poster presented at the NARST Annual International Conference, Portland, OR (Cancelled due to COVID-19).
27. McAlexander, S. L., **McCance, K. R.,** Blanchard, M. R., & Venditti, R. (August 2019) *A Novel Interdisciplinary Approach to Diversify Bioeconomy Participation: A Pilot Study.* Paper presented at the European Science Education Research Association (ESERA) Conference, Bologna, Italy.
28. **McCance, K. R.,** Sagues, W. J., McAlexander, S. L., Blanchard, M. R., & Venditti, R. (June 2019) *An Interdisciplinary Educational Program to Promote Interest in the Circular Bioeconomy.* Paper presented at the American Chemical Society Annual Green Chemistry & Engineering (ACS GC&E) Conference, Reston, VA.
29. **McCance, K. R.,** Kite, V. J., Park, S., & Seung, E. (April 2019). *Science Teachers' Gaps in Knowledge and Perceptions of NGSS Science Practices as Epistemic Acts.* Paper presented at the American Educational Research Association (AERA) Annual Meeting, Toronto, Canada.
30. **McCance, K. R.,** Kite, V. J., Park, S., & Seung, E. (March 2019). *Understanding Science Teachers' Perceptions and Misconceptions of the Epistemic Foundation of NGSS Science Practices.* Paper presented at the NARST Annual International Conference, Baltimore, MD.
31. **McCance, K. R.,** McAlexander, S., Blanchard, M. R., & Venditti, R. A. (September 2018). *The Collaborative, Interdisciplinary Development of Authentic Science Investigations that Promote Interest in Careers in the Bioeconomy.* Oral presentation at the annual meeting of the Mid-Atlantic Association of Science Teacher Education (MA-ASTE), Harrisonburg, VA.
32. Trundle, K. C., **McCance, K. R**., & Shaheen, M. (January 2018). *Digging into gardening to grow science learning.* Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE), Baltimore, MD.
33. Trundle, K. C., **McCance, K. R.,** & Shaheen, M. (October 2017). *Digging into gardening to germinate science learning*. Paper presented at the 15th Annual Design Institute. Raleigh, NC. (Invited)

34. **McCance, K. R**. & Niemeyer, E. D. (March 2017). *Transforming the undergraduate chemistry experience through active learning: Evaluating pedagogical reforms within general and organic chemistry*. Poster presented in the Division of Chemical Education at the 253rd American Chemical Society (ACS) National Meeting, San Francisco, CA.
35. **McCance, K. R.** & Niemeyer, E. D. (April 2015). *Influence of plant maturity on anthocyanin levels, phenolic composition, and antioxidant properties of 3 purple basil (Ocimum basilicum* L.*) cultivars*. Paper presented at Research and Creative Works Symposium, Southwestern University, Georgetown, TX.
36. **McCance, K. R.** & Niemeyer, E. D. (March 2015). *Influence of plant maturity on anthocyanin levels, phenolic composition, and antioxidant properties of purple basil (Ocimum basilicum* L.*) cultivars*. Poster presented in the Sci-Mix session at the 249th ACS National Meeting, Denver, CO.
37. **McCance, K. R.** & Niemeyer, E. D. (March 2015). *Influence of plant maturity on anthocyanin levels, phenolic composition, and antioxidant properties of purple basil (Ocimum basilicum* L.*) cultivars*. Poster presented in the Division of Agricultural and Food Chemistry at the 249th ACS National Meeting, Denver, CO.
38. **McCance, K. R.** & Niemeyer, E. D. (March 2014). *Influence of plant maturity on anthocyanin levels, phenolic composition, and antioxidant properties of 3 purple basil (Ocimum basilicum* L.*) cultivars.* Poster presented in the Sci-Mix session at the 247th ACS National Meeting, Dallas, TX.
39. **McCance, K. R.** & Niemeyer, E. D. (March 2014). *Influence of plant maturity on anthocyanin levels, phenolic composition, and antioxidant properties of 3 purple basil (Ocimum basilicum* L.*) cultivars.* Poster presented in the Division of Agricultural and Food Chemistry at the 247th ACS National Meeting, Dallas, TX.

Practitioner Presentations

1. Venditti, R. A., Collier, K. M., Blanchard, M. R., & **McCance, K. R**. (2021). Microplastics in the environment and how to introduce this topic to students in the classroom. Presentation at the annual meeting of the Mid-Atlantic Association of Science Teacher Education (MA-ASTE), Blowing Rock, NC.
2. **McCance, K. R.**, Stover, M., Topliceanu, A., Collier, K. M., McAlexander, S., Starkey, H., Blanchard, M. R., & Venditti, R. (October 2020). *Students take the lead: Making sense of human impacts on the environment*. Oral presentation at Bridging the Gap: Uniting North Carolina STEM Education. Virtual due to COVID-19.
3. Collier, K. M., Davis, G., **McCance, K. R.**, McAlexander, S., Starkey, H. Blanchard, M. R., & Venditti, R. (October 2020). *Integrating STEM, sustainability, and industry to promote interest in the bioeconomy*. Oral presentation at Bridging the Gap: Uniting North Carolina STEM Education. Virtual due to COVID-19.
4. McAlexander, S., Topliceanu, A., Sharma, S., **McCance, K. R.,** Starkey, H., Blanchard, M. R., & Venditti, R. (October 2019). *Building a sustainable future with bioproducts & bioenergy in science curricula*. Oral presentation at Bridging the Gap: Uniting North Carolina STEM Education, Raleigh, NC.
5. **McCance, K. R.,** McAlexander, S. L., Blanchard, M. R., & Venditti, R. (September 2019). *Promoting Student Interest in the Bioeconomy and Related Careers: Challenges and Solutions for a Teacher Professional Development Program.* Paper presented as a roundtable at the annual meeting of MA-ASTE, Pipestem, WV.

6. McAlexander, S., Starkey, H., **McCance, K. R.,** Blanchard, M. R., & Venditti, R. (October 2018). *Generating Excitement for careers in the bioeconomy: A four-year partnership with rural high schools, community colleges, universities, and industry*. Oral presentation at Bridging the Gap: Uniting North Carolina STEM Education, Raleigh, NC.

Invited Presentations

1. **McCance, K. R.** (March 2024). *Finding and Thriving in a Postdoc*. Graduate student forum roundtable facilitator, NARST.
2. **McCance, K. R.** (February 2024). *How to Write for your Research Discipline*. Dissertation Weekend Warrior, The Graduate School, UTSA

Presentation Proposals in Review

1. Topliceanu, A., **McCance, K. R.,** Sollinger, J., Blanchard, M. R. (March 2025). *International Graduate Students as STEM Role Models for High School Students.* Paper to be submitted to the annual MA-ASTE conference, Pineville, KY.
2. Topliceanu, A., **McCance, K. R.,** Sollinger, J., Blanchard, M. R. (March 2025). *International Graduate Students as STEM Role Models for High School Students.* Paper to be submitted to the National Association of Research in Science Teaching (NARST) Annual International Conference, National Harbor, MD.

FUNDING & GRANTS

Funded

2024	Postdoctoral Fellowship Travel Award ($750), UTSA Graduate School
2021	Dissertation Support Grant ($500), NCSU College of Education
2021	Global Graduate Presenter Award ($172), NCSU College of Education
2019	Travel Assistance Award ($500), NCSU Graduate Student Association
2017	University Graduate Fellowship ($4,000), NCSU

Not Funded

2020	Blanchard, M. R., Venditti, R., **McCance, K. R.**, Collier, K. M., McAlexander, S. L., & Rajwade, A. (2020). *Cultivating Partnerships with Rural High Schools and Industry to Diversify Participation in the Sustainable Bioeconomy.* (2021-2025, not funded). ITEST DTI, National Science Foundation, $1,500,000/4 years. Co-author.
2019	Blanchard, M. R., **McCance, K. R.,** Wright, W. G. (2019). *STEM Career Clubs Scaling, Expanding, and Iterating Innovations (SEI): Expanding Opportunities and Stimulating College Aspirations for Underserved Urban and Rural Students*. (2020-2024, not funded). ITEST SEI, National Science Foundation, $2,988,246/4 years. Co-author.

AWARDS & RECOGNITION

2024	Recipient of "18 Under 40" award for young alumni, Southwestern University
2017	Graduate Research Fellowship, Honorable Mention, National Science Foundation
2015	Shearn Writing Award, Southwestern University

2015 Undergraduate Award in Analytical Chemistry, American Chemistry Society
2014 Semi-Finalist, McKnight Prize in Undergraduate Chemistry, UT Southwestern

CERTIFICATES & TRAINING

2024 Inclusive STEM Teaching Project facilitator training, CIRTL Network
2022 - 2023 Strategic Practice Certificate, NCSU Office for Institutional Equity and Diversity
2021 - 2022 Inclusive Excellence Certificate, NCSU Office for Institutional Equity and Diversity
2021 Writing Certificate, NCSU Graduate School (100 hours)
2013 – 2015 SCOPE Summer Research Scholar, Southwestern University

POSTSECONDARY TEACHING EXPERIENCE

The University of Texas at San Antonio
Fall 2024 Co-Instructor, Inferential Statistics (EDU 7063-901);Doctoral, in-person
Spring 2024 Co-Instructor, Descriptive and Comparative Statistics (EDU 7043-901), Doctoral, in-person
Fall 2023 Co-Instructor, Inferential Statistics (EDU 7063-901), Doctoral, in-person

North Carolina State University
Spring 2019 Teaching Assistant, Biomass Conversion (PSE 295/FB 595), Undergrad/Master's, asynchronous
Spring 2018 Teaching Assistant, Introduction to Teaching Science (EMS 205), Undergrad, in-person
Fall 2017 Teaching Assistant, Special Problems in Teaching Biology (EMS 594), Master's, synchronous
Fall 2017 Teaching Assistant, Methods of Teaching Science II (EMS 506), Master's, in-person

Southwestern University
2013 - 2015 General Chemistry Peer Mentor

INFORMAL TEACHING EXPERIENCE

2015 **Environmental Conservation & Outdoor Education Youth Crew Leader**
AmeriCorps Texas Conservation Corps, Austin, TX

2014 - 2015 **STEM Education Intern for After-School STEM Clubs**
Girlstart, Austin, TX

PROFESSIONAL ACTIVITIES & SERVICE

International and National Service

2024 - Reviewer, *PLOS One* (1 review)
2023 - Reviewer, *The Journal of Chemical Education* (2 reviews)

2023 -	Reviewer, American Society for Engineering Education (ASEE) conference
2022 -	Mentor, Graduate Student Research Symposium, National Association of Research in Science Teaching (NARST); 2022, 2023, 2024
2021	Moderator, European Science Ed Research Association (ESERA) conference
2020 -	Reviewer, NARST annual conference
2020	Reviewer, *Enhancing Learning Opportunities Through Student, Scientist, and Teacher Partnerships*. IGI Global.

University and Departmental Service

2024 -	Judge, Graduate Student Research Symposium, UTSA
2023 -	Coordinator, CIRTL (Center for Integration of Research, Teaching, Learning, UTSA
2023 -	Judge, 3 Minute Dissertation competition, UTSA
2023 -	Leader, Postdoctoral Association, UTSA
2022	Invited panel contributor (NCSU EMS 731; EMS 732)
2021 - 2022	Graduate Curriculum & Experience Work Group, Anti-Racist Change Agent Taskforce, NCSU College of Education
2020 - 2023	Alumni volunteer, Office of Admissions, Southwestern University
2019 - 2020	Graduate student representative, Faculty Awards Committee, NCSU College of Education
2017 - 2018	Graduate student recruitment, NCSU Science Education Program

Service to Schools & Community

2022	North Carolina Math/Science Education Network Pre-College Program and Eastman Chemical grant field trip coordination (20 middle school and 20 high school students)
2021	North Carolina Central Regional Science & Engineering Fair volunteer
2019	Eno River Academy STEM consultation with high school science teachers
2019	NC SATELLITE high school student summer outreach
2018 - 2023	Sustainable Bioproducts & Bioenergy Program (19 high school science/CTE teachers, ~1800 rural high school students, 19 undergraduate students)
2018 - 2022	STEM Career Club Program (4 middle schools in rural North Carolina)
2011 - 2018	K-12 science and math tutor (Santa Clarita, CA; Georgetown, TX; Raleigh, NC)
2011 - 2017	Science outreach volunteer (Georgetown, TX; Austin, TX)

Professional Memberships

2024 -	Association for the Study of Higher Education (ASHE)
2024 -	American Society for Engineering Education (ASEE)
2022 - 2023	Southwest Association for Science Teacher Education (SW-ASTE)
2021 - 2022	European Science Education Research Association (ESERA)
2020 - 2022	Australasian Science Education Research Association (ASERA)
2019 -	National Association of Research in Science Teaching (NARST)
2019 - 2022	American Educational Research Association (AERA)
2018 - 2021	Mid-Atlantic Association for Science Teacher Education (MA-ASTE)
2017 - 2018	North Carolina Science Teachers Association (NCSTA)
2017 - 2018	Association for Science Teacher Education (ASTE)
2015 -	Phi Beta Kappa (PBK)
2013 -	American Chemical Society (ACS)
2012 - 2015	Omicron Delta Kappa (ODK)