Kiranmayi Mangalgiri

Assistant Professor (Water Quality)
Biosystems and Agricultural Engineering
Agricultural Hall 113
Oklahoma State University, Stillwater OK 74078
Email: Kiranmayi.mangalgiri@okstate.edu
Phone: 405-744-5914

Education

Ph.D. 2017 *University of Maryland Baltimore County* (Environmental Engineering)

M.S. 2012 *Texas A&M University* (Civil Engineering)

B.Tech. 2008 *National Institute of Technology Karnataka, India* (Civil Engineering)

Current Appointment

2021 - Current Oklahoma State University, Assistant Professor (Water Quality)
Department of Biosystems and Agricultural Engineering

Previous Research Experience

2017 - 2021 *University of California Riverside*, Postdoctoral Research Scholar/Fellow
Department of Chemical and Environmental Engineering
Supervisor: Haizhou Liu

- Investigated UV-based advanced oxidation processes for treatment of organic contaminants and contaminants of emerging concern relevant in water reuse (*e.g.,* 1,4-dioxane, acetone, atenolol, DEET, and trichloroethylene).
- Conducted collaborative study with Dr. Kenneth Ishida at Orange County Water District (OCWD) to determine impact of chloramines in pilot-scale UV-hydrogen peroxide reactor in full-scale treatment conditions.
- Studied oxidation-based treatment strategies for reverse osmosis concentrate (brine waste) generated from full-scale treatment trains in potable water reuse systems.
- Evaluated the degradation kinetics of biofilm-like components in mixed oxidant systems to understand biofilm sloughing in drinking water distribution systems.
- Developed analytical techniques for contaminant analysis using solid-phase extraction (SPE), high performance liquid chromatography coupled with diode array detector (HPLC-DAD), and gas chromatography – ion trap mass spectrometer (GC-MS) and ion chromatography (IC).
- Supervised and mentored four graduate students, two undergraduate students, and one high school summer intern.

2012 - 2017 *University of Maryland Baltimore County,* Graduate Research Assistant
Department of Chemical, Biochemical and Environmental Engineering
(Formerly Department of Civil Engineering)
Supervisor: Lee Blaney

- Determined UV-absorbance and acid dissociation properties of environmentally relevant pharmaceutical compounds with antibiotic activity.
- Developed analytical technique for antibiotic compounds using solid-phase extraction

(SPE) and liquid chromatography coupled with triple quadruple mass spectrometer (LC-MS/MS).
- Investigated photolytic fate of agricultural pharmaceuticals, including, fluoroquinolones, macrolides, organoarsenicals, sulfonamides, and tetracyclines in UV-based engineered and natural systems.
- Characterized dissolved organic matter (DOM) from agricultural waste using fluorescence, with Dr. Michael Gonsior at Chesapeake Biological Laboratory (CBL).
- Conducted preliminary studies to recover phosphorus from nutrient-rich manure waste from poultry and swine concentrated animal feeding operations.
- Supervised and mentored five undergraduate students and two summer interns.

2011 - 2012 *Texas A&M University,* Graduate Research Assistant
Department of Civil and Environmental Engineering
Supervisor: Bryan Boulanger

- Investigated the total and acid-extractable arsenic and lead content in glass beads used in pavement markings using inductively-coupled plasma mass spectrometry (ICP-MS) at Texas A&M University Center of Chemical Characterization, using potassium hydroxide digestion method and EPA 3050B.
- Determined the leachable and bio-accessible fractions of arsenic and lead in glass beads using extraction methods based on
- In collaboration with Texas Transportation Institute, determined correlation between arsenic content and retroreflectivity of glass beads.
- Supervised one undergraduate student.

2009 - 2010 *CSIR – Centre for Mathematical Modeling and Computer Simulation*, India, Project Assistant, Earth and Environment Division
Supervisor: Sridevi Jade

- Worked in Solid Earth Modeling Program (SEMP) in projects in earth modeling and crustal deformation studies.
- Used C-programming to develop a model to calculate total electron content of ionosphere based on global position systems (GPS) signal dispersion.

2008 – 2009 *Indian Institute of Science, Bangalore*, Project Assistant
Department of Civil Engineering
Supervisor: P.V. Sivapullaiah

- Performed literature review for projects in geo-environmental engineering, proofreading and correction of theses and reports.
  Drafted proposal to study the impact of acid spills on geotechnical properties of soils.

Honors and Awards Received

2021	2020-2021 AEESP Future Faculty Seminar Series, Speaker
2019 - 2021	University of California Riverside Chancellor's Postdoctoral Fellowship
2019	American Chemical Society (ACS) Division of Environmental Chemistry (ENVR), five-year service award

2019	ACE-ENVR, Certificate of Merit (Co-Author) Award
2017	ACS Maryland Chapter Travel Award, 2017
2017	Finalist, 3MT® (three-minute thesis) Southern Council of Graduate Schools Annual Conference
2016	1st Place, 3MT®, 2016 University of Maryland Baltimore County
2015	ACS ENVR Division Graduate Student Award
2015	1st Place, AEESP Student Video Competition, 2015-2016
2005	2nd place, Platform Presentation, Nirmaan Civil Engineering Techfest

Research Support and/or Fellowships Received

1. 2019 - 2021 "Impact of Mixed Oxidant Systems on Water Treatment and Distribution Systems", *University of California Riverside Chancellor's Postdoctoral Fellowship*. (Role: Principal Awardee)
Total Award (Current): $ 125,836.00
Potential Future Funding (Up to $575,000.00)
Hiring Incentive at UC System: $425,000.00
STEM start-up funding at UC system: up to $150,000.00

2. 2019 - 2020 "UV-based Advanced Oxidation of Brine Waste from Water Reuse Systems", *University of California Riverside Mini-Grant Program for Undergraduate Research and Creative Activities* (Role: Co-mentor)
Total Award: $ 1,000.00

3. 2019 - 2020 "Biofilm control using electrochemically generated disinfectant from brine Waste", *Blue Earth Inc.* (Role: Co-author)
Total Award: $ 50,000.00

Journal Articles (corresponding author underlined)

1. **Mangalgiri, K.**; Cheng, Z.; Cervantes, S; Spencer, S; Liu, H. (*Submitted*). UV-based Advanced Oxidation of Dissolved Organic Matter in Reverse Osmosis Concentrate from a Potable Water Reuse Facility: A Parallel-Factor (PARAFAC) Analysis Approach

2. **Mangalgiri, K.**; Patton, S.; Wu, L.; Xu, S.; Ishida, K.; Liu, H. (2019). Optimizing Potable Water Reuse Systems: Chloramines or Hydrogen Peroxide for UV-based Advanced Oxidation Process? *Environmental Science & Technology*, 53 (22), 13323-13331.

3. **Mangalgiri, K.**; Blaney, L. (2017). Elucidating the stimulatory and inhibitory effects of dissolved organic matter from poultry litter on photodegradation of antibiotics. *Environmental Science & Technology*, 51 (21), 12310-12320.

4. **Mangalgiri, K.**; Timko, S.; Gonsior, M.; Blaney, L. (2017). PARAFAC modeling of irradiation- and oxidation-induced changes in fluorescent dissolved organic matter extracted from poultry litter. *Environmental Science & Technology*, 51 (14), 8036-8047.

5. Snowberger, S.; Adejumo, H.; He, K.; **Mangalgiri, K. P**.; Hopanna, M., Soares, A. D.;

Blaney, L. (2016). Direct Photolysis of Fluoroquinolone Antibiotics at 253.7 nm: Specific Reaction Kinetics and Formation of Equally Potent Fluoroquinolone Antibiotics. *Environmental Science & Technology*, 50(17), 9533-9542.

6. Adak, A.*; **Mangalgiri, K**.*; Lee, J.; Blaney, L. (2015). UV irradiation and UV-H_2O_2 advanced oxidation of the roxarsone and nitarsone organoarsenicals. *Water Research*, 70(3), 74-85. (* equal contribution)

7. **Mangalgiri, K**.; Adak, A.; Blaney, L. (2015). Organoarsenicals in poultry litter: Detection, fate, and toxicity. *Environment International*, 75(2), 68-80.

8. **Mangalgiri, K.P**.; He, K.; Blaney, L. (2015). Emerging contaminants: A potential human health concern for sensitive populations. *PDA Journal of Pharmaceutical Science and Technology*, 69(2), 1-4.

Journal Publications In Preparation (corresponding author underlined)

1. **Mangalgiri, K.** *; Ibitoye, T.; Hopanna, M; Blaney, L. (*In preparation: Experiments completed, Final Draft Revisions*). Spectrophotometric determination of specific molar absorption coefficients and acid dissociation constants for antibiotics of environmental concern.

2. **Mangalgiri, K.**; Cervantes, S; Garcia, L., Cheng, Z.; Liu, H. (*In preparation: Experiments completed, Final Draft Revisions*). Advanced oxidation treatment of reverse osmosis concentrates obtained from full-advanced treatment trains in water reuse systems.

3. **Mangalgiri, K.**; Garcia, L., Liu, H. (*In preparation: Final Experiments and Manuscripts Draft in progress*). UV-persulfate based advanced oxidation for removal of persistent industrial solvents.

4. **Mangalgiri, K.**; Liu, H. (*In preparation: Final Experiments and Manuscripts Draft in progress*). Impact of mixed oxidant systems on biofilms components.

5. Wu, L.; **Mangalgiri, K**.; Patton, S.; Harraka, G.; Schlenk, D.; Liu, H. (*In preparation: Experiments in progress*). Identification of transformation products generated during the removal of 1,4-dioxane through UV-light based advanced oxidation.

6. Jain, T.; **Mangalgiri, K**.; Ren, C.; Liu, J.; Liu, H. (*In preparation: Experiments completed, Final Draft Revisions*). Degradation of anti-scalants in UV-based treatment systems to improve water recovery from brackish water desalination brines.

Book Chapters and Reports

1. Hopanna, M.; **Mangalgiri, K.**; Ibitioye, T.; Ocasio, D.; Snowberger, S.; Blaney, L. (2020). UV-254 transformation of antibiotics in water and wastewater treatment processes, *In* Hernandez-Maldonado, J.A. and Blaney, L. (Eds) *Contaminants of Emerging Concern (CECs) in Water and Wastewater: Advanced Treatment Processes*. Oxford, Butterworth-Heinemann.

2. **Mangalgiri, K.**; Patton, S.; Wu, L.; Ishida, K.; Liu, H. (2018). Kinetic Modeling and Experimental Investigation of Chloramine Photolysis in Ultraviolet-Driven Advanced Water Treatment; The Water Research Foundation.

Other Publications

1. **Mangalgiri, K.** (2017). Photolytic Fate of Antibiotics in UV-based Engineered and Natural Systems (*Thesis/Dissertation*). University of Maryland, Baltimore County.

2. **Mangalgiri, K.** (2012). Heavy Metals in Glass Beads Used in Pavement Markings. Photolytic Fate of Antibiotics in UV-Based Engineered and Natural Systems (*Thesis/Dissertation*). Texas A&M University.

Invited Talks and Seminars

1. *Let there be light: UV-based treatment of contaminants of emerging concern in water reuse systems*. Association of Environmental Engineering and Science Professors AJAR 2020-2021 Future Faculty Seminar Series, January 9, 2021. https://www.youtube.com/watch?v=XC9cIgS9qEI

2. *One Health, One Water: Improving water reuse systems to mitigate priority contaminants of emerging concern.* 2021 University of California Riverside President's and Chancellor's Postdoctoral Fellow Symposium, April 16, 2021.

Oral and Poster Presentations (presenting author underlined)

1. **Mangalgiri, K.**; Cervantes, S, Cheng, Z., Liu, H. Fluorescence-based parameters to predict fate of trace organic contaminants in membrane waste streams. 2021 Virtual Academic Spring Retreat: President's and Chancellor's Postdoctoral Fellowship Program (Virtual Conference), April 17, 2021.

2. **Mangalgiri, K.**; Cheng, Z., Cervantes, S., Liu, H. Photodegradation and characterization of dissolved organic matter from reverse osmosis concentrates from potable water reuse facility. UV-based treatment for advanced water treatment. 261st American Chemical Society Annual Meeting (Virtual), Apr 14, 2021.

3. **Mangalgiri, K.**; Liu, H. UV-based treatment for advanced water treatment: Impact of membrane biocides on contaminant removal in water reuse systems. 2020 Virtual Academic Spring Retreat: President's and Chancellor's Postdoctoral Fellowship Program (Virtual Conference), April 18, 2020.

4. **Mangalgiri, K.**; Patton, S.; Wu, L.; Ishida, K.; Liu, H. Water reuse to meet water demands: New insight into UV-based treatment for water reuse. 2019 University of California Riverside Postdoctoral Symposium (Riverside, CA). November 4, 2019.

5. Wu, L.; **Mangalgiri, K**.; Patton, S.; Harraka, G.; Schlenk, D.; Liu, H. Identification of transformation products generated during the removal of 1,4-dioxane through UV-light based advanced oxidation. 258th American Chemical Society Annual Meeting (San Diego, CA), Aug 27, 2019.

6. Patton, S.; **Mangalgiri, K**., Wu, L.; Li, W.; Couch, K.; Mezyck, S.P.; Ishida, K.; Liu, H. Chloramines in UV/based AOPs: Impacts and insights into water reuse. 258th American Chemical Society Annual Meeting (San Diego, CA), Aug 27, 2019.

7. Liu, H.; **Mangalgiri, K**.; Patton, S.; Wu, L.; Schlenk, D. Which photo-oxidant for potable reuse? Treatment efficiency and toxicity considerations. 258th American Chemical Society Annual Meeting (San Diego, CA), Aug 26, 2019.

8. **Mangalgiri, K.**; Liu, H. UV-based advanced oxidation for persistent industrial solvents in potable water reuse systems. Gordon Research Conference 2019: Disinfection, Byproducts and Health (Mt Holyoke, MA), Poster Presentation, July 31 – Aug 1, 2019.

9. **Mangalgiri, K.**; Liu, H. UV-based advanced oxidation for persistent industrial solvents in potable water reuse systems. Gordon Research Seminar 2019: Disinfection, Byproducts and Health (Mt Holyoke, MA), Poster Presentation, July 27 - 28, 2019.

10. Wu, L.; **Mangalgiri, K**.; Patton, S.; Schlenk, D.; Liu, H. Identification and toxicological response of transformation products generated during the removal of 1,4-dioxane through UV-light based advanced oxidation. Annual Symposium Ecotoxicology Program. Jun 18, 2019.

11. Patton, S.; **Mangalgiri, K**., Wu, L.; Li, W.; Ishida, K.; Liu, H. Chloramines in UV-based AOPs: Impacts and insights into water reuse. . American Water Works Association Annual Conference and Exhibition 19 (ACE 19) (Denver, CO), Poster Presentation, Jun 10, 2019.

12. **Mangalgiri, K.**; Cheng, Z.; Liu, H. Understanding reactivity of dissolved organic matter from reverse osmosis concentrate: Towards sustainable brine treatment in water reuse. AEESP Research and Education Conference 2019 (Tempe, AZ), Poster Presentation, May 15, 2019.
13. **Mangalgiri, K.**; Patton, S.; Wu, L.; Xu, S.; Ishida, K.; Liu, H. New insight into removal of trace organic contaminants in chloramine-impacted UV-H_2O_2 system for water reuse. 257th American Chemical Society Annual Meeting (Orlando, FL), April 02, 2019.

14. Patton, S.; **Mangalgiri, K.,** Wu, L.; Li, W.; Ishida, K.; Liu, H. Chloramines in UV-based AOPs: Impacts and insights into water reuse. American Water Works Association CA-NV Spring Conference (Sacramento, CA), Poster Presentation, March 26, 2019.

15. Spencer, S.; **Mangalgiri, K.**; Liu, H. UV-based advanced oxidation treatment for reverse osmosis concentrate in water reuse systems. Mentoring Summer Research Internship Program Research Symposium (Riverside, CA), Poster Presentation, August 17, 2018.

16. **Mangalgiri, K.**; Blaney, L. Poultry litter dissolved organic matter: PARAFAC analysis and role in photolysis of antibiotics. AEESP Research and Education Conference 2017 (Ann Arbor, MI), Poster Presentation, June 22, 2017.

17. **Mangalgiri, K.**; Timko, S; Gonsior, M.; Blaney, L. PARAFAC analysis of irradiation- and oxidation-induced changes in fluorescent dissolved organic matter extracted from poultry litter. AEESP Research and Education Conference 2017 (Ann Arbor, MI), Poster Presentation, June 21, 2017.

18. **Mangalgiri, K.**; Blaney, L. Effect of agricultural dissolved organic matter on the photolytic fate of poultry antibiotics. 253th American Chemical Society Annual Meeting (San Francisco, CA), April 05, 2017.

19. **Mangalgiri, K.**.; Timko, S; Gonsior, M.; Blaney, L. PARAFAC analysis of irradiation- and oxidation-induced changes in fluorescent dissolved organic matter extracted from poultry litter. 253th American Chemical Society Annual Meeting (San Francisco, CA), April 02, 2017.

20. **Mangalgiri, K.**; Blaney, L. Photolytic fate of poultry antibiotics in agricultural wastewater. 39th UMBC Graduate Research Conference (Baltimore, MD), Poster Presentation, March 29, 2017.

21. Ibitoye, T.; **Mangalgiri, K.**.; Blaney, L. Spectrophotometric determination of acid dissociation constants of antibiotics. 2016 Annual Biomedical Research Conference for Minority Students (Tampa, FL), Poster Presentation, November 10, 2016.

22. Adejumo, H; He, K; **Mangalgiri, K.**; Blaney, L. Identifying implications of antibiotics during ultraviolet disinfection: Antimicrobial activity and antimicrobial resistance in wastewater treatment. 2016 Tri-Association Conference (Ocean City, MD), August 31, 2016.

23. **Mangalgiri, K.**; Blaney, L. Photolytic fate of poultry antibiotics in agricultural wastewater. 252nd American Chemical Society Annual Meeting (Philadelphia, PA), Poster Presentation, August 26, 2014.

24. Ibitoye, T.; **Mangalgiri, K.**.; Blaney, L. Spectrophotometric determination of acid dissociation constants of antibiotics. UMBC 19th Summer Undergraduate Research Fest (Baltimore, MD), Poster Presentation, August 10, 2016.

25. Blaney, L.; **Mangalgiri, K.**; Adejumo, H.A.; Ocasio, D.; He, K. Transformation of fluoroquinolone, tetracycline, and sulfonamide antibiotics at 253.7 nm: Generation of antimicrobially active transformation products. Gordon Research Conference (Holderness, NH), Poster Presentation, June 26, 2016.

26. Steinly, S.; Hopanna, M; **Mangalgiri, K.**; Blaney, L. Mapping the Specific Molar Extinction Coefficients of Organometallic Compounds. UMBC 20th Undergraduate Research and Creative Achievement Day (Baltimore, MD), Poster Presentation, April 27, 2016.

27. Ocasio, D.; **Mangalgiri, K.**.; Blaney, L. Photokinetic Determination of Environmentally Relevant Pharmaceuticals for UV-Based Applications in Treatment Facilities. UMBC 20th Undergraduate Research and Creative Achievement Day (Baltimore, MD), Poster Presentation, April 27, 2016.

28. **Mangalgiri, K.**; Ocasio, D.; Adak, A.; Blaney, L. Role of dissolved organic matter on UV transformation of antibiotics in agriculture-impacted water. 38th UMBC Graduate Research Conference (Baltimore, MD), March 23, 2016.

29. **Mangalgiri, K.**; Adejumo, H.A.; Ocasio, D.; He, K.; Blaney, L. Transformation of fluoroquinolone, tetracycline, and sulfonamide antibiotics at 253.7 nm: Generation of

antimicrobially active transformation products. 251st American Chemical Society Annual Meeting (San Diego, CA), March 14, 2016.

30. **Mangalgiri K.**; Rogers, N; Dawkins, K.; Ocasio, D.; Blaney, L. Characterizing effects of advanced oxidation on dissolved organic matter in agriculturally-impacted surface water using PARAFAC. UMBC Research Forum (Baltimore, MD), Poster Presentation, October 30, 2015.

31. **Mangalgiri K.**; Ocasio, D.; Adak, A.; Blaney, L. Role of dissolved organic matter on UV transformation of antibiotics in agriculture-impacted water supplies. International Water Association Natural Organic Matter 6 Conference (Malmo Sweden), September 7-10, 2015

32. **Mangalgiri K.**; Rogers, N; Dawkins, K.; Ocasio, D.; Blaney, L. Characterizing effects of advanced oxidation on dissolved organic matter in agriculturally-impacted surface water using PARAFAC. International Water Association Natural Organic Matter 6 Conference (Malmo Sweden), Poster Presentation, September 7-10, 2015

33. Shashvatt, U.; **Mangalgiri, K.**; Blaney, L. Recovering phosphorus from poultry litter: Impact of organic matter on recovery. 250th American Chemical Society Annual Meeting (Boston, MA), August 20, 2015.

34. Adak, A.; **Mangalgiri, K.**; Lee, J.; Blaney, L. Transformation of organoarsenicals in water using the UV and UV-H_2O_2 systems. 250th American Chemical Society Annual Meeting (Boston, MA), August 18, 2015.

35. **Mangalgiri, K.**; Shashvatt, U.; Blaney, L. Phosphorus recovery from poultry litter using a two-stage treatment process. Association of Environmental Engineering and Science Professors Research and Education Conference (New Haven, CT), June 15, 2015.

36. Blaney, L.; **Mangalgiri, K.**; Adak, A. Treatment of agricultural wastewater containing organoarsenicals using UV-based processes. 2014 Tri-Association Conference (Ocean City, MD), August 28, 2014.

37. Adak, A.; **Mangalgiri, K**.; He, K.; Blaney, L. Photochemical UV-H_2O_2 system for oxidation of organoarsenicals in agricultural wastewater. The 248th American Chemical Society Annual Meeting (San Francisco, CA), Poster Presentation, August 13, 2014.

38. Rubin, G.; **Mangalgiri, K.**; Blaney, L. pH-dependent absorbance behavior of antibiotic pharmaceuticals. UMBC 18th Summer Undergraduate Research Fest (Baltimore, MD), Poster Presentation, August 5, 2015.

39. **Mangalgiri, K.**; Blaney, L. Fate of Antibiotics used in Poultry Industry in Phosphate Recovery Processes. 37th UMBC Graduate Research Conference (Baltimore, MD), March 25, 2015.

40. Blaney, L.; **Mangalgiri, K.**; Adak, A. Treatment of agricultural wastewater containing organoarsenicals using UV-based processes. 2014 Tri-Association Conference (Ocean City, MD), August 28, 2014.

41. Adak, A.; **Mangalgiri, K.**; He, K.; Blaney, L. Photochemical UV-H_2O_2 system for oxidation of organoarsenicals in agricultural wastewater. 248th American Chemical Society Annual Meeting (San Francisco, CA), Poster Presentation, August 10-14, 2014.

42. **Mangalgiri, K.**; Lee, J.; Blaney, L. Photodegradation of organoarsenicals in agricultural waste. 36th UMBC Graduate Research Conference (Baltimore, MD), March 26, 2014.

43. **Mangalgiri, K.**; Lee, J.; Blaney, L. Development of a novel SPE-LC-ESI-MS/MS method for analysis of organoarsenicals in water. 247th American Chemical Society Annual Meeting (Dallas, TX), Poster Presentation, March 19, 2014.

44. **Mangalgiri, K.**; Lee, J.; Blaney, L. Photodegradation of organoarsenicals in agricultural waste. 247th American Chemical Society Annual Meeting (Dallas, TX), March 17, 2014.

Laboratory Skills

Chromatography: Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS: Thermo, Shimadzu)
High Performance Liquid Chromatography with UV Detector (HPLC- UV-DAD: Agilent, Shimadzu)
Gas-Chromatography Ion-trap Mass Spectrometry (GC-MS: Agilent)
Inductively Coupled Plasma Mass Spectrometry (ICP-MS: Perkin Elmer)
Ion Chromatography (IC: Thermo Dionex)

Spectrometry: UV/VIS Spectrophotometry
Fluorescence Excitation-Emission Matrices (EEM, Aqualog)

Other Samples Analysis: Total Organic Caron analysis
Total Nitrogen (TN) analysis ((TOC/TN: Shimadzu, Xylem)
Solid Phase Extraction (SPE) EPA 542, 1694, 3050B, 8315A

Computational Tools: Parallel Factor Analysis (PARAFAC: DrEEM)
Matlab 2014A, Kintecus (Chemical Kinetics)

Mentorship

Texas A&M University

2012	Hidi M. Wood *(BS, Civil Engineering)*

University of Maryland Baltimore County

2012	Adam Antoszewski (*Highschool Summer Intern)*
2013 - 2015	Jessica Lee (*BS, Chemical Engineering)* National Science Foundation-Research Experience for Undergraduates 2013, 2014.
2014 - 2015	Kendall Dawkins (*BS, Chemical Engineering*) Howard Hughes Medical Institute (HHMI) Fellow, Meyerhoff Scholar.
2015	Graham Rubin (*Highschool Summer Intern)*

2015 - 2017	Daniel Ocasio (*BS, Chemical Engineering*) Goldwater Scholar, MARC U*STAR Scholar, HHMI Scholar, Meyerhoff Scholar, National Hispanic Recognition Program Scholar
2016 - 2017	Savannah Steinly (*BS, Chemical Engineering*) , Center for Women in Technology (CWIT) Scholar
2016 - 2017	Temitope Ibitoye (*BS, Chemical Engineering*) Meyerhoff Scholar, HHMI Scholar

University of California Riverside (UCR)

2017 - 2018	Liang Wu, (*PhD, Environmental Toxicology*)
2018	Samantha Spencer (*Highschool Summer Intern*) United States Department of Agriculture (USDA) Summer Internship
2018 - 2019	Zhiwen Cheng (*PhD, Environmental Engineering*) Exchange Student
2019	Lesley Garcia (*BS, Chemical Engineering*)
2019 - 2021	Ananta Azad (*PhD, Environmental Engineering*)
2019 - 2021	Andrew Sanchez (*PhD, Environmental Engineering*)
2019 - 2020	Sheila Cervantez (*BS, Chemical Engineering*), University of California Riverside Mini-Grant for Undergraduate Research & Creative Activities

UCR Postdoctoral Mentorship Program

2021	Isis Frausto-Vicencio (Environmental Sciences)
2021	Roxana Coreas (Environmental Toxicology)

Clean Water Science Network

2020 - 2021	Sebastian Tapia Manchego (CWSN Mentee 2020-2021 Cohort)
2020 - 2021	Carolina Aidé González Vallejo (CWSN Mentee 2020-2021 Cohort)

Pedagogical Training and Professional Development Workshops

2021	"*Advancing Learning through Evidence-Based STEM Teaching*" Center for the Integration of Research, Teaching and Learning Spring 2021, Passed with Distinction
2021	"*Developing Professional Skill Sets in Mentoring and Advising Relationships*" Online Workshop; Center for the Integration of Research, Teaching and Learning (CIRTL)
2021	"*What Have I Really Learnt?*" Online Workshop; Center for the Integration of Research, Teaching and Learning (CIRTL)
2020	*WriteNow Fall 2020* National Centre for Faculty Development and Diversity (NCFDD)
2020	"*Bring an Inclusive Mindset to your Teaching"*

	Online Workshop; Center for the Integration of Research, Teaching and Learning (CIRTL)
2020, 2018	"*An Introduction to Evidence-Based Undergraduate STEM Teaching*" Center for the Integration of Research, Teaching and Learning Summer 2020: Passed with Distinction, Fall 2018: Audited
2018 - 2021	*14-Day Writing Challenge* National Centre for Faculty Development and Diversity
2019, 2018	*Academic Career Day* Graduate Student Association, University of California Riverside
2019, 2018	*Junior Faculty Workshop* Office of Academic Personnel, University of California Riverside
2018	*"'How Can We Interrupt and Mitigate Implicit Bias When We Witness It?"* Center for the Integration of Research, Teaching and Learning
2018	*"Addressing Implicit Bias in STEM: Workshop"* Center for the Integration of Research, Teaching and Learning
2018	*"Getting Ready to Teach in the American Classroom"* Center for the Integration of Research, Teaching and Learning
2016	*"Writing a syllabus"* Future Faculty Workshop, University of Maryland Baltimore County
2016	*"How to write an NSF Grant"* Future Faculty Workshop, University of Maryland Baltimore County
2015	*"The Dissertation House: Winter 2015"* PROMISE: Maryland's AGEP

Teaching Experience

2018	Guest Lecturer, Water Quality Systems *University of California Riverside*
2017	Guest Lecturer, Hazardous Waste Management *University of California Riverside*
2017	Guest Lecturer, Biological Treatment Processes *University of California Riverside*
2016	Graduate Teaching Assistant, Chemical Engineering Laboratory *University of Maryland Baltimore County*
2016	Guest Lecturer, Environmental Chemistry and Biology *University of Maryland Baltimore County*

Departmental/University Service

2020 - Current	Mentor, *Clean Water Science Network* 2020 cohort
2019 - Current	Member, *Society of Women Engineers* University of California Riverside
2017 - Current	Member, *Riverside Postdoctoral Association* University of California Riverside

2014 - 2016	President, *BioChEGS (Graduate Student Organization)* University of Maryland Baltimore County
2013 - 2014	Secretary, *BioChEGS (Graduate Student Organization)* University of Maryland Baltimore County
2012 - 2017	Member, *BioChEGS (Graduate Student Organization)* University of Maryland Baltimore County
2012 - 2013	Member, *Engineers Without Borders* University of Maryland Baltimore County

Professional Service and Outreach

2020	Organizer, *2020 Virtual Meet and Writing Retreat* UC Presidential Postdoctoral Fellowship Program (PPFP) and Partners
2020	Panelist, *Postdoc Q&A, Academic Career Day* Graduate Student Association, University of California Riverside
2018	Panelist, *Postdoc Q&A, Academic Career Day* Graduate Student Association, University of California Riverside
2017	Volunteer, *STEM Career Day* Girls Build LA group, Equitas Academy, Los Angeles
2017	Judge, *Certificate of Merit Awards Committee: Environmental Chemistry* 253rd American Chemical Society Annual Meeting
2015	Panelist, *Freshman Forum* Society of Women Engineers, University of Maryland Baltimore County
2015	Panelist, *Bits and Bytes Discussion* Center for Women in Technology, University of Maryland Baltimore County
2017 – Current	Peer Reviewer *Water Research, Environmental Science and Technology Water, Environmental Science and Technology Letters, Environmental Science and Technology Water, Journal of Hazardous Materials, Chemical Engineering Journal, Chemosphere, Environment International, Environmental Science and Technology Letters, Waste Management, Water Quality Research Journal, Materials Today Chemistry.*