Vikram Kapoor, Ph.D.
Assistant Professor
University of Texas at San Antonio
Department of Civil & Environmental Engineering
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Education

2010-2014 Ph. D. Environmental Engineering
University of Cincinnati, Cincinnati, OH

2006-2010 B. Tech. Biotechnology
Jaypee Institute of Information Technology, Noida, India

Professional Positions and Appointments

2016-present Assistant Professor, Department of Civil & Environmental Engineering, University of Texas at San Antonio, San Antonio, TX

2014-2016 ORISE Postdoctoral Research Fellow, U.S. Environmental Protection Agency, Cincinnati, OH

2013-2014 Environmental Microbiologist, Pegasus Technical Services, Inc., Cincinnati, OH
On-Site Contractor to U.S. Environmental Protection Agency

2010-2013 Graduate Research Assistant, Environmental Engineering, University of Cincinnati, Cincinnati, OH

Awards and Honors

2018 National Science Foundation Travel Award to attend 2018 International Research Committee on Disasters Researchers Meeting
2017 Association of Environmental Engineering and Science Professors (AEESP) Poster Award, AECOM
2015 Nominated member, Global Water Pathogen Project, UNESCO
2014-2016 ORISE Postdoctoral Research Fellowship, US Environmental Protection Agency
2014 American Chemical Society “Breakthrough Science” Article
2014 The John David Eye Scholarship, University of Cincinnati
2013 University Research Council Fellowship, University of Cincinnati
2013 First Place Student Paper Competition and Oral Presentation Award, Ohio Section - American Water Works Association

2013	Certificate of Merit for Outstanding Oral Presentation, American Chemical Society
2013	Advanced Degree Scholarship, Ohio Section - American Water Works Association
2013	Exemplary Poster Presentation, Graduate Poster Forum, University of Cincinnati
2013-2014	Environmental Engineering and Science Scholarship, University of Cincinnati
2012	Graduate Student Governance Association Research Fellowship, University of Cincinnati
2012-2013	Conference Travel Award, Graduate Student Governance Association, University of Cincinnati
2010-2013	University Graduate Scholarship, University of Cincinnati
2011	Educational Grant for graduate studies at University of Cincinnati, Jamsetji Tata Trust, India
2010	J.N. Tata Endowment Scholarship for higher studies abroad, The J.N. Tata Endowment, Mumbai, India
2010	First Place Technical Paper Presentation, Department of Biotechnology, Jaypee Institute of Information Technology, Noida, India
2007-2010	William Webster Merit Scholarship, Jaypee Institute of Information Technology, Noida, India

Publications: Peer Reviewed Journal Articles

1. Phan, D., Pasha, A. B. M., Carwile, N., & **Kapoor, V.** (2020). Effect of zinc oxide nanoparticles on physiological activities and gene expression of wastewater nitrifying bacteria. ***Environmental Engineering Science***. (Just Accepted).
2. Tanvir Pasha, A. B. M., Hinojosa, J., Phan, D., Lopez, A., & **Kapoor, V.** (2019). Detection of human fecal pollution in environmental waters using human mitochondrial DNA and correlation with general and human-associated fecal genetic markers. ***Journal of Water and Health.*** (Just Accepted).
3. Annavajhala, M. K., **Kapoor, V.**, Santo-Domingo, J., & Chandran, K. (2018). Structural and functional interrogation of selected biological nitrogen removal systems in the United States, Denmark, and Singapore using shotgun metagenomics. ***Frontiers in Microbiology,*** *9*, 2544.
4. **Kapoor, V.**, Gupta, I., Pasha, A. T., & Phan, D. (2018). Real-time Quantitative PCR Measurements of Fecal Indicator Bacteria and Human-associated Source Tracking Markers in a Texas River following Hurricane Harvey. ***Environmental Science & Technology Letters***, *5*(6), 322-328.
5. **Kapoor, V.**, Phan, D., & Pasha, A. T. (2018). Effects of metal oxide nanoparticles on nitrification in wastewater treatment systems: A systematic review. ***Journal of Environmental Science and Health, Part A***, *53*(7), 659-668.

6. Annavajhala, M. K., **Kapoor, V.**, Santo-Domingo, J., & Chandran, K. (2018). Comammox Functionality Identified in Diverse Engineered Biological Wastewater Treatment Systems. ***Environmental Science & Technology Letters***, *5*(2), 110-116.
7. Bhattacharjee, A. S., Wu, S., Lawson, C. E., Jetten, M. S., **Kapoor, V.**, Domingo, J. W. S., McMahon, K. D., Noguera, D. R. and Goel, R. (2017). Whole community metagenomics in two different anammox configurations: process performance and community structure. ***Environmental Science & Technology***, *51*(8), 4317-4327.
8. **Kapoor, V.**, Elk, M., Toledo-Hernandez, C., & Santo Domingo, J. W. (2017). Analysis of human mitochondrial DNA sequences from fecally polluted environmental waters as a tool to study population diversity. ***AIMS Environmental Science***, *4*(3), 443-455.
9. Wurtzler, E. M., Ravi, R., **Kapoor, V.** and Wendell, D. (2017) Rational Design of Duplex Specific Nuclease for One-Step Isothermal Viral RNA Detection. ***Journal of Applied Biology & Biotechnology***, *5*(5), 1-10.
10. **Kapoor, V.**, Li, X., Elk, M. and Santo Domingo, J. W. (2016) Inhibitory Effect of Cyanide on Wastewater Nitrification Determined Using SOUR and RNA-Based Gene-Specific Assays. ***Letters in Applied Microbiology,*** *63*(2), 155-161.
11. Camejo, P. Y., Owen, B., Martirano, J., Ma, J., **Kapoor, V.**, Santo Domingo, J. W., McMahon, K. D. and Noguera, D. R. (2016) *Candidatus* Accumulibacter phosphatis clades enriched under cyclic anaerobic and microaerobic conditions simultaneously use different electron acceptors. ***Water Research,*** *102*, 125-137.
12. **Kapoor, V.**, Li, X., Impelliteri, C., Chandran, K. and Santo Domingo, J. W. (2016) Use of Functional Gene Expression and Respirometry to Study Wastewater Nitrification Activity After Exposure to Low Doses of Copper. ***Environmental Science and Pollution Research***, *23*(7), 6443-6450.
13. **Kapoor, V.**, Li, X., Elk, M., Impelliteri, C. and Santo Domingo, J. W. (2016) Effects of Cr(III) and Cr(VI) on Nitrification Inhibition Determined Using SOUR and Gene Expression of Ammonia-Oxidizing Bacteria. ***Chemosphere,*** *147*, 361-367.
14. Li, X., **Kapoor, V.**, Impelliteri, C., Chandran, K. and Santo Domingo, J. W. (2016) Measuring Nitrification Inhibition by Metals in Wastewater Treatment Systems: Current State of Science and Fundamental Research Needs. ***Critical Reviews in Environmental Science and Technology,*** *46*(3), 249-289.
15. **Kapoor, V.**, Li, X., Elk, M., Impelliteri, C., Chandran, K. and Santo Domingo, J. W. (2015) Impact of Heavy Metals on Transcriptional and Physiological Activity of Nitrifying Bacteria ***Environmental Science & Technology***, *49*(22), 13454–13462.
16. **Kapoor, V.**, Pitkänen, T., Ryu, H., Elk, M., Wendell, D. and Santo Domingo, J. W. (2015). Distribution of Human-Specific Bacteroidales and Fecal Indicator Bacteria in an Urban Watershed Impacted by Sewage Pollution, Determined Using RNA-and DNA-Based Quantitative PCR Assays. ***Applied and Environmental Microbiology,*** *81*(1), 91-99.

17. **Kapoor, V.**, DeBry, R. W., Boccelli, D. and Wendell, D. (2014) Sequencing Human Mitochondrial Hypervariable Region II as a Molecular Fingerprint for Environmental Waters. ***Environmental Science & Technology,*** *48*(18), 10648–10655.
18. Zehraoui, A., **Kapoor, V.**, Wendell, D. and Sorial, G. A. (2014) Impact of Alternate Use of Methanol on n-Hexane Biofiltration and Microbial Community Structure Diversity. ***Biochemical Engineering Journal,*** *85*, 110-118.
19. **Kapoor, V.**, Smith, C., Santo Domingo, J. W., Lu, T. and Wendell, D. (2013) Correlative Assessment of Fecal Indicators Using Human Mitochondrial DNA as a Direct Marker. ***Environmental Science & Technology,*** *47*(18), 10485–10493.
20. **Kapoor, V.** and Wendell, D. (2013) Engineering Bacterial Efflux Pumps for Solar Powered Bioremediation of Surface Waters. ***Nano Letters,*** *13*(5), 2189-2193.
21. Padaria, J. C. and **Kapoor, V.** (2011) Plasmid Borne Gene of *Bacillus pumillus* MTCC 7615 Responsible for Fungal Antagonism towards *Rhizoctonia solani*. ***Indian Journal of Biotechnology,*** *10*(3), 316-320.

Publications: Book Chapters, Technical Reports and Other Articles

1. **Kapoor, V.**, Hutchinson, J., & Dessouky, S. (2019). Evaluation and Enhancement of Carbon Sequestration Potential of Existing Vegetation along Roadsides. *Tran-SET Report*.
2. Eukaryotic and chemical indicators to support fecal pollution detection and tracking. (2015) *Global Water Pathogens Project (GWPP).* Publisher: United Nations Educational, Scientific, and Cultural Organization (UNESCO).
3. Lu, T.; **Kapoor, V.**; George, B.; Lodor, M.; Parrott, J.; Metz, D.; and Wendell, D. (2014) *WERF* Research Helps Cincinnati Use Innovative Biomarkers To Assess & Monitor Water Quality In National Scenic River. *Water Environment Research Foundation (WERF) Research Update*. Publisher: Water Online.
4. Lu, T.; George, B.; Lodor, M.; Metz, D.; Parrott, J.; Fitzpatrick, J.; Hunter, G.; **Kapoor, V.**; and Wendell, D. (2013) What is the Right Biomarker for Water Quality Monitoring? Pros and cons of fecal coliforms, E. coli, and alternative microorganisms and how they are used in watershed monitoring and water quality improvements. *Water Environment & Technology*. Vol. 25, No.10. Publisher: Water Environment Federation.

Conference Presentations/Proceedings

1. Phan, D. C., Pasha, A. T., Carwile, N., Matta, A., & **Kapoor, V.** (2019) Nitrification inhibition by ZnO nanoparticles: functional gene expression and respirometric analysis. *IWA Microbial Ecology in Water Engineering Conference*, Hiroshima, Japan.
2. **Kapoor, V.**, Pasha, A. T., & Phan, D. C. (2019) Effects of Hurricane Harvey on Microbial Water Quality in a Texas River. *IWA Microbial Ecology in Water Engineering Conference*, Hiroshima, Japan.

3. Hinojosa, J., Green, J., Phan, D., Pasha, A. T., Estrada, F., Herrera, J., Mata, T., Carwile, N., Johnson, D., & **Kapoor, V.** (2019) Human or Animal Waste? Determining the Sources of Fecal Pollution in a Karstic Aquifer Using Molecular Tools. *IWA Microbial Ecology in Water Engineering Conference,* Hiroshima, Japan.
4. Pasha, A. T., Hinojosa, J., Phan, D., & **Kapoor, V.** (2019) Human Fecal Source Identification in an Urban Watershed Using Human Mitochondrial DNA. *IWA Microbial Ecology in Water Engineering Conference,* Hiroshima, Japan.
5. Hinojosa, J., Green, J., Phan, D., Pasha, A. T., Estrada, F., Herrera, J., Mata, T., Carwile, N., Johnson, D., & **Kapoor, V.** (2019) Microbial Source Tracking using Bacteroidales 16S rRNA-based qPCR Assays for Fecal Pollution Evaluation in a Rural and Urban Creek within Aquifer Recharge and Contributing Zones. *American Society for Microbiology Texas Branch Fall Meeting,* San Antonio, TX, U.S.A.
6. Phan, D. C., & **Kapoor, V.** (2019) Use of functional gene expression and respirometry to study nitrification inhibition upon exposure to Mn_2O_3 nanoparticles under low and high dissolved oxygen conditions. *American Society for Microbiology Texas Branch Fall Meeting,* San Antonio, TX, U.S.A.
7. Jafarzadeh, A., Phan, D., Moghadam, S. V., Estrada, F., & **Kapoor, V.** (2019) Physiological and transcriptional responses of cyanobacteria under different environmental conditions. *American Society for Microbiology Texas Branch Fall Meeting,* San Antonio, TX, U.S.A.
8. Green, J., Hinojosa, J., Jafarzadeh, A., Green, R., Flores, M., & **Kapoor, V.** (2019) Using DNA to determine flow paths in surface water. *American Society for Microbiology Texas Branch Fall Meeting,* San Antonio, TX, U.S.A.
9. Jafarzadeh, A., Phan, D., Moghadam, S. V., Estrada, F., & **Kapoor, V.** (2019) Molecular tools to predict cyanobacteria toxin production. *EPA P3 Expo*, Boston, MA, U.S.A.
10. Hinojosa, J., Pasha, A. T., Phan, D., & **Kapoor, V.** (2019) Measuring Human Sewage Contamination in Recreational Surface Waters Using Human and Bacterial DNA Markers. *AEESP Research and Education Conference,* Tempe, AZ, U.S.A.
11. Green, J., Hinojosa, J., Jafarzadeh, A., Green, R., Flores, M., & **Kapoor, V.** (2019) Development of a New Class of Environmental Tracers. *AEESP Research and Education Conference,* Tempe, AZ, U.S.A.
12. Phan, D. C., Pasha, A. T., Carwile, N., & **Kapoor, V.** (2019) Impact of Zinc Oxide Nanoparticles on transcriptionl and physiological activity of wastewater nitrification. *AEESP Research and Education Conference,* Tempe, AZ, U.S.A.
13. Rangel, L., Vedadi, S., **Kapoor, V.**, Hutchinson, J., & Dessouky, S. (2019) Assessing carbon sequestration potential of roadside vegetation in Texas. *AEESP Research and Education Conference,* Tempe, AZ, U.S.A.
14. Phan, D. C., & **Kapoor, V.** (2019) Interaction of manganese oxide nanoparticles with wastewater nitrification: physiological and transcriptional responses. *AEESP Research and Education Conference,* Tempe, AZ, U.S.A.

15. Rangel, L., **Kapoor, V.**, Hutchinson, J., & Dessouky, S. (2019) Carbon Sequestration of Soil and Plants along IH-35 in Bexar County, Texas. *Tran-SET Conference,* San Antonio, TX, U.S.A.
16. Estrada, F., Hinojosa, J., Phan, D., Green, J., Vedadi, S., Carwile, N., Herrera, J., Mata, T., & **Kapoor, V.** (2018) Measuring fecal contamination in karstic aquifers using human and bacterial DNA markers. *The Geological Society of America 2019 Joint Section Meeting*, Manhattan, KS, U.S.A.
17. Estrada, F., Hinojosa, J., & **Kapoor, V.** (2018) Tracking the Primary Sources of Fecal Pollution in the Edwards Aquifer using Molecular Tools. *UTSA College of Sciences Research Conference,* San Antonio, TX, U.S.A.
18. **Kapoor, V.**, Gupta, I., Pasha, A. T., & Phan, D. (2018) Molecular Detection of Fecal Indicator Bacteria and Human-Associated Bacteroidales in a Texas River impacted by Hurricane Harvey. *American Society for Microbiology Texas Branch Fall Meeting*, Corpus Christi, TX, U.S.A.
19. Pasha, A. T., Hinojosa, J., Lopez, A., Phan, D., Carwile, N., & **Kapoor, V.** (2018) Measuring human sewage contamination in surface waters using human and bacterial DNA markers. *WEFTEC 2018*, New Orleans, LA, U.S.A.
20. Phan, D. C., Pasha, A. T., Gupta, I., & **Kapoor, V.** (2018) Distribution and persistence of fecal indicators in a Texas waterway impacted by Hurricane Harvey. *WEFTEC 2018*, New Orleans, LA, U.S.A.
21. Phan, D. C., Pasha, A. T., Carwile, N., & **Kapoor, V.** (2017) Impact of zinc oxide nanoparticles on wastewater nitrification. *UTSA College of Sciences Research Conference*, San Antonio, TX, U.S.A.
22. Lamas-Samanamud, G., Lopez, F., Carwile, N., Pasha, A. T., Phan, D. C., **Kapoor, V.**, & Shipley, H. (2017) Is There Harmful Algal Bloom in Texas Surface Waters? *UTSA College of Sciences Research Conference*, San Antonio, TX, U.S.A.
23. Annavajhala, M., **Kapoor, V.**, Santo-Domingo, J., & Chandran, K. (2017). Presence and functional potential of comammox in full-scale wastewater treatment systems across the globe. *Proceedings of the Water Environment Federation*, 2017(7), 4060-4068.
24. Annavajhala, M., Fanyin-Martin, A., Taher, E., Elk, M., **Kapoor, V.**, Santo-Domingo, J., & Chandran, K. (2017). Metagenomics of Anaerobic Food Waste Fermentation. *Proceedings of the Water Environment Federation*, 2017(7), 4041-4047.
25. Phan, D.; Tanvir Pasha, A. B. M.; and **Kapoor, V.** (2017) Interaction of zinc oxide nanoparticles with wastewater nitrifying enrichments. *AEESP Research and Education Conference,* Ann Arbor, MI, U.S.A.
26. **Kapoor, V.**; Elk, M.; Li, X.; and Santo Domingo, J. W. (2017) Inhibition and gene expression of wastewater nitrifying enrichments exposed to cyanide. *American Chemical Society National Meeting & Exposition,* San Francisco, CA, U.S.A.

27. **Kapoor, V.**; Li, X.; Elk, M.; Impellitteri, C. A.; and Santo Domingo, J. W. (2016) Chromium toxicity to nitrifying bacteria: Implications for wastewater treatment. *American Chemical Society National Meeting & Exposition*, San Diego, CA, U.S.A.
28. **Kapoor, V.**; Li, X.; Elk, M.; Impellitteri, C. A.; Chandran, K.; and Santo Domingo, J. W. (2016) Effect of heavy metals on nitrification activity as measured by RNA- and DNA-based function-specific assays. *American Chemical Society National Meeting & Exposition*, San Diego, CA, U.S.A.
29. **Kapoor, V.**; and Santo Domingo, J. W. (2016) Enhanced detection of bacteria in environmental waters: An RNA-based approach. *American Chemical Society National Meeting & Exposition*, San Diego, CA, U.S.A.
30. **Kapoor, V.**; Li, X.; Elk, M.; Impellitteri, C. A.; Chandran, K.; and Santo Domingo, J. W. (2015) Applying Molecular Tools for Monitoring Inhibition of Nitrification by Heavy Metals. *Proc. WEFTEC 2015,* Chicago, IL, U.S.A.
31. Clar, J.; Li, X.; **Kapoor, V.**; Impellitteri, C.; Santo Domingo, J.; and Luxton, T. (2015) Copper Nanoparticle Induced Cytotoxicity to Nitrifying Bacteria used in Wastewater Treatment: A Copper Speciation Study by XAFS. *Society of Environmental Toxicology and Chemistry Annual Meeting*, Salt Lake City, UT, U.S.A.
32. **Kapoor, V.**; Li, X.; Impellitteri, C. A.; and Santo Domingo, J. W. (2015) Nitrification Inhibition As Measured By RNA- And DNA-Based Function-Specific Assays And Microbial Community Structure Analyses. *American Water Works Association Annual Conference*, Anaheim, CA, U.S.A.
33. **Kapoor, V.**; and Wendell, D. (2014) Fecal Source Tracking In Environmental Waters: From *E. coli* To Human Mitochondrial DNA. *American Water Works Association Annual Conference*, Boston, MA, U.S.A.
34. **Kapoor, V.**; Lu, T.; Bahar, A.; George, B.; and Wendell, D. (2013) Use of Mitochondrial DNA and *Bacteroides* for Source Tracking in Fecally Contaminated Surface Water. *Proc. WEFTEC 2013,* Chicago, IL, U.S.A.
35. Lu, T.; **Kapoor, V.**; Wendell, D.; Lodor, M.; George, B.; Metz, D.; Fitzpatrick, J.; and Hunter, G. (2013) Fecal Coliforms, *E. coli* or Alternative Pathogens: What is the Right Indicator for Water Quality Monitoring? *Proc. WEFTEC 2013*, Chicago, IL, U.S.A.
36. Ravi, R.; **Kapoor, V.**; and Wendell, D. (2013) Rapid Detection and Quantification of Norovirus in Environmental Waters Using a Novel Isothermal Assay. *Proc. WEFTEC 2013,* Chicago, IL, U.S.A.
37. **Kapoor, V.**; Ravi, R; and Wendell, D. (2013) Engineering Molecular Efflux Pumps for Bioremediation of Surface Waters. *Proc. WEFTEC 2013,* Chicago, IL, U.S.A.
38. **Kapoor, V.**; and Wendell, D. (2013) Engineering bacterial efflux pumps: Applications in bioremediation of surface water. *National Meeting of the American Chemical Society,* Indianapolis, IN, U.S.A.

39. **Kapoor, V.**; and Wendell, D. (2013) Engineering Microbial Efflux Pumps for Bioremediation of Surface Waters. *General Meeting of the American Society for Microbiology*, Denver, CO, U.S.A.
40. Ravi, R.; **Kapoor, V**.; and Wendell, D. (2013) A Novel RNA Virus Detection System Based on Duplex Specific Nuclease. *General Meeting of the American Society for Microbiology*, Denver, CO, U.S.A.
41. **Kapoor, V.** (2013) Engineering Bacterial Efflux Pumps for Solar-Powered Bioremediation of Surface Waters. *Ohio American Water Works Association Annual Conference*, Toledo, OH, U.S.A.
42. **Kapoor, V**.; and Wendell, D. (2013) Applying Molecular Tools for Microbial Source Tracking in the Duck Creek Watershed. *28th Annual WateReuse Symposium*, Denver, CO, U.S.A.
43. **Kapoor, V**.; and Wendell, D. (2013) Engineering Molecular Efflux Pumps for Bioremediation of Surface Waters. *17th Annual Water Reuse and Desalination Research Conference*, Phoenix, AZ, U.S.A.
44. Ravi, R.; **Kapoor, V**.; and Wendell, D. (2013) A Novel Approach for Detection of Norovirus in Surface Waters. *Midwest Graduate Research Symposium, University of Toledo*, Toledo, OH, U.S.A.
45. **Kapoor, V**.; Ravi, R; and Wendell, D. (2013) Engineering Molecular Efflux Pumps for Bioremediation of Surface Waters. *Midwest Graduate Research Symposium, University of Toledo*, Toledo, OH, U.S.A.
46. **Kapoor, V**.; and Wendell, D. (2013) Engineering molecular efflux pumps for bioremediation of groundwater. *National Ground Water Association Summit*, San Antonio, TX, U.S.A.
47. Ravi, R.; **Kapoor, V**.; and Wendell, D. (2013) A Novel Approach for Detection of Norovirus in Groundwater. *National Ground Water Association Summit*, San Antonio, TX, U.S.A.
48. **Kapoor, V**.; and Wendell, D. (2013) Microbial Source Tracking in the Duck Creek Watershed: An Integrated Approach. *5th IWA International Conference on Microbial Ecology and Water Engineering*, Ann Arbor, Michigan, U.S.A.
49. **Kapoor, V**.; and Wendell, D. (2013) Engineering Microbial Efflux Pumps for Bioremediation of Surface Waters. *5th IWA International Conference on Microbial Ecology and Water Engineering*, Ann Arbor, Michigan, U.S.A.
50. **Kapoor, V**.; Ravi, R; and Wendell, D. (2013) Engineering Molecular Efflux Pumps for Solar Powered Bioremediation of Surface waters. *Graduate Poster Forum, University of Cincinnati*, Cincinnati, OH, U.S.A.
51. Ravi, R.; **Kapoor, V**.; and Wendell, D. (2013) A Novel RNA Virus Detection System Based on Duplex Specific Nuclease. *Graduate Poster Forum, University of Cincinnati*, Cincinnati, OH, U.S.A.

52. Lu, T.; **Kapoor, V.**; Wendell, D.; George, B.; Lodor, M.; Parrott, J.; and Metz, D. (2012) Innovative Biomarkers to Monitor Water Quality in a National Scenic River. *Assessing pathogen fate, transport and risk in natural and engineered water treatment*, Banff, Alberta, Canada.
53. **Kapoor, V.**; Lu, T.; and Wendell, D. (2012) Applying Molecular Tools for Microbial Source Tracking in the Duck Creek Watershed. *Proc. WEFTEC 2012,* New Orleans, LA, U.S.A.
54. Lu, T.; **Kapoor, V.**; Wendell, D.; Johnstone, R.; Linn, D.; and George, B. (2012) A Holistic Watershed Planning Approach: How MSDGC Conducts an Integrated Water Quality Monitoring Project. *Proc. WEFTEC 2012,* New Orleans, LA, U.S.A.

Invited Talks

1. Kapoor, V. (2019) Microbial Source Tracking in and around South Central Texas. Edwards Aquifer Authority, San Antonio, TX, USA, Dec 3, 2019.
2. Kapoor, V. (2019) Fecal source tracking in environmental waters: From bacterial indicators to human mitochondrial DNA. Seminar – Jaypee Institute of Information Technology, Noida, India, July 22, 2019.
3. Kapoor, V. (2018) Molecular Detection of Fecal Indicator Bacteria and Human-Associated Bacteroidales in a Texas River impacted by Hurricane Harvey. American Society for Microbiology Texas Branch Fall Meeting, Texas A&M University, Corpus Christi, TX, USA, Nov 9, 2018.
4. Kapoor, V. (2018) Applying Molecular Tools for Measuring Sewage Contamination in Guadalupe River after Hurricane Harvey. Department of Geological Sciences, University of Texas, San Antonio, TX, U.S.A., Oct 19, 2018.
5. Kapoor, V. (2018) Microbiological Assessment of Fecal Pollution in a Texas River impacted by Hurricane Harvey. 2018 IRCD Researchers Meeting, Broomfield, CO, USA, Jul 12, 2018.
6. Kapoor, V. (2017) Fecal source tracking in environmental waters: From bacterial indicators to human mitochondrial DNA. South Texas Center for Emerging Infectious Diseases, University of Texas at San Antonio, San Antonio, TX, U.S.A, Feb 3, 2017.
7. Kapoor, V. (2017) Nitrogen Cycle and Wastewater Treatment. Guest Lecture – Introduction to Civil Engineering, University of Texas, San Antonio, TX, U.S.A., Apr 14, 2017.
8. Kapoor, V. (2016) Measuring nitrification inhibition in wastewater treatment systems: A molecular biotechnology approach. Department of Civil and Environmental Engineering Seminar, University of Texas, San Antonio, TX, U.S.A., Sep 9, 2016.
9. Kapoor, V. (2016) Nitrogen Cycle and Wastewater Treatment. Environmental Engineering Seminar, University of Cincinnati, Cincinnati, OH, U.S.A., Mar 3, 2016.

10. Kapoor, V. (2016) Fecal Source Tracking in Environmental Waters: From Bacterial Indicators to Human Mitochondrial DNA. University of Texas, San Antonio, TX, U.S.A., Jan 11, 2016.
11. Kapoor, V. (2015) Solar-Powered Nanofilter for Removal of Harmful Antibiotics from Water. Indian Institute of Technology, Delhi, India, Nov 16, 2015.
12. Kapoor, V. (2014) Integrated Analysis of Bacteroidales and Mitochondrial DNA for Fecal Source Tracking in Environmental Waters. University of Maryland, College Park, MD, U.S.A., May 21, 2014.
13. Kapoor, V. (2018) Applying Molecular Tools for Microbial Source Tracking in the Duck Creek Watershed. Metropolitan Sewer District of Greater Cincinnati, Cincinnati, OH, U.S.A., Jan 18, 2013.

Research Support (total: ~$3.5 million)

1. Hutchinson, J. (Principal), Kapoor, V. (Principal), & Dessouky, S., "Evaluation of the vegetation along roadways in Edwards Aquifer recharge and contributing zones for storm water management and water quality improvement," Sponsored by City of San Antonio, $798,636.00. (September 1, 2019 – August 31, 2022).
2. Kapoor, V. (Principal), "Monitoring Harmful Algal Blooms in Environmental Waters in Cibolo Preserve," Sponsored by UTSA Office of the Vice President for Research, Economic Development, and Knowledge Enterprise (VPREDKE), $3,000.00. (January 1, 2020 - August 31, 2020).
3. Sharif, H. (Principal), Dessouky, S., Giacomoni, M., Rashed-Ali, H., Weissmann, A., & Kapoor, V., "Hydrology Infrastructure Data Collection and Analysis," Sponsored by Texas General Land Office, $1,536,419.00. (April 1, 2019 – October 31, 2019).
4. Kapoor, V. (Principal), & Hutchinson, J. (Principal), "Evaluation of the vegetation and soils to improve carbon sequestration and ecosystem services at the University of Texas at San Antonio Main Campus," Sponsored by the UTSA Office of Sustainability, $82,619.00. (March 1, 2019 – August 31, 2022).
5. Kapoor, V. (Principal), "Molecular tools to predict cyanobacteria toxin production," Sponsored by U.S. Environmental Protection Agency, $15,000.00. (December 1, 2018 – November 30, 2019).
6. Kapoor, V. (Principal - UTSA), & Green, R. (Principal – SwRI), "Development and Deployment of a New Class of Environmental Tracers," Sponsored by the Connect Program between UTSA and SwRI, $125,000.00. (September 1, 2018 – August 31, 2019).
7. Kapoor, V. (Principal), Dessouky, S., & Hutchinson, J., "Evaluation and enhancement of carbon sequestration potential, bioenergy production and ecosystem services of existing vegetation along roadsides," Sponsored by Transportation Consortium of South-Central States (Tran-SET), $100,000.00. (April 1, 2018 - September 30, 2019).

8. Kapoor, V. (Principal), "RAPID: Mobilization and transport of microbial contaminants along Texas waterways following Hurricane Harvey," Sponsored by National Science Foundation, $79,277.00. (October 1, 2017 - September 30, 2018).
9. Kapoor, V. (Principal), & Johnson, D. W., "Tracking the Primary Sources of Fecal Pollution in the Recharge and Contributing Zones of Edwards Aquifer in Bexar County, TX using Molecular Tools," Sponsored by City of San Antonio, $692,452.00. (November 1, 2017 - December 31, 2020).
10. Kapoor, V. (Principal), "Fecal Source Tracking in the Cibolo Preserve," Sponsored by UTSA VPR Office, $3,000.00. (April 1, 2017 - March 31, 2018).

Patents and Invention Disclosures

- Wendell, D., Ravi, R., **Kapoor, V.** "Duplex Specific Nuclease as a Means of Isothermal Amplified RNA Detection" University of Cincinnati Invention Disclosure (2015).
- Wendell, D., **Kapoor, V.** "Bacterial Efflux Pump and delta-Rhodopsin" Provisional Patent (2013).

Teaching Experience

University of Texas at San Antonio

- **Biological Phenomena in Environmental Engineering (CE 5213)**
  Fall 2017, Fall 2018
- **Environmental Engineering (CE 2633)**
  Fall 2016, Spring 2017, Spring 2018, Spring 2019, Fall 2019, Spring 2020
- **Experimental Methods in Environmental Engineering (CE 5713)**
  Spring 2019

University of Cincinnati

- **Applied Biology for Engineers (ENVE 6000)**
  Teaching Assistant - Fall 2010, Fall 2011, Fall 2012, Fall 2013
- **Applied Biology for Engineers Lab (ENVE 6001L)**
  Teaching Assistant - Fall 2010, Fall 2011, Fall 2012, Fall 2013
- **Microbiological Principles of Environmental Systems (ENVE 6046)**
  Teaching Assistant - Spring 2012, Spring 2013

Students Advised

PhD Students

Sina Vedadi Moghadam, PhD Civil Engineering, (in progress)
Haya Al-Duroobi, PhD Environmental Science and Engineering, (in progress)
Duc Phan, PhD Environmental Science and Engineering, 2019

MS Students

Jemima Green, Civil Engineering, (in progress)
Arash Jafarzadeh, Civil Engineering, (in progress)
Jessica Hinojosa, Civil Engineering, 2019
ABM Tanvir Pasha, Civil Engineering, 2018

Undergraduate Students

William Loren, B.S. Civil Engineering, 2020-present
Fabiola Estrada, B.S. Civil Engineering, 2017 - present
Nikolas Carwile, B.S. Civil Engineering, 2017 - present
Jonathan Herrera, B.S. Civil Engineering, 2018 – present
Troy Mata, B.S. Civil Engineering, 2018 – present
Diana Cabral, B.S. Civil Engineering, 2016 – 2017
Adrianne Lopez, B.S. Geological Sciences, 2017

Committee Member

Dulcie Gomez, M.S. Environmental Science, (in progress)
Sarah Gorton, M.S. Environmental Science, (in progress)
Lauren Rangel, M.S. Environmental Science, (in progress)
Alyssa Flynn, M.S. Civil Engineering, 2018

Student Awards

2019 Lauren Rangel won the 3rd place in the Student Poster Competition at the 2019 Tran-SET Conference in San Antonio, TX.
2018 Undergraduate student Fabiola Estrada won the Best Undergraduate Student Poster Award at the UTSA College of Sciences Research Conference.
2018 Graduate students Duc Phan and Jessica Hinojosa were awarded the Graduate Student Professional Development Award for conference travel.
2018 MS student Jessica Hinojosa won the 2nd place in Three Minute Thesis (3MT) Competition at UTSA.
2018 Fabiola Estrada was awarded the Minority Science and Engineering Improvement Program (MSEIP) fellowship.
2017 PhD student Duc Phan was awarded a student scholarship at the Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference at Ann Arbor, Michigan.
2017 PhD student Duc Phan was awarded a stipend from the Research Grant Proposal Program held at UTSA.
2017 Adrianne Lopez was awarded the Minority Science and Engineering Improvement Program (MSEIP) fellowship.
2016 PhD student Duc Phan was awarded the Presidential Distinguished Research Fellowship at UTSA.

2016 MS student ABM Tanvir Pasha was awarded the Valero Outstanding Research Scholarship.

Service Activities

Department

- Committee Member, Department Research Taskforce, Department of Civil and Environmental Engineering, UTSA (2019-present)
- Committee Member, Environmental Science and Engineering Doctoral Review Committee, UTSA (2016-present)
- Committee Member, Undergraduate Studies Committee, Department of Civil and Environmental Engineering, UTSA (2017-present)
- Committee Member, Faculty Annual Review Committee, Department of Civil and Environmental Engineering, UTSA (2016-17, 2018-19)
- Department Representative, UTSA Day, Department of Civil and Environmental Engineering (2016, 2018)

University

- Committee Member, Cores Advisory Board, UTSA (2019-present)
- Committee Member, Faculty Search Committee for Cluster Hire- Social and Environmental Challenges in Latin America, UTSA (2019)
- Committee Member, College of Engineering Business Service Center Advisory Committee, UTSA (2018-present)
- Committee Member, COE Research Branding Committee, College of Engineering, UTSA (2018-present)
- Committee Member, Materials Science and Engineering Graduate Program Proposal Committee, UTSA (2018-present)
- Committee Member, Critical Infrastructure Research Initiative, UTSA (2017-present)
- Judge, College of Engineering Tech Symposium, UTSA (2016, 2017)
- Banner Marshal, College of Engineering, May 2017 Commencement, UTSA (2017)
- Guest Speaker, Equinox Festival Water Panel, UTSA (2017)
- Faculty Mentor, Indian Student Association, UTSA (2016-present)

External

- Session Chair, American Society for Microbiology (ASM) Texas Branch Meeting 2019, Session – Microbial Ecology and Environmental Microbiology
- Review Panel, National Science foundation, Environmental Engineering Program (2019)
- Reviewer for 2019 American Society for Engineering Education (ASEE) Annual Conference & Exposition, ASEE Environmental Engineering Division

- Reviewer for 2018 ConTex Collaborative Research Grants between UT System and Mexico based researchers
- Judge, 4th Annual San Antonio Postdoctoral Research Forum, San Antonio, TX, 2016
- Reviewer for Graduate Student Governance Association Research Fellowship, University of Cincinnati (2016)
- Member, Global Water Pathogen Project, Indicators and Microbial Source Tracking Markers Group (2015-2019)
- Editorial Team, Environment and Natural Resources Research (2016-present)
- Editorial Board Member for Environmental Health Insights, 2015 - 2016
- Member, Ohio Section AWWA Young Professionals Committee, 2013 – 2016

Reviewer for Journals

npj Clean Water
Water Research
Environmental Science and Technology
Environmental Science and Technology Letters
Chemosphere
Science of the Total Environment
Environmental Research
Journal of Microbiology
Water Science and Technology
Environmental Science and Pollution Research
Environment and Natural Resources Research
Journal of Water Resource and Protection
Water Science and Technology
Environmental Health Insights
Bioinformatics and Biology Insights

Organization memberships

American Society for Microbiology (ASM)
American Chemical Society (ACS)
American Water Works Association (AWWA)
Water Environment Foundation (WEF)
Association of Environmental Engineering and Science Professors (AEESP)
American Society for Engineering Education (ASEE)