**Hemali H. Oza**

hemali.harish.oza@emory.edu • (919) 561-2233

|  |
| --- |
| **Education** |
|  | **Rollins School of Public Health, Emory University, Atlanta, GA****Laney Graduate School, Emory University, Atlanta, GA**Ph.D. Candidate in Environmental Health SciencesExpected graduation: May 2024Dissertation committee: Dr. Sheela Sinharoy (co-chair), Dr. Matthew Freeman (co-chair), Dr. Thomas Clasen, Dr. Noah Scovronick, and Dr. Lance GundersonDissertation topic: *Development of Resilience Measurement Tool to Assess the Impact of RISE Interventions on Household and Community Resilience in Informal Settlements***Gillings School of Global Public Health, University of North Carolina at Chapel Hill**Master of Science in Environmental Sciences and EngineeringGraduated: August 2019Master’s thesis committee: Dr. Mark Sobsey (advisor), Dr. Louise Ball, Dr. Mike FisherMaster’s thesis topic: *Physical characterization of flocs and assessment of microbial reductions with the use of chitosan acetate as a cloth filter aid***Gillings School of Global Public Health, University of North Carolina at Chapel Hill**Bachelor of Science in Public Health in Environmental Health SciencesGraduated with distinction and highest honors: May 2018Grade Point Average: 3.75Honor’s thesis topic: *Chitosan acetate coagulation as a cloth filter aid for improving drinking water quality* |

|  |  |
| --- | --- |
| **Honors** |  |
|  | **ARCS Foundation Herz Global Impact Scholar**The ARCS Foundation run by women who boost American leadership and aid advancement in science and technology. Selection for the scholarship is based on merit and ability to properly communicate research | **Awarded****Fall 2021** |
|  | **Laney Graduate Fellow**Offered to qualified applicants across the programs of the Emory’s Laney Graduate School | **Awarded** **Fall 2019** |
|  | **Hazen & Sawyer Scholarship from the American Water Works Association**Selection is based upon the applicant's ability to become a leader in research and consulting in the drinking water field; Hazen and Sawyer sponsors this scholarship to benefit a student seeking a master’s degree in the water science field. | **Awarded****Summer****2018** |
|  | **Successful Defense of Undergraduate Honors Thesis with Highest Honors**Honor’s thesis committee: Dr. Mark Sobsey (advisor), Dr. Louise Ball, Dr. Lydia AbebeHonor’s thesis topic: *Chitosan acetate coagulation as a cloth filter aid for improving drinking water quality* | **Fall 2017** |
|  | **Dean’s List**Awarded to student with a semester GPA of at least a 3.5/4.0. Received five out of eight semesters as an undergraduate student at UNC | **2014-2018** |
|  | **SMART Research Fellow**Awarded to rising second-years and third-year undergraduate students from minority or underprivileged backgrounds to encourage STEM-related researchFellowship topic: *Identifying presumptive positive colonies of Salmonella spp. In raw sewage, reclaimed, and surface water sources* | **Awarded** **May 2015** |
|  | **UNC Covenant Scholar**A UNC scholars program for students from low-income backgrounds | **2014-2018** |
| **Research Experience** |  |
|  | **Doctoral Research Assistant**Emory University Gangarosa Department of Environmental Health |  |
|  | * Dissertation Project: Revitalizing Informal Settlements and their Environments

(1) a systematic review on current resilient measurement methods and their characteristics(2) development and validation of a context-specific resilience measurement tool for RISE(3) implementation of the tool to evaluate the impact of the RISE intervention on resilience. | **Spring 2021-Present** |
|  | * Lead systematic review protocol write-up, data extraction, analysis and manuscript write-up for *Health Risks of Occupational health risks among sanitation workers: A Systematic Review*
* Presented findings at UNC Water and Health
 | **Fall 2019-Fall 2021** |
|  | * Drafted analysis plan for Low-birthweight Infant Feeding Exploration Project cohort dataset.
 | **Summer 2020** |
|  | **Graduate Research Assistant**UNC Department of Environmental Sciences and Engineering* Lead laboratory experiments for coagulation-jar tests, coagulation-flocculation-sedimentation and filtration studies with a novel organic coagulant
* Conducted particle-size analysis of coagulated particles at a partnering lab at Duke University’s Department of Civil and Environmental Engineering, Durham, NC
* Lead a team of four undergraduate research assistants in a laboratory and academic setting
 | **2018-2019** |
|  | UNC Water Institute* Analyzed a mixed-methods data set from Malawian maternity wards to assess infection prevention and control measures and environmental health conditions
* Conducted qualitative data analysis using coding software, Dedoose
* Advanced proficiency in statistical analysis using R programming language
 | **2019-2020** |
|  | **Undergraduate Research Assistant**Department of Environmental Sciences and Engineering* Conducted research experiments to optimize point-of-use drinking water technology
* Successfully defended undergraduate honor’s thesis with highest honors
* Mastered methods for examination of surface water, wastewater, and reclaimed water
* Analyzed qualitative data for Cambodia field research for Chitosan technology design
 | **2015-2018** |
|  | **Center for Disease Control and Prevention & ORISE Fellow**Center for Disease Control and Prevention, Atlanta, GA* Worked on revising the 2011 Emergency Water Supply Planning Guide for Healthcare Facilities
* Gained experience in different fields of environmental health and working in a professional and federal government setting
* Document was released during the summer of 2019
 | **Summer 2017** |
|  | **SMART Research Fellowship Program**UNC Department of Undergraduate Research* Gained experience in biochemical identification and presumptive positive Salmonella isolates
* Took part in poster symposium and oral presentation
 | **Summer 2015** |
| **Teaching & Work Experience** |  |
|  | **Graduate Teaching Assistant**Gangarosa Department of Environmental Health at Emory University |  |
|  | * EH 520 Human Toxicology Graduate Teaching Assistant: led small discussion sections, worked with faculty members to adjust to a virtual teaching style amidst the COVID-19 pandemic, helped with grading, and held office hours for students.
 | **Fall 2020** |
|  | * EH 570 Environmental Health Law and Policy: aided with curriculum development, planned and gave lecture on environmental injustice, helped with grading, and held office hours.
 | **Spring 2021** |
|  | * EH 596 Research Development in Environmental Health: aided with lecturing and mentoring 2nd year MPH students on the planning process of their capstones and theses
 | **Fall 2021** |
|  | **Graduate Teaching Assistant**UNC Biology Department* Assist with grading and course logistics for two sections of “Principles of Biology,” a course with ~800 total students
 | **Fall 2019** |
|  | **Residential Computing Consultant**UNC ResNET Information Technology Services* Trained in technological support to provide for and education students on campus
* Developed customer service skills
* Trained and certified to use 3D printers, wood laser cutters, vinyl cutters, and industrial embroidery machines
 | **2017-2019** |
|  | **Volunteer Teacher**Shanti Bhavan Children’s Project, Tamil Nadu, India* Taught environmental sciences, computer science, literature, and language for 3rd-12th grade
 | **Summer 2016** |
|  |  |
| **Leadership** |  |
|  | **EHS PhD Student Government Outreach Chair**Gangarosa Department of Environmental Health* Responsible for planning community engagement/outreach events for EHS PhD students
 | **2021-present** |
|  | **EHS PhD Student Government Secretary and Social Chair**Gangarosa Department of Environmental Health* Took part in executive committee responsibilities
* Planned virtual and socially-distanced events
 | **2020-2021** |
|  | **Captain of UNC-Chapel Hill Ek Taal**UNC Chapel Hill, NC* Re-established and lead UNC’s classical Indian fusion dance team for four years
* Planned and lead practices, workshops, and open practices
* Choreographed dances and established semester goals for the team
* Organized performances and competition seasons
 | **2015-2019** |
|  | **SMART Research Fellowship Program Mentor**UNC Department of Undergraduate Research* Participated in the program as a fellow during the summer of 2015 and returned as a program mentor
* Lead journal clubs and discussions on research obstacles and lab trouble shooting techniques
 | **Summer 2018** |
|  | **Covenant Scholar Mentor**UNC Covenant Scholar Program* Mentored four first-year Covenant Scholars with academics, involvement, and career development
 | **2017-2018** |
|  | **Undergraduate Student Representative**UNC Department of Environmental Sciences and Engineering* Attended department meetings to voice students’ questions and concerns
* Planned and hosted departmental and school-wide networking and social events
 | **2016-2018** |
| **Skills** |  |
|  | * Proficient in Microsoft Office Suite, MAXQDA and Dedoose (qualitative data analysis software), and R (statistical software)
* Working knowledge of SAS (statistical software)
 |

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |
| --- |
| **PUBLICATIONS** |
|  | **Oza, H.H.**; Holmes, E.B.; Bailey, E.; Coleman, C.K.; Sobsey, M.D. (2022). Microbial reductions and physical characterization of chitosan flocs when using chitosan acetate as a cloth filter aid in water treatment. PloS one. (in publication; will be released Jan/Feb 2022)**Oza, H. H.**, Lee, M. G., Boisson, S., Pega, F., Medlicott, K., & Clasen, T. (2022). Occupational health outcomes among sanitation workers: A systematic review and meta-analysis. International Journal of Hygiene and Environmental Health, 240, 113907. <https://doi.org/10.1016/j.ijheh.2021.113907>Bailey, E. S., Beetsch, N., Wait, D. A., **Oza, H. H.**, Ronnie, N., & Sobsey, M. D. (2021). Methods, Protocols, Guidance and Standards for Performance Evaluation for Point-of-Use Water Treatment Technologies: History, Current Status, Future Needs and Directions. Water, 13(8), 1094. <https://doi.org/10.3390/w13081094>Coleman, C. K., Mai, E., Miller, M., Sharma, S., Williamson, C., **Oza, H.**, Holmes, E., Lamer, M., Ly, C., Stewart, J., Sobsey, M. D., & Abebe, L. S. (2021). Chitosan Coagulation Pretreatment to Enhance Ceramic Water Filtration for Household Water Treatment. International journal of molecular sciences, 22(18), 9736. <https://doi.org/10.3390/ijms22189736>**Oza, H. H.**, Fisher, M. B., Abebe, L., Cronk, R., McCord, R., Reuland, F., Behnke, N., Kafanikhale, H., Mofolo, I., Hoffman, I., & Bartram, J. (2020). Application of tools to monitor environmental conditions, identify exposures, and inform decision-making to improve infection prevention and control practices in Malawian maternity wards. Environmental monitoring and assessment, 192(2), 1-11. <https://doi.org/10.1007/s10661-020-8089-5> |

**Presentations** |
|  | Panel Discussion at UNC Chapel Hill Water and Health Conference 2021: Looking Deeper: A research agenda to advance health, safety, and dignity of sanitation workers. Convening Organizations: WHO, WaterAid, ILO, World Bank, SNV, **Emory University****Oza, H.H.**; Lee, M.G.; Boisson, S.; Pega, F.; Medlicott, K.; Clasen, T. “Occupational Health Outcomes among Sanitation Workers: A Systematic Review and Meta-Analysis.” Poster presentation at the UNC Water and Health Conference, Chapel Hill, NC. Fall 2020.**Oza, H.H.**; Holmes, E.B.; Miller, M.; Lafontaine, S.; Patel, S.; Edward, B.; Coleman, C.K.; Sobsey, M.D. “Evaluation of chitosan as a transformative coagulant-flocculant to improve cloth and sand filter drinking water treatment.” Poster presentation (presented by Sobsey, M.D.) at the International Water Association Conference, Geneva, Switzerland. Fall 2019.**Oza, H.H.**; Holmes, E.B.; Sobsey, M.D. “Physical characterization of chitosan flocs during coagulation-flocculation procedures using a particle size analyzer.” Poster presentation at the UNC Water Microbiology Conference, Chapel Hill, NC. Spring 2019.Lafontaine, S.\*; Patel, S.\*; **Oza, H.H.**; Holmes, E.B.; Sobsey, M.D. “Microbial reductions from water using chitosan and cloth filtration.” Poster presentation at the UNC Water Microbiology Conference, Chapel Hill, NC. Spring 2019.**Oza, H.H.**; Fisher, M.B.; Cronk, R. “The Causes and Consequences of Inadequate Environmental Health Conditions in Maternity Wards in Health Care Facilities in Malawi.” Verbal presentation at the UNC Water and Health Conference, Chapel Hill, NC. Fall 2018.Holmes, E.B.\*; Coleman, C.K.; **Oza, H.H.**; Sobsey, M.D. “Summary of work with chitosan and various filtration technologies” Side event verbal presentation at the UNC Water and Health Conference, Chapel Hill, NC. Fall 2018.**Oza, H.H.**; Holmes, E.B.; Coleman, C.K.; Abebe, L.; Sobsey, M.D. “Microbial and turbidity removal by chitosan coagulation in natural waters to optimize cloth water filtration for household drinking water treatment.” Verbal presentation at the UNC Water Microbiology Conference, Chapel Hill, NC. Spring 2018.**Oza, H.H.**; Holmes, E.B.; Coleman, C.K.; Abebe, L.; Sobsey, M.D. “Microbial and turbidity removal by chitosan coagulation in natural waters to optimize saree cloth water filtration for household drinking water treatment.” Poster presentation at UNC Water Microbiology Conference, Chapel Hill, NC. Spring 2017. **Oza, H.H.**; Bailey, E.; Sobsey, M.D. “Identifying presumptive positive colonies of Salmonella spp. In raw sewage, reclaimed, and surface water sources.” Poster presentation at the SMART Fellow Symposium, Chapel Hill, NC. Summer 2015. |