

Yuke Wang

PERSONAL INFORMATION	Address: 96 Oak Leaf Ln, Unit 204, Vernon Hills, IL 60061 Phone: (404) 330-7292 Email: yuke.wang@emory.edu Website: https://ywan446.github.io/
CONTACT INFORMATION	Center of Global Safe WASH Rollins School of Public Health, Emory University Hubert Department of Global Health 1518 Clifton Road, NE MS: 002-7BB CNR6040B Atlanta, GA 30322 Phone: (404) 727-2238 Fax: (404) 727-4590 Email: yuke.wang@emory.edu
EDUCATION	2016/08 - 2023/08 Ph.D. in Mathematics and Statistics, Georgia State University. 2012/08 - 2014/05 MSPH. in Biostatistics, Emory University. 2008/08 - 2012/06 B.Eng. in Food Quality and Safety, South China University of Technology.
RESEARCH INTERESTS	Infectious Disease Modeling, Wastewater Surveillance, COVID-19, Bayesian Methods, Quantitative Microbial Risk Assessment, Social Networks, Global Water, Sanitation, and Hygiene
PROFESSIONAL EXPERIENCE	2019/11 - Senior Biostatistician, Emory University Supervisor: Dr. Christine Moe , Dr. Peter Teunis 2017/04 - 2019/10 Biostatistician, Emory University Supervisor: Dr. Christine Moe , Dr. Peter Teunis 2016/08 - Research Assistant, Georgia State University Advisor: Dr. Yichuan Zhao , Dr. Sixia Chen , Dr. Yi Jiang 2015/01 - 2017/04 Information Analyst III, Emory University Supervisor: Dr. Christine Moe , Dr. Peter Teunis 2014/06 - 2015/01 Information Analyst II, Emory University Supervisor: Dr. Christine Moe , Dr. Peter Teunis 2013/05 - 2014/05 Research Assistant, Emory University Advisor: Dr. Vicki Hertzberg
HONORS	2023 V.V Lavroff-Graduate Award, GSU 2018 Harshbarger Travel award, NSF
MEMBERSHIPS	2016/10 - 2017/11 International Chinese Statistical Association

GRANT
SUPPORT**Co-Investigator or Biostatistician**

2021 - 2023	<i>Wastewater-Based COVID-19 Surveillance</i> (PI: Christine Moe) \$3,186,834, NIH
2019 - 2022	<i>Exposure Assessment of Campylobacter Infections in Rural Ethiopia (EXCAM)</i> (PI: Song Liang) \$954,431, Bill & Melinda Gates Foundation
2021 - 2022	<i>Wastewater surveillance of SARS-CoV-2 and enteric pathogens in Cox's Bazar Rohingya camps</i> (PI: Christine Moe) \$297,424, The Rockefeller Foundation
2021 - 2022	<i>Wastewater surveillance of SARS-CoV-2 and enteric pathogens in Dhaka, Bangladesh</i> (PI: Christine Moe) \$180,150, The Rockefeller Foundation
2021 - 2022	<i>Wastewater surveillance of SARS-CoV-2 and enteric pathogens in Accra, Ghana</i> (PI: Christine Moe) \$250,000, The Rockefeller Foundation
2021 - 2022	<i>Wastewater surveillance of SARS-CoV-2 and enteric pathogens in Atlanta public schools</i> (PI: Christine Moe) \$250,000, The Rockefeller Foundation
2021 - 2022	<i>Rollins School of Public Health Dean's Rapid COVID-19 Pilot Awards</i> (PI: Pengbo Liu) \$50,000, Rollins School of Public Health, Emory University
2020 - 2021	<i>Transmission dynamics of COVID-19 in Georgia, USA</i> (PI: Max Lau) \$13,446, Emory COVID-19 Response Collaborative (ECRC)
2019 - 2020	<i>Modelling Faecal Pathogen Flows in Urban Environments</i> (PI: Juliet Willetts) £250,000, Water & Sanitation for the Urban Poor
2016 - 2021	<i>SaniPath-Typhoid and Environmental Surveillance Strategy</i> (PI: Christine Moe) \$3,298,528, Bill & Melinda Gates Foundation OPP1150697
2010 - 2021	<i>Assessment and Characterization of Fecal Exposure Pathways in Urban Low-Income Settings</i> (PI: Christine Moe) \$6,252,309, Bill & Melinda Gates Foundation OPP1016151
2014 - 2018	<i>Safe Water: Access to Clean Water in Health Facilities and Communities</i> (PI: Christine Moe) \$2,544,658, General Electric Foundation 26425

INVITED
TALKS

1. *When Case Reporting Becomes Untenable: Can Sewer Networks Tell Us Where COVID-19 Transmission Occurs?*. IDM Fall Symposium, Seattle, WA USA, 2022
2. *Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Transmission in Georgia, USA, February 1–July 13, 2020*. ICEID 2022, Atlanta, GA USA, 2022
3. *Strategic Sampling Design and Adaptive Sampling for COVID-19 Wastewater Surveillance*. Wastewater Surveillance for SARS-CoV-2: Fall RCN Meeting, Online, 2021
4. *Typhoid Environmental Surveillance Sampling Strategies and Adaptive Sampling Site Allocation Method: A Simulation Study for Wards 58 & 59, Kolkata*. 11th International Conference on Typhoid and Other Invasive Salmonellosis, Hanoi, Vietnam, 2019
5. *SaniPath Study: A Quantitative Assessment of Exposure to Fecal Contamination for Young Children in Accra, Ghana*. World Toilet Day Seminar at Emory University, Atlanta, GA USA, 2018
6. *Simulation Study of Adaptive Sampling Sites Allocation for Typhoid Environmental Surveillance in Ward 58 & 59, Kolkata*. American Society of Tropical Medicine & Hygiene annual meeting, New Orleans, LA USA, 2018
7. *Examining Acute Gastrointestinal Disease Data from Cruise Ships to Guide Effective Intervention & Prevention Strategies*. Cruise Lines International Association Webinar, 2017
8. *Structured Observations and the Competing Hazards Model: Lessons from SaniPath in Ghana*. Water Microbiology Conference, Chapel Hill, NC USA, 2017
9. *Quantitative assessment of exposure to fecal contamination for young children in Accra, Ghana*. ICSA, Atlanta, GA USA 2016

JOURNAL
REVIEW

Acta Parasitologica
 American Journal of Epidemiology
 Cities
 Environmental Science & Technology
 Environmental International
 Heliyon
 Infectious Diseases of Poverty
 International Journal of Global Environmental Issues
 Journal of Exposure Science and Environmental Epidemiology
 PLOS Computational Biology
 PLOS Neglected Tropical Diseases
 PLOS ONE
 PLOS Water
 Risk Analysis
 Scientific Reports
 Tropical Medicine and Infectious Disease
 Veterinary World

TOOLS

1. The [SaniPath Assessment Tool](#) is a tool designed to assess public health risks related to poor sanitation and to help prioritize sanitation investments based on the exposures that have the greatest public health impact.
2. The [WASHCON Tool](#) is an assessment tool to evaluate WASH conditions within HCF in low- and middle-income countries.

SKILLS

Programming:	R, Python, Mathematica
Database:	SQL, Access
Codebase:	Github, Git
Statistics Software:	SAS, STATA, JAGS, winBUGs
Other:	AWS, mHealth, Machine Learning, LaTeX, GIS

PUBLICATIONS

[*corresponding author]

1. **Wang, Y.***, Liu, P., VanTassell, J., Hilton, S. P., Guo, L., Sablon, O., ... Moe, C. L. (2023). [When case reporting becomes untenable: Can sewer networks tell us where COVID-19 transmission occurs?](#). *Water Research*, 229, 119516.
2. Hagedorn, B.*, Zhou, N. A., Fagnant-Sperati, C. S., Shirai, J. H., Gauld, J., **Wang, Y.**, ... Meschke, J. S. (2023). [Estimates of the cost to build a stand-alone environmental surveillance system for typhoid in low-and middle-income countries](#). *PLOS Global Public Health*, 3(1), e0001074.
3. Amin, N.*, Haque, R., Rahman, M. Z., Rahman, M. Z., Mahmud, Z. H., Hasan, R., ... Bhattacharya, P. (2023). [Dependency of sanitation infrastructure on the discharge of faecal coliform and SARS-CoV-2 viral RNA in wastewater from COVID and non-COVID hospitals in Dhaka, Bangladesh](#). *Science of The Total Environment*, 161424.
4. **Wang, Y.***, Liu, P., Zhang, H., Ibaraki, M., VanTassell, J., Geith, K., Cavallo, M., ... Moe, C. L. (2022). [Early warning of a COVID-19 surge on a university campus based on wastewater surveillance for SARS-CoV-2 at residence halls](#). *Science of the Total Environment*, 821.
5. **Wang, Y.***, Mairinger, W., Raj, S. J., Yakubu, H., Siesel, C., Green, J., Durry, S., ... Moe, C. L. (2022). [Quantitative assessment of exposure to fecal contamination in urban environment across nine cities in low-income and lower-middle-income countries and a city in the United States](#). *The Science of the Total Environment*, 806.
6. Adams, C.*, Chamberlain, A., **Wang, Y.**, Hazell, M., Shah, S., Holland, D. P., Khan, F., Gandhi, N. R., Fridkin, S., Zelner, J., & Lopman, B. A. (2022). [The Role of Staff in Transmission of SARS-CoV-2 in Long-term Care Facilities](#) *Epidemiology*, 33, 5, 669-677.
7. Rouphael, N.*, Beck, A.*, Kirby, A. E., Liu, P., Natrajan, M. S., Lai, L., ... Mulligan, M. J. (2022). [Dose-Response of a Norovirus GII. 2 Controlled Human Challenge Model Inoculum](#) *The Journal of Infectious Diseases*, 226, 10, 1771-1780.
8. Isunju, J. B.*, Ssekamatte, T., Wanyenze, R., Mselle, J. S., Wafula, S. T., Kansiime, W. K., ... Mugambe, R. K. (2022). [Analysis of management systems for sustainability of infection prevention and control, and water sanitation and hygiene in healthcare facilities in the Greater Kampala Area, Uganda](#) *PLOS Water*, 1, 5.
9. **Wang, Y.***, Siesel, C., Chen, Y., Lopman, B., Edison, L., Thomas, M., Adams, C., Lau, M., & Teunis, P. F. M. (2021). [Severe Acute Respiratory Syndrome Coronavirus 2 Transmission in Georgia, USA, February 1–July 13, 2020](#). *Emerg Infect Dis*, 27, 10, 2578-2587.
10. Kapoor, R., Ebdon, J., Wadhwa, A., Chowdhury, G., **Wang, Y.**, Raj, S. J., Siesel, C., Durry, S. E., Mairinger, W., Mukhopadhyay, A. K., Kanungo, S., Dutta, S., & Moe, C. L.* (2021) [Evaluation of Low-Cost Phage-Based Microbial Source Tracking Tools for Elucidating Human Fecal Contamination Pathways in Kolkata, India](#). *Frontiers in microbiology*, 12.

PUBLICATIONS [*corresponding author]

11. Mugambe, R. K.*, Yakubu, H., Wafula, S. T., Ssekamatte, T., Kasasa, S., Isunju, J. B., Halage, A. A., Osuret, J., Bwire, C., Ssempebwa, J. C., **Wang, Y.**, McGriff, J. A., & Moe, C. L. (2021) [Factors associated with health facility deliveries among mothers living in hospital catchment areas in Rukungiri and Kanungu districts, Uganda.](#) *BMC Pregnancy Childbirth*, 21, 1, 329.
12. Chen, S.*, Zhao, Y., & **Wang, Y.** (2021) [Sample Empirical Likelihood Approach under Complex Survey Design with Scrambled Responses.](#) *Survey Methodology*, 47, 1.
13. **Wang, Y.***, & Teunis, P. F. M. (2020). [Strongly heterogeneous transmission of COVID-19 in mainland China: local and regional variation.](#) *Frontiers in Medicine*, 7.
14. Raj, S. J.*, **Wang, Y.**, Yakubu, H., Robb, K., Siesel, C., Green, J., Kirby, A., Mairinger, W., Michiel, J., Null, C., Perez, E., Roguski, K., & Moe, C. L. (2020). [The SaniPath Exposure Assessment Tool: A quantitative approach for assessing exposure to fecal contamination through multiple pathways in low resource urban settlements.](#) *Plos One*, 15, 6.
15. **Wang, Y.***, Moe, C. L., Dutta, S., Wadhwa, A., Kanungo, S., Mairinger, W., Zhao, Y., Jiang, Y., & Teunis, P. F. M. (2020). [Designing a Typhoid Environmental Surveillance Study: a Simulation Model for Optimum Sampling Site Allocation.](#) *Epidemics*, 100391.
16. Kayiwa, D., Mugambe, R. K., Mselle, J. S., Isunju, J. B., Ssempebwa, J. C., Wafula, S. T., Ndejjo, R., Kansiime, W. K., Nalugya, A., Wagaba, B., Zziwa, J. B., Bwire, C., Buregyeya, E., Radooli, M. O., Kimbugwe, C., Namanya, E., Bateganya, N. L., McGriff, J. A., **Wang, Y.**, Ssekamatte, T.*, & Yakubu, H. (2020). [Assessment of water, sanitation and hygiene service availability in healthcare facilities in the greater Kampala metropolitan area, Uganda.](#) *BMC Public Health*, 20, 1.
17. Berendes, D. M.*, Mondesert, L., Kirby, A. E., Yakubu, H., Adomako, L., Michiel, J., Raj, S., Robb, K., **Wang, Y.**, Doe, B., Ampofo, J., & Moe, C. L. (2020). [Variation in E. coli concentrations in open drains across neighborhoods in Accra, Ghana: The influence of onsite sanitation coverage and interconnectedness of urban environments.](#) *International Journal of Environmental Research and Public Health*, 224, 113433.
18. Amin, N.*, Rahman, M., Raj, S., Ali, S., Green, J., Das, S., Doza, S., Mondol, M. H., **Wang, Y.**, Islam, M. A., Alam, M. U., Huda, T. M. U., Haque, S., Unicomb, L., Joseph, G., & Moe, C. L. (2019). [Quantitative assessment of fecal contamination in multiple environmental sample types in urban communities in Dhaka, Bangladesh using SaniPath microbial approach.](#) *Plos One*, 14, 12.
19. **Wang, Y.***, Moe, C. L., & Teunis, P. F. M. (2018). [Children Are Exposed to Fecal Contamination via Multiple Interconnected Pathways: A Network Model for Exposure Assessment.](#) *Risk Analysis*, 22.

PUBLICATIONS [*corresponding author]

21. Ritter, R. L., Peprah, D., Null, C., Moe, C. L., Armah, G., Ampofo, J., Wellington, N., Yakubu, H., Robb, K., Kirby, A. E., **Wang, Y.**, Roguski, K., Reese, H., Agbemabiese, C. A., Adomako, L. AB., Freeman, M. C., & Baker, K. K.* (2018). [Within-Compound Versus Public Latrine Access and Child Feces Disposal Practices in Low-Income Neighborhoods of Accra, Ghana.](#) *The American Journal of Tropical Medicine and Hygiene*, 98, 5, 1250-1259.
22. Hertzberg, V. S.*, **Wang, Y. A.**, Elon, L. K., & Lowery-North, D. W. (2018). [The Risk of Cross Infection in the Emergency Department: A Simulation Study.](#) *Infection Control and Hospital Epidemiology*, 39, 6, 688-693.
23. **Wang, Y.***, Moe, C. L., Null, C., Raj, S. J., Baker, K. K., Robb, K. A., Yakubu, H., ... Teunis, P. F. M. (2017). [Multipathway Quantitative Assessment of Exposure to Fecal Contamination for Young Children in Low-Income Urban Environments in Accra, Ghana: The SaniPath Analytical Approach.](#) *The American Journal of Tropical Medicine and Hygiene*, 97, 4, 1009-1019.
24. Zhang, Y., Shan, X., Shi, L., Lu, X., Tang, S., **Wang, Y.**, Li, Alam, M. J., & Yan, H.* (2011). [Development of a *fimY*-based Loop-mediated Isothermal Amplification Assay for Detection of *Salmonella* in Food.](#) *Food Research International*, 45, 2, 1011-1015.
25. Li, Y., **Wang, Y.**, Ye, Y., Yan, H., & Shi, L.* (2012). Application of Loop-mediated Isothermal Amplification Assay for Detection Peanut allergy. *Modern Food Science and Technology*, 1: 127-130, 126.