

## Bianca Corpuz

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### Education

University	Location	Major	Degree	Year
Johns Hopkins University	Baltimore, MD	Earth Sciences	PhD	
Johns Hopkins University	Baltimore, MD	Earth Sciences	MA	2022
Emory University	Atlanta, GA	Global Health & Epidemiology	MPH	2020
University of Maryland BC	Baltimore, MD	Biology	BS	2016

### Research Narrative

Bianca's research focuses on the association between extreme heat and air pollution on respiratory diseases in urban areas. Using her interdisciplinary background in climate and health sciences, she aims to address the disproportionate impacts of climate-induced environmental hazards in neighborhoods disadvantaged by structural inequalities. Her expertise lies in satellite remote sensing, statistics, epidemiology, risk communication, machine learning, geospatial analysis, and climate modeling.

### Research Experience

Years	Role/Affiliation
2020–present	Graduate Student Researcher with Dr. Benjamin Zaitchik, Johns Hopkins University, Baltimore, MD
2021–2022	Sustainable Design Research Fellow with Dr. Anand Pandian, Johns Hopkins University, Baltimore, MD
2019–2020	Acute Disease Epidemiologist, Georgia Department of Public Health, Atlanta, GA
2018–2020	Graduate Student Researcher with Dr. Pengbo Liu, Center for Global Safe Water, Sanitation, & Hygiene (WASH), Atlanta, GA & Dhaka, Bangladesh
2019	Epidemiology Research Fellow, WaterAid Cambodia, Phnom Penh, Cambodia & Kampong Chhnang, Cambodia
2014	Undergraduate Student Researcher with Dr. Michael Engel, University of Utah Huntsman Cancer Institute, Salt Lake City, UT

### Policy Experience

Years	Role/Affiliation
2024	Science for Development Institute Scholar, U.S. Agency for International Development, Washington, DC
2024	Fellow for Policy & Leadership, American Meteorological Society (AMS) Summer Policy Colloquium, Washington, DC
2023–2024	Policy Advisor in Data & Indices for Extreme Heat, Federation of American Scientists, Washington, DC
2022–2023	Science Policy Chair, Johns Hopkins University Science Policy & Diplomacy Group, Baltimore, MD
2021–2022	Science Diplomacy Coordinator, Johns Hopkins University Science Policy & Diplomacy Group, Baltimore, MD

### Teaching Experience

Years	Role/Affiliation
2024–present	Teaching Fellow, Johns Hopkins University Center for Teaching Excellence & Innovation, Baltimore, MD
2024	Graduate Teaching Assistant (Environmental Data Analysis with Python), Johns Hopkins University, Baltimore, MD
2023	Guest Lecturer, Columbia University, New York, NY
2023	Guest Lecturer, Virginia Tech, Blacksburg, VA
2023	Guest Lecturer, Emory University, Atlanta, GA
2019–2020	Graduate Teaching Assistant (Environmental Microbiology; Control of Foodborne & Waterborne Diseases), Emory University, Atlanta, GA
2016–2017	Teacher (4 <sup>th</sup> Grade), AmeriCorps City Year, Philadelphia, PA
2013–2016	ESOL Instructor, Refugee Youth Project, Baltimore, MD

### **Select Publications**

1. [Corpuz, B.](#), Zaitchik, B. F., Waugh, D., Scott, Anna, & Logan, T. (2024). Shifting Islands: How weather conditions and urban form shape the spatiotemporal character of Baltimore's urban heat island. *Urban Climate*. <https://doi.org/10.1016/j.uclim.2024.102058>
2. Brower, A., [Corpuz, B.](#), Ramesh, B., Zaitchik, B., Gohlke, J., & Swarup, S. (2022). Predictors of Evacuation Rates During Hurricane Laura: Weather Forecasts, Social Vulnerability, and Twitter. *Weather, Climate, and Society*. <https://doi.org/10.1175/WCAS-D-22-0006.1>
3. Ramesh, B., Jagger, M., Zaitchik, B., Kolivras, K., Swarup, S., Yang, B., [Corpuz, B.](#), & Gohlke, J. (2022). Estimating Changed in Emergency Department Visits Associated with Floods Caused by Tropical Storm Imelda Using Satellite Observations and Syndromic Surveillance. *Health & Place*. <https://doi.org/10.1016/j.healthplace.2022.102757>
4. Liu, P., Amin, N., Miah, R., Foster, T., Raj, S., [Corpuz, M.](#), Rahman, M., Willetts, J., & Moe, C. (2021). A Method for Correcting Underestimation of Enteric Pathogen Genome Quantities in Environmental Samples. *Journal of Microbiological Methods*. <https://doi.org/10.1016/j.mimet.2021.106320>
5. [Corpuz, M.](#) (2020). Identifying enteric pathogens and assessing their health risks in urban environments of Dhaka, Bangladesh. *Master's Thesis*. <https://etd.library.emory.edu/concern/etds/gm80hw464?locale=fr>

### **Select Presentations**

1. [Corpuz, B.](#), Zaitchik, B., Waugh, D., Zeger, S., Scott, E., Balasubramanian, A., Koehl, R., & McCormack, M. (2024). *Harmonizing High-Resolution Earth Observation and Health Data to Examine Associations between Extreme Heat and Asthma Exacerbations in Baltimore*. AMS Annual Meeting 2024. (Oral)
2. [Corpuz, B.](#), Foust, E., Davis, K., & Zaitchik, B. (2023). *BSEC: A Community-Integrated Approach to Urban Climate Research*. American Geophysical Union (AGU) Fall Meeting 2023. (Invited Oral)
3. [Corpuz, B.](#), Zaitchik, B., & Waugh, D. (2023). *Spatiotemporal Patterns of Baltimore's Urban Heat Island: Disparate Exposures to Extreme Heat*. AMS/AGU GeoHealth Showcase 2023. (Invited Oral)
4. Hultquist, C., Squires, J., Tuholske, C., [Corpuz, B.](#), Sankar, U., Holler, S., Yetman, G., & Adamo, S. (2023). *Enabling Student-led Air Quality and Extreme Heat Monitoring in New York*. AGU Fall Meeting 2023. (Oral)
5. [Corpuz, B.](#), & Zaitchik, B. (2021). *Hot Topic: Using Satellite and Ground-Based Measurements to Estimate Air Temperature and Identify Vulnerable Communities in Baltimore City*. AGU Fall Meeting 2021. (Poster)

### **Honors & Awards**

EPA Environmental Justice Science Advisory Board Nominee	2023
Rachel S. Core Award (for Outstanding Service to Graduate Student Body)	2022
Ecological Design Collective Fellowship	2021
Earth & Planetary Science Fellowship	2020
James Alley Student Award Nominee (for Outstanding Community Service)	2020
Eugene Gangarosa Student Award (for Excellence in International Health)	2020
Global Field Experience Award (for Global Health Research)	2019
Mission-Driven Scholarship Award (for Disease Prevention Efforts)	2018, 2019
Segal AmeriCorps Education Award	2017
President's List	2014, 2015, 2016
Summer Undergraduate Research Fellowship	2014

### **Service & Leadership**

JHU, Earth & Planetary Sciences (EPS) DEI Committee, Student Member	2022-present
JHU, Sustainable Leadership Council, Environmental Justice Working Group Member	2020-present
JHU, Graduate Representative Organization (GRO), Health & Wellness Chair	2022-2023
JHU, Climate Adaptation Working Group, Student Member	2021-2022
JHU, GRO, EPS Department Graduate Student Council Representative	2021-2022
Emory, Asian & Pacific Islander Health Coalition, Vice President & Co-Founder	2019-2020
Emory, WASH Action Research & Practice, Secretary	2018-2020
UMBC, Refugee Journey Upward Mentoring Program, Mentor & Tutor	2014-2016
UMBC, Global Public Health & Water Brigades, President & Co-Founder	2013-2016
UMBC, INNTerim Housing, Community Outreach Intern	2013-2015
UMBC, Model United Nations, Representative to United Nations Environment Programme	2013-2014

### **Professional Affiliations**

American Geophysical Union | American Meteorological Society | National Science Policy Network