# Leona Neftaliem

leonan@stanford.edu | Stanford, CA, USA | Personal Website | LinkedIn | GitHub

## Education

**Stanford University**, Stanford, CA, USA
- Ph.D. Candidate in Environment and Resources — Fall 2022 - Present
- Ongoing research:
  - *Towards a North American Urban Tree Spatial Dataset*
  - *Community-Engaged Air Quality Monitoring of South Baltimore, Maryland*
- Committee: Drs. Chris Field (Lead Advisor), Rob Jackson (Lead Advisor), and Nicole Ardoin

**Oxford University,** Oxford, England — Feb. 2024 - May 2024
- Course: Data Analysis in Ecology: Statistics for Ecologists & Field Biologists

**George Washington University**, Washington, D.C., USA
- B.S. Biology with honors; Minor: Sustainability — Fall 2020
- Honors thesis: "How to Get Away with Decomposition: Sunlight driven decomposition of lignin in simulated wood" (Advisor: Dr. Amy Zanne)

## Pertinent Experience

*Biological Science Technician,* Smithsonian Environmental Research Center — Jan. 2021 - July 2022
- Built and programmed remote sensor loggers to measure $CO_2$ data for GENX at the Global Change Research Wetland
- Supported several ongoing climate change experiments by building sensor and heating infrastructure, and managing data (projects here)
- Co-advised a George Washington University undergraduate researcher, Rose Cheney

*Undergraduate Research,* Dr. Amy Zanne's Lab, George Washington University — Jan. 2018 - Dec. 2020
- Completed three independent research projects on the impact of solar radiation on wood decomposition and an undergraduate honors thesis

*Teaching Assistantships*

*Graduate Teaching Assistant,* Stanford University — Jan. 2024 - March 2024
- Course: Designing Environmental Research
- Taught causal inference methods for environmental research to first-year PhD students

*Undergraduate Teaching Assistant,* George Washington University — Aug. 2018 - June 2020
- Courses: Introductory Biology: Cells and Molecules lab and Introductory Biology 1112: The Biology of Organisms
- Taught cellular, molecular, ecological, and evolutionary concepts and fundamental lab skills to undergraduates
- Supported additional classroom activities through ensuring lab protocols were met, grading assignments, proctoring and reviewing exams, creating lesson plans and lecturing, and holding weekly office hours

## Fellowships and Awards

*Smithsonian 'Life on a Sustainable Planet' Research Award (Co-PI; $75,000)* — 2025 - Present
*Stanford Community Impact Award* — 2024
*Smithsonian 'Life on a Sustainable Planet' Research Award (Co-PI; $49,188)* — 2023 - Present
*Knight-Hennessy Scholar ($306,000)* — 2023 - Present
*National Science Foundation Graduate Research Fellowship ($138,000)* — 2022 - Present
*Stanford Doerr School of Sustainability Dean's Graduate Scholar ($100,000)* — 2022 - Present
*Stanford EDGE Fellowship ($12,800)* — 2022 - Present
*GW Undergraduate Research Fellowship ($5,000)* — 2020
*GW Sigelman Undergraduate Research Enhancement Award ($500)* — 2020
*Harlan Undergraduate Summer Fellowship ($5,000)* — 2019

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## Posters and Presentations

**Neftaliem, L.**, Rich, R. L., Brown, D., LaGorga, L., Rosa-Rivera, C., Hedinger, A., Jackson, R. B, Cawood, A. Community-Engaged Air Quality Monitoring of South Baltimore, Maryland. American Geophysical Union, Washington, D.C., December 2024.

LaGorga, L., Smith, T., **Neftaliem, L.**, Noyce, G. L., Rich, R. L. Comparison and Assessment of Low-Cost, DIY Arduino-Based $CO_2$ Measurement System with Instrument-Measured $CO_2$ Flux from Automated Chambers over Three Years in a Coastal Wetland. American Geophysical Union, Washington, D.C., December 2024.

**Neftaliem, L.**, Field, C. B., Jackson, R. B. Towards a North American Urban Tree Spatial Dataset: Leveraging Urban Tree Inventories from 30 Cities in North America. American Geophysical Union, San Francisco, CA, December 2023.

**Neftaliem, L.**, Rich, R. L., Noyce, G. L. Can a DIY Arduino-based system accurately measure $CO_2$ flux from automated chambers? American Geophysical Union, Chicago, IL, December 2022.

**Neftaliem, L.**, Rich, R. L., Noyce, G. L. Finer Temperature Measurements and GenX Sensors. Global Research Wetland Symposium, Smithsonian Environmental Research Center, Edgewater, MD, March 2021.

Rosenfield, M. V., **Neftaliem, L.**, Rich, R. L., Zanne, A. E. Carbon in the Capital: DC Metro carbon dioxide monitoring in the COVID-19 era. American Geophysical Union, Remote, December 2020.

**Neftaliem, L.**, Rosenfield, M. V., Zanne, A. E. How to Get Away with Decomposition: Light driven decomposition on lignin in simulated wood. Honors Thesis Seminar, Remote, December 2020.

**Neftaliem, L.**, Rosenfield, M. V., Zanne, A. E. Simulated Wood: Lignin Photodegradation. Harlan Poster Session, Washington, D.C., August 2019.

## Invited Speaking Engagements

**Neftaliem, L.**, Rich, R. L., Brown, D., LaGorga, L., Rosa-Rivera, C., Hedinger, A., Jackson, R. B, Cawood, A. Breathe Baltimore: Community-Engaged Air Quality Monitoring of South Baltimore, Maryland. D.C. Air Research Consortium, Department of Energy and Environment, Remote, February 7, 2025.

**Neftaliem, L.**, Rich, R. L., Brown, D., LaGorga, L., Rosa-Rivera, C., Hedinger, A., Jackson, R. B, Cawood, A. Breathe Baltimore: Community-Engaged Air Quality Monitoring of South Baltimore, Maryland. Baltimore Office of Sustainability, Remote, January 10, 2025.

Rosenfield, M. V., **Neftaliem, L.**, Rich, R. L., Zanne, A. E. The Techno-Ecosphere: Using novel technologies to understand carbon emissions and ecosystem function. Smithsonian Gardens, *Let's Talk Gardens* Webinar, Remote, June 24, 2021.

Rosenfield, M. V., **Neftaliem, L.**, Rich, R. L., Zanne, A. E. Carbon in the Capital: DC Metro carbon dioxide monitoring in the COVID-19 era. Smithsonian Gardens, Remote, October 30, 2020.

Rosenfield, M. V., **Neftaliem, L.**, Rich, R. L., Zanne, A. E. Carbon in the Capital: DC Metro carbon dioxide monitoring in the COVID-19 era. Co-lecture in COVID-19 and the Environment (Walsh School of Foreign Service), Georgetown University, Remote, October 28, 2020.

## Publications

Neftaliem, L. (2024, October 23). *Breathing life into ghost towns: Harnessing the promise of €1 homes*. Knight-Hennessy Scholar Insights. Link.

David J. Hayes, Stephen Ferruolo, David Haines, Katelyn McEvoy, **Leona Neftaliem**, Lisa Roberds, Siddharth Sachdeva, Celina Scott-Buechler, Angela Tsao, Katie Vogelheim, Brad Ward, Callie

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Walker, Benjamin Zehr, Measuring the Carbon (and Other) Benefits of Climate-Smart Forestry Practices *(Policy Lab: Harvesting Climate Benefits from Agriculture and Forestry Practices (808Y); Teaching/Supervising Team: David J. Hayes)*. Link.

## Leadership, Volunteer, and Internship Experience

*Stanford Doerr School of Sustainability,* Recruitment Ambassador — Feb. 2025 - Present
*The Building Africa's Cities Summit,* Coordinating Committee Member — Feb. 2025 - Present
*OMG-YA Science Fiction Novel*, Researcher — Jan. 2024 - Present
*Featured in: Knight-Hennessy Scholars KHeystone Projects, August 2024*
*Knight-Hennessy Scholars,* Admission Ambassador — Sept. 2024 - Present
*Stanford Doerr School of Sustainability Leadership*, Peer Wellness Liaison — July 2023 - Present
*Earthtones Environmental Justice Art Festival*, Committee Member — Jan. 2023 - April 2023
*R Data Carpentries Workshop,* Helper — June 2022
*Eritrean Refugee Centre,* Mentor — Dec. 2020 - April 2021
*Ethio-Bridge,* Mentor — Dec. 2020 - April 2021
*Planned Parenthood of Metropolitan, Washington, D.C.,* Engagement Intern — June 2018 - Aug. 2018
*George Washington University Hospital,* Volunteer — Jan. 2018 - May 2018

## Skills

*Computer:* R; Python; Arduino; Bash programming; CRBasic; Google Earth Engine; Jupyter Notebook; ArcGIS Pro; GitHub; EAGLE; LoggerNet; Microsoft Office
*Languages:* English (native), Tigrinya (native)

## Research Interests

Urban ecosystem ecology; Ecosystem services; Environmental justice; Sense of place