

# Leona Nefitalem

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: Leveraging Urban Tree Inventories from 30 Cities in North America*
  - [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<sub>2</sub> 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

<i>Stanford Community Impact Award</i>	2024
<i>Smithsonian 'Life on a Sustainable Planet' Research Award (Co-PI; \$49,188)</i>	2023 - Present
<i>Knight-Hennessy Scholar (\$306,000)</i>	2023 - Present
<i>National Science Foundation Graduate Research Fellowship (\$138,000)</i>	2022 - Present
<i>Stanford Doerr School of Sustainability Dean's Graduate Scholar (\$100,000)</i>	2022 - Present
<i>Stanford EDGE Fellowship (\$12,800)</i>	2022 - Present
<i>GW Undergraduate Research Fellowship (\$5,000)</i>	2020
<i>GW Sigelman Undergraduate Research Enhancement Award (\$500)</i>	2020
<i>Harlan Undergraduate Summer Fellowship (\$5,000)</i>	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<sub>2</sub> Measurement System with Instrument-Measured CO<sub>2</sub> 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<sub>2</sub> 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.
- 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

- 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 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

- |   |                        |
|---|------------------------|
| OMG-YA Science Fiction Novel, Researcher  | Jan. 2024 - Present    |
| Featured in: <a href="#">Knight-Hennessy Scholars KHeystone Projects, August 2024</a> |                        |
| 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 |

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*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