Elif Kılıç

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Education

University of California, Berkeley | Berkeley, CA
M.S. in Environmental Engineering, GPA: 3.7/4.0 May 2025

Georgia Institute of Technology | Atlanta, GA
B.S. in Environmental Engineering Aug. 2023

Emory University | Atlanta, GA
B.S. in Spanish and Linguistics May 2021

Relevant Research Experience & Projects

Gadgil Lab for Energy and Water Research at University of California, Berkeley | Berkeley, CA Oct. 2023 – Present
Graduate Research Assistant, advised by Dr. Ashok Gadgil - Civil and Environmental Engineering

- Applied the extended heat index to assess heat stress risks and develop actionable insights to enhance climate resilience and mitigate health impacts in India.
- Utilized python packages to calculate and analyze the extended heat index using meteorological data to develop recommendations for mitigating heat-related risks and improving resilience in vulnerable populations in India.
- Communicated research findings effectively through reports or presentations targeted at academic audiences, policymakers, and stakeholders involved in public health, disaster management, urban planning, and climate adaptation in India.
- Successfully completed the **Bay Area Regional NSF I-Corps** with a project utilizing AI modeling and stacked generalization to produce probabilistic forecasts of future humid heat stress extremes across differing IPCC emissions scenarios.

MIT Lincoln Laboratory | Lexington, MA May 2023 – Aug. 2023
GEM Fellow Summer Intern, advised by Dr. Todd Thorsen - Chemical and Biological Technologies Group 23

- Executed microfluidic gut modelling in a high-throughput in vitro system of diverse human gut microbiomes to develop countermeasures to chemical and biological exposures.
- Participated in the Intern Innovation Idea Challenge with new method to develop a plastic replacement biomaterial using natural fungal products and bioengineering techniques, won the proposal pitch and submitted a Technology Disclosure.
- Obtained Department of Defense Secret Clearance, valid for 5 years.

The Kostas' Microbial Genomics Laboratory at Georgia Institute of Technology |Atlanta, GA Jan. 2022 – May 2023
Undergraduate Research Assistant, advised by Dr. Kostas Konstantinidis - Civil and Environmental Engineering

- Conducted NSF & Amazon.com, Inc. funded independent research on microplastic biodegradation using gut microbiome of wood-boring beetles and environmental samples around metropolitan Atlanta.
- Isolated potential polytetrafluoroethylene degrading bacteria, won the President's Undergraduate Research Award.

The Prokopec Lab of Disease Ecology at Emory University | Atlanta, GA Aug. 2019 – Oct. 2020
Undergraduate Research Assistant, advised by Dr. Gonzalo Vazquez-Prokopec - Environmental Studies

- Investigated mosquito behavior to develop vector control strategies pertaining to Dengue, Malaria, and Zika virus in low-income communities in areas of West Africa and Mexico.

UF CPET Student Science Training Program at University of Florida | Gainesville, FL June 2017 – July 2017
High School Student Research Assistant, advised by Dr. Eric McLamore - Biological and Agricultural Engineering

- Synthesized and characterized carbon quantum dots for water quality measurements and analysis of local water sources in Bogota, Colombia serving to track contamination in a web-based cloud system.

Relevant Teaching Experience & Projects

Extreme Weather and Climate, undergraduate course EPS 81 | Berkeley, CA Jan. 2025 – Present
Graduate Teaching Assistant, supervised by Dr. William Boos – Earth and Planetary Sciences at University of California, Berkeley

- Mentored undergraduate students in the Society of Women Engineers within the College of Engineering, providing guidance with academic matters and graduate opportunities.

Earthquakes in Your Backyard, undergraduate course EPS C20 | Berkeley, CA Aug. 2024 – Dec. 2024
Graduate Teaching Assistant, supervised by Dr. Richard Allen – Earth and Planetary Sciences at University of California, Berkeley

- Mentored undergraduate students in the Society of Women Engineers within the College of Engineering, providing guidance with academic matters and graduate opportunities.

CEE Systems Design, graduate course CIVENG 180 | Berkeley, CA Jan. 2024 – May 2024

Graduate Teaching Assistant, supervised by Dr. Stanislaus Tuholski and Dr. Hung Nguyen– Civil and Environmental Engineering at University of California, Berkeley

- Mentored undergraduate students in the Society of Women Engineers within the College of Engineering, providing guidance with academic matters and graduate opportunities.

Leadership & Outreach Experience

SWE x GWE Mentoring Program |Berkeley, CA Oct. 2023 – Present

Graduate Research Mentor

- Mentored undergraduate students in the Society of Women Engineers within the College of Engineering, providing guidance with academic matters and graduate opportunities.

Graduate Assembly Alternate |Berkeley, CA Sep. 2023 – Present

Civil and Environmental Graduate Assembly Representative

- Represented the department of Civil and Environmental Engineering at the University of California, Berkeley, as an alternate assembly member that regularly meets with the Associated Students of the University of California (ASUC) and coordinates allocation of funds available for graduate student activities within the college.

LSAMP Peer-2-Peer Mentoring Program at Georgia Institute of Technology |Atlanta, GA Aug. 2021 – May 2023

Peer Research Mentor

- Mentored 5 undergraduate students in the department of Civil and Environmental Engineering and organized networking programs, academic workshops, and social events to promote black and latinx academic excellence and foster academic retention.

Undergraduate Council at Georgia Institute of Technology |Atlanta, GA Aug. 2022 – May 2023

Civil and Environmental Student Council Ambassador

- Represented the Department of Civil and Environmental Engineering as a council member that regularly met with and coordinated quality of life and academic improvements with the dean of the College of Engineering, Dr. Raheem Beyah, and the president of the Department of Aerospace Engineering, Dr. Mitchell Walker.

Tech 411 |Atlanta, GA Aug. 2022

Transfer Student Ambassador

- Organized programming for 24 black and latine transfer students in the College of Engineering, College of Sciences, and Ivan Allen College of Liberal Arts to ease the transition into a rigorous course load, foster a culture of collaboration, and promote excellence during a 3-day retreat.

Parent & Family Programs at Georgia Institute of Technology |Atlanta, GA Aug. 2021 – May 2023

Parent Assistant Leader

- Served as a student guide for parents of Georgia Tech students throughout the academic year and assisted 3-4,000 students and family members in bi-annual events related to academic success and student life.

Skills

Mathematical and Automation Toolsets: Python, MATLAB, ML

Electronic Instruments & Techniques: Electron Microscopy, Electrophoresis, Spectrophotometer, PCR Analysis, FTIR, XPS, Aerobic and Anaerobic Culturing Techniques

Professional & Technical Communications: DoD Secret Security Clearance, Technology Disclosure, Technical Reports, Grant Writing

Languages: English (Native), Spanish (Native), Italian (Proficient), Turkish (Beginner)

Selected Publications

- Down To Earth. (2024, June). *Get the heat index right: An important first step to protect people from heatwaves*. Down To Earth. https://www.downtoearth.org.in/climate-change/get-the-heat-index-right-an-important-first-step-to-protect-people-from-heatwaves
- India Energy and Climate Center (IECC). (2024, July). *Primer on heat stress: Causes, impacts, and solutions*. Berkeley Institute of Governmental Studies. https://iecc.gspp.berkeley.edu/wp-content/uploads/2024/07/IECC-Primer-on-Heat-Stress-Jul24.pdf

- Wu, Y., Malik, J., Kilic, E., Vaidya, P., Hong, T., Yan, D., & Gadgil, A. (2024, September). *Passive cooling strategies to enhance the resilience design of a cooling shelter in India*. Paper presented at ASim2024: Asia Conference of the International Building Performance Simulation Association, Osaka, Japan.

Honors, Awards, Scholarships, Fellowships

- *Berkeley Hope Scholar*, University of California, Berkeley — May 2023
- First Place Pitch, MIT Lincoln Laboratory Intern Innovation Idea Challenge Shark Tank — Jul. 2023
- Most Altruistic Poster, MIT Lincoln Laboratory Intern Innovation Idea Challenge Poster Competition — Jul. 2023
- GEM Employer PhD Fellow, The National GEM Consortium — Nov. 2022
- *President's Undergraduate Research Award* Recipient, Georgia Tech College of Engineering — Aug. 2022
- *Emory College Grant* Recipient, Emory University — Aug. 2018
- Poster Presentation High Marks, University of Florida Junior Engineering Science & Humanities Symposium — Jan. 2018