

Allie (Minh-Anh) Nguyen

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EDUCATION

University of California, Berkeley (UCB)

Berkeley, CA

Ph.D. in Environmental Engineering — GPA: 4.00/4.00

Aug 2022 – May 2027 (Expected)

M.S. in Environmental Engineering

Aug 2023 – Dec 2023

University of Minnesota - Twin Cities (UMN)

Minneapolis, MN

B.Eng in Environmental Engineering

Aug 2018 – May 2022

RESEARCH EXPERIENCE

University of California, Berkeley

Berkeley, CA

Graduate Student Researcher

Aug 2022 – Present

Project: Pandemic Readiness and Equity through Virus Epidemiology of Wastewater (PREViEW) *Aug 2022 – Present*

- Studying the persistence of viral nucleic acid signals of 8 human respiratory viruses in wastewater in presence of surfactants.
- Conducting research to advance the understanding of how sub-sewershed sampling can contribute to efforts to improve health equity, with the focus on sub-sewersheds of San Francisco.
- Mentor junior research assistants in the lab.

Project: Supplementing conventional drinking water with distributed sources of purified municipal wastewater

Oct 2025 – Present

University of Minnesota - Twin Cities

Minneapolis, MN

Undergraduate Research Assistant

Jan 2021 – Aug 2022

Project: Biochar for Nutrient Removal from Municipal Wastewater (Behrens' Lab)

Sep 2021 – Aug 2022

- Operated and prepared wastewater media for sequencing batch reactors.
- Analyzed nitrate, nitrite, and ammonium using segmented flow analysis and UV-Vis spectrophotometry to characterize nutrient removal capacities of biochar.

Project: Hydrologic and Hydraulic Characteristics of Effective Sea Lamprey Barriers

Jan 2022 – May 2022

- Conducted literature review on the efficacy of current sea lamprey barrier technologies.
- Designed and performed fluid mechanics experiments with model barriers in hydraulic flumes.
- Analyzed the time-averaged and root-mean-square velocities of the water flow due to barriers' impact, lamprey detachment forces, and turbulent kinetic energy from the experiment results.

Project: Determination of Biomethane Generation Potential in the Domestic Municipal Waste Flow of Hanoi, Vietnam

Jan 2021 – Nov 2021

- Sampled organic municipal waste, conducted calculations based on the samples' waste composition, and performed biochemical methane potential tests on a sample of organic matters resembling the above waste to measure its anaerobic digestion capability.

PRESENTATIONS & PUBLICATIONS

Presentations

- **Nguyen, Allie (Minh-Anh);** Nelson, Kara. *Persistence of viral nucleic acid signals in the presence of surfactants in wastewater*. Gordon Research Conference 2025 "Microbes in Built Environments", June 21-27, 2025, Waterville Valley, New Hampshire, USA. Poster Presentation.
- **Nguyen, Allie (Minh-Anh);** Nguyen, Viet-Anh. *Pretreatment of Organic Waste and Sewage Sludge for Biogas and Methane Production Improvement in Anaerobic Digestion in Hanoi, Vietnam*. IWA World Water Congress & Exhibition, August 11-15, 2024, Toronto, Canada. Poster Presentation.
- **Nguyen, Allie;** Tschirner, Ulrike. *Determination of Biomethane Generation Potential in the Domestic Municipal Waste Flow of Hanoi, Vietnam*. Fall Virtual Undergraduate Research Symposium 2021, University of Minnesota, 27 November 2021, Minneapolis, Minnesota. Poster Presentation.

Publications

- Article: Audrey Liwen Wang, Minxi Jiang, **Allie Nguyen**, Staci Kane, Monica Borucki, Rose Kantor, Kara Nelson, *Benchmarking Concentration and Extraction Methods for Wastewater-Based Surveillance of Eight Human Respiratory Viruses: Implications for Rapid Application to Novel Pathogens*, Environmental Science & Technology, 2025 59 (36), 19107-19118, DOI: 10.1021/acs.est.4c13635

- Article: Viet-Anh Nguyen, Thi Minh Thanh Vu, **Minh-Anh (Allie) Nguyen**, Viet Minh Nguyen, *Can COVID-19 disease be transmitted in water environment?* (in Vietnamese). J. Environment and Cities, Vietnam Association of Urban and Industrial Environment, 2021. ISSN 1859-3623, Vol.131, pp. 36-42.
- Report: *National Strategy for Rural Clean Water Supply and Sanitation for the period to the year 2030, vision to 2045*. Consultancy work, prepared for the Vietnamese Ministry of Agriculture and Rural Development, funded by UNICEF. 2021.
- Report: Viet-Anh Nguyen, Nguyen Duong Quang Chanh, Vu Manh Cuong, **Minh-Anh (Allie) Nguyen** et al., *Study on the implementation of low and no-cost options in three wastewater treatment plants, Vietnam* (Project No. 100052). IESE, for the United Nations Industrial Development Organization (UNIDO) and Vietnamese Ministry of Planning and Investment (MPI), Contract No. 3000070422. March-August 2019

WORK EXPERIENCE

University of California, Berkeley

Berkeley, CA

Graduate Student Instructor – Department of Civil and Environmental Engineering

Jan 2025 – May 2025

- Course: CE 211B – Environmental Biological Processes (Spring 2025 semester, 35 graduate students)
- Graded weekly homework assignments and exams.
- Held weekly office hours to support student learning.
- Led exam review sessions to reinforce key concepts, provide example problems, and enhance student comprehension.
- Collaborated with course instructor to revise assignments and grading rubrics.

SURF Graduate Student Mentor – Office of Undergraduate Research and Scholarships

Jan 2023 – Aug 2023

- Led draft proposal workshops and weekly office hours for applicants of the Summer Undergraduate Research Fellows (SURF) program.
- Hosted 2 summer workshops on research skills with an attendance of 50 SURF fellows.
- Organized and facilitated the SURF program's orientation, weekly small group meetings, and students' final presentations.

University of Minnesota - Twin Cities

Minneapolis, MN

Peer Tutor Mentor – SMART Learning Commons, UMN Libraries

Sep 2019 – May 2022

- Assisted over 100 students' learning inquiries in Math and Chemistry.
- Observed and evaluated 12 SMART peer tutors with 1-on-1 consultation sessions and written reports.
- Led a 60-minute staff meeting every semester for additional training of peer tutors.

Undergraduate Teaching Assistant – College of Science and Engineering

Sep 2021 – May 2022

- Graded assignments for 60 students in CECE 3101 (Computer Applications I) and CECE 3501 (Introduction to Environmental Engineering).
- Prepared, taught, and managed class logistics for 30 students in CSE 1001 (First-year Experience).

International Student Consultant – International Student and Scholar Services

May 2021 – Aug 2021

- Assisted 80 incoming international students during orientation and before their US arrival.
- Provided logistical support to the CSE Academic Advising office in facilitating activities and preparing for orientation.

Hanoi University of Civil Engineering

Hanoi, Vietnam

Environmental Engineering & Management Intern

May 2019 – Jan 2021

- Participated in preparation of five environmental engineering research papers, manuals, and reports.
- Contributed to environmental management consultancy contracts of Institute of Environmental Science and Engineering, Hanoi University of Civil Engineering
- Participated in site visits to wastewater treatment plants, clients' factories, and contaminated sites. Conducted field surveys of municipal waste management.

AWARDS & ACHIEVEMENTS

- UC Berkeley, The Trussell Fellowship in Environmental Engineering *2022-2023*
- University of Minnesota, College of Science and Engineering Dean's List *2018-2021*
- University of Minnesota, Department of Civil, Environmental and Geo- Engineering James and Sharon Weinell Chi Epsilon Scholarship *2021-2022*
- University of Minnesota, International Student and Scholar Services Culture Corps Program Scholarship *2021*
- University of Minnesota, Undergraduate Research Opportunities Program Scholarship *2021*
- University of Minnesota, Department of Civil, Environmental and Geo- Engineering Adolph Sommerfeld Scholarship *2020*
- University of Minnesota, Global Excellence Scholarship *2018-2022*

SKILLS

- Laboratory:** Digital PCR, DNA/RNA extraction, UV–Vis spectrophotometry, cell culture, sequencing batch reactor operation, water chemistry analysis (alkalinity, hardness, microbial level, COD/BOD concentrations).
- Software:** R/RStudio, Markdown, MATLAB, Microsoft Excel.
- Languages:** Vietnamese (native proficiency), English (bilingual proficiency).
- Certifications:** Master Certified Tutor (CRLA Level 3).

LEADERSHIP AND OUTREACH

University of California, Berkeley

- Beyond Academia 2023-Present
 - Logistics Co-director (2024-Present):
 - * Oversee logistics for all events, including the Beyond Academia conference with 650+ attendees from over 20 countries.
 - * Serve as the main contact for external partners, including UC Berkeley Graduate Division, Graduate Professional Development, and Berkeley Career Engagement.
 - * Lead meetings with members and co-directors, setting event logistics frameworks.
 - Finance Co-director (2024):
 - * Managed a \$70,000+ for Beyond Academia, a non-profit student-led organization.
 - * Co-directed and managed a team of 10+ volunteers
 - * Organized, recruited guest PhD speakers, and moderated panels for the annual Beyond Academia conference (1,300+ attendees).
- Graduate Women of Engineering 2022-Present
 - Co-president (2024-Present)
 - Career and Professional Development Committee Head (2023-2024): Organized the annual Career Panel, Speaker Series, and other professional development events for women-identifying engineering graduate students at UC Berkeley.

University of Minnesota – Twin Cities

- American Society of Civil Engineers Historian (2021-22)
- CSE International Ambassadors President (2021-22), Vice President (2020-21), Secretary (2019-20)
- Chi Epsilon Honors Society Vice President (2021-22)
- Design U Research and Strategy Team Member (2021)
- Welcome Week Program Welcome Week Leader (2020)