

# Allie (Minh-Anh) Nguyen

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## EDUCATION

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### University of California, Berkeley

Berkeley, CA

*Ph.D. in Environmental Engineering*

*Aug 2022 – May 2027 (Expected)*

*M.S. in Environmental Engineering*

*Aug 2023 – Dec 2023 (Expected)*

### University of Minnesota - Twin Cities

Minneapolis, MN

*B.Eng in Environmental Engineering — GPA: 3.81/4.00*

*Aug 2018 – May 2022*

## RESEARCH EXPERIENCE

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### University of California, Berkeley

Berkeley, CA

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

- Conduct research on forms of viruses and their persistence with regards to various environmental factors (such as surfactants, temperature, and ammonia) in wastewater.
- Perform experiments to evaluate and compare methods of nucleic acid extraction and concentration from wastewater.
- Mentor undergraduate research assistants in the lab.

### 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

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### Presentations

- 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: 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

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### **Institute of Environmental Science and Engineering (IESE)(HUCE)**

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 IESE, Hanoi University of Civil Engineering (HUCE)
- Participated in site visits to wastewater treatment plants, clients' factories, and contaminated sites. Conducted field surveys of municipal waste management.

### **Office of Undergraduate Research (UC Berkeley)**

Berkeley, CA

*SURF Graduate Student Mentor*

*Jan 2023 – Aug 2023*

- Led draft proposal workshops and weekly office hours and 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.

### **College of Science and Engineering (UMN)**

Minneapolis, MN

*Undergraduate Teaching Assistant*

*Sep 2021 – May 2022*

- Graded assignments for CECE 3101 (Computer Applications I) and CECE 3501 (Introduction to Environmental Engineering).
- Prepared and presented teaching materials with the instructor, and managed class logistics for CSE 1001 (First-year Experience).

*International Student Consultant*

*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.

### **SMART Learning Commons, University of Minnesota Libraries (UMN)**

Minneapolis, MN

*Peer Tutor Mentor*

*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.

## AWARDS & ACHIEVEMENTS

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

## SKILLS

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**Laboratory:** digital PCR, water sample collection, UV-Vis spectrophotometry, sequencing flow analysis, sequencing batch reactor operation, water chemistry analysis (alkalinity, hardness, microbial level, COD/BOD concentrations).

**Software:** MATLAB, Microsoft Excel.

**Languages:** Vietnamese (native proficiency), English (bilingual proficiency).

**Certifications:** Master Certified Tutor (CRLA Level 3).

## ORGANIZATIONS

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### UC Berkeley:

- Graduate Women of Engineering, *Career and Professional Development Head* *Aug 2022 – Present*
- Beyond Academia, *Member* *May 2023 – Present*

### University of Minnesota:

- American Society of Civil Engineers, *Historian* *Sep 2021 – May 2022*
- College of Science and Engineering International Ambassadors, *President* *Sep 2019 – May 2022*
- Chi Epsilon Honors Society, *Vice President* *Apr 2021 – May 2022*
- Design U, *Research and Strategy Team Member* *Jan 2021 – May 2021*
- Welcome Week Leader *Apr 2020 – Sep 2020*