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

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

- Conduct research on different forms of 8 viruses and their decay in the presence of surfactants in wastewater.
- Perform experiments to evaluate and compare methods of nucleic acid extraction and concentration from wastewater.
- Mentor junior 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

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

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.

Office of Undergraduate Research, UC Berkeley Berkeley, CA

SURF Graduate Student Mentor *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.

SMART Learning Commons, University of Minnesota Libraries 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.

College of Science and Engineering, University of Minnesota Minneapolis, MN

Undergraduate Teaching Assistant *Sep 2021 – May 2022*

- Graded assignments for 60 students in CEGE 3101 (Computer Applications I) and CEGE 3501 (Introduction to Environmental Engineering).
- Prepared, taught, and managed class logistics for 30 students in 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.

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 Weinel 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 *2021*
- 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, R 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:

- Graduate Women of Engineering — *Co-President (2024-Present), Committee Head (2022-24)*
- Beyond Academia — *Co-Director (2024-Present), Member (2023-24)*
  - Manage a budget of over $70,000 for Beyond Academia, a non-profit student-led organization.
  - Co-organize the annual Beyond Academia conference with over 1300 attendees.

University of Minnesota:

- 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)*