

# AARTI VISSWANATHAN

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(760) 520-2535

## EDUCATION

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University of Southern California- *1st year PhD Environmental Engineering*

University of California, Berkeley- *B.S. Environmental Engineering Science '22*

## RESEARCH EXPERIENCE

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**University of Southern California: The McCurry Lab- Research Assistant**

June 2022 - August 2022

- Conducting research on heterogeneous catalysts for the removal of aldehydes in wastewater for potable reuse

**University of California, Berkeley: The Gadgil Lab for Energy and Water Research- Student Researcher**

January 2022 - May 2022

- Assisted on experimental runs of spiral reactor electrochemical technology for chromium removal from contaminated groundwater

August 2021 - December 2021

- Conducted independent honors research on developing improved fabrication methods for air cathodes utilized in the Air Cathode Assisted Iron Electrocoagulation (ACAIE) reactor, a sustainable and cost-effective technology for removing arsenic from contaminated groundwater

June 2021 - August 2021

- Assisted on scale up of ACAIE for upcoming implementation in Allensworth, CA
- Built industrial-scale air cathodes, performed tests to determine their Faradaic efficiencies, and collected & analyzed data from the multiple trial runs performed on the large-scale treatment system

January 2020 - May 2021

- Assessed the lifetime of the reactor cartridge utilized in the development of a remotely monitored technology, known as Fe-Electrocoagulation with External Oxidizer (FOX), for the removal of arsenic in contaminated groundwater
- Awarded the Charlene Conrad Liebau Library Prize for this Undergraduate Research

**Harvard University & Massachusetts General Hospital, Boston: Dr. Rudolph Tanzi's Genetics and Aging Lab- Summer Research Intern**

June 2018 - July 2018

- Performed standard molecular biology laboratory procedures to assist on a research project dedicated to understanding the role of neuronal BIN1, a prominent gene implicated in Alzheimer's Disease
- This research was presented as a poster at the MGH Neurology Retreat, MassGeneral Institute for Neurodegenerative Disease in September 2018

June 2017 - August 2017

- Developed laboratory skills and learned lab procedures through working on a research project that examined how proteins found in the Mitochondria Associated-ER Membrane were affected when the expression of a prominent gene implicated in Alzheimer's Disease was altered in neuronal cells

## EMPLOYMENT

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### **Student Learning Center (SLC) Science Program, UC Berkeley- Course Liaison & Drop-In Tutor for Physics 8A/8B and Chem 1A/1AL**

#### January 2021 - May 2022

- Physics 8A & 8B Course Liaison for Spring 2021 and Fall 2021 semesters
- Physics 8A & 8B Tutor for Spring 2022 semester
- Serving as a liaison between faculty, tutors, and program staff by attending lectures and preparing notes for the physics courses, disseminating materials and notes to physics tutors, developing agendas to facilitate weekly meetings to review content with physics tutors, and creating comprehensive problem sets for students
- Tutoring physics students in the drop-in tutoring space both virtually and in-person (~3 to 5 students per shift)
- Attending weekly training seminars aimed to enhance tutoring skill sets and science learning methods
- Approximately 48 hours/month

#### June 2021 - August 2021

- Chem 1A and Chem 1AL Course Liaison for the 2021 Summer Session
- Tutored Chem 1A/1AL students virtually (~8 to 10 students per shift)
- Attended lectures and prepared notes, disseminated materials and notes to chemistry tutors, developed agendas to facilitate weekly meetings for content review with chemistry tutors, created comprehensive problem sets for students
- Developed exam review packets and facilitated exam review sessions for Chem 1A students (~50 students in attendance each review session)
- Approximately 64 hours/month

#### August 2020 - December 2020

- Tutored Physics 8A & 8B virtually (~5 to 7 students per shift)
- Enhanced pedagogical and professional skills through attending weekly training seminars
- Approximately 36 hours/month

## ACTIVITIES

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### **The Alternative Protein Project of Berkeley, UC Berkeley - Curriculum Crafter & Educator**

March 2020 - December 2020: Worked on developing the curriculum for a future student-run course, "Food for Thought"

### **Associated Students of the University of California - Senator Shah's Office - Graphic Designer**

August 2020 - December 2020: Designed graphics and posters for events held by the South Asian, STEM, and Sexual Violence Prevention Departments of this office. Also assisted in preparing for and conducting online zoom panel events.

### **Society of Women Engineers (SWE), UC Berkeley - Silver Member & Mentor**

September 2019 - May 2020: Mentored a female-identifying high school student interested in STEM and helped to provide her with an understanding of engineering and college life

January 2019 - May 2019: Prepared engineering activities and mentored female high school students interested in engineering every Saturday through SWE's High School Engineering Program

## AWARDS

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Charlene Conrad Liebau Library Prize for Undergraduate Research (Spring 2020)

## PRESENTATIONS

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Poster Presentation (September 2018):

Catarina Teves, Sophia Black, Alexandra Long, Aarti Visswanathan, Meng Chen, Raja Bhattacharrya and Rudolph E. Tanzi. **Role of Neuronal BIN1 in Alzheimer's Disease**. MGH Neurology Retreat, MassGeneral Institute for Neurodegenerative Disease, Department of Neurology, Massachusetts General Hospital, Harvard Medical School

## ACADEMIC PUBLICATIONS

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Visswanathan, Aarti, and Samyukta Shrivatsa. *Exploring a Decision-Trigger for Maintenance of Remotely Monitored Arsenic-Remediation System Planned for Low-Income Community in Central Valley, CA*. eScholarship, University of California, 2020.

## NON-ACADEMIC PUBLICATIONS

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Visswanathan, Aarti. *Shakti*. 2020. *Babae{x}:The Moon and Her Phases*, {M}aganda Magazine, 2020, 45.