

# SHM GARANGANAO ALMEDA

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## Research Interests

Human-Computer Interaction, Generative Art, Creativity Support Tools, User Interface Design, Social Theory

## Education

2020 – Present **University of California at Berkeley, Berkeley, CA**

PhD. in Electrical Engineering Computer Science.

Advisor: Björn Hartmann

2016 – 2020 **The College of New Jersey, Ewing Township NJ**

B.S. in *Computer Science*, with minor in *Fine Art, cum laude*

## Experience

2020 – Present **University of California at Berkeley, Berkeley, CA**

**Graduate Student Researcher with Björn Hartmann**

Researching at the intersection of human computer interaction and art; investigating the impact of emergent technologies such as generative / AI Art, decentralized marketplaces, content algorithms, and platform design on creative practices and communities.

### **Adobe Research Labs in San Jose, CA**

Jun 2019 **Computational Artistry Team Research Intern with Jose Echevarria & Stephen Diverdi**  
– Aug 2019

Implemented a novel parametric color-mixing model that emulates the behavior of physical pigments and produces unique effects that transcend existing color-blending technology. Developed bPigment, a graphical painting application using Python to demonstrate the novel color-mixing experience.

### **The College of New Jersey, Ewing Township, NJ**

Jan 2018 **Accessible Sign Language Recognition with the Leap Motion Controller**  
– May 2020 **with Andrea Salgian**

Communities that use visual languages to communicate are underrepresented by translation and language learning tools. Utilized the Python and C++ with the LeapMotion infrared hand-tracking controller to recognize and translate ASL fingerspelling.

Jun 2018 **Algorithms for Protein Variant Library Design with Dimitris Papamichail**  
– May 2019

Developed an algorithm for optimizing oligonucleotide chain design to minimize the cost of synthesizing proteins. Implemented a web tool and an online database with results generated by our programs to make the algorithm accessible to a biology research team at Princeton.

2012 - Aug 2020 **Freelance Digital Artist**

## Fellowships & Honors

- 2022 Keynote Speaker at the Queer, Trans (QT) Black, Indigenous, People of Color (BIPOC) Participatory Design (PD) Workshop at CHI 2022
- 2020 Chancellor's Fellowship for Graduate Study
- 2019-2020 Upsilon Pi Epsilon, The Computer Science Honors Society Chapter President
- 2020 The Charles H. Goldberg-Norman Neff Award
- 2018, 2019 TCNJ CS Department Service Award
- 2016, 2017 TCNJ CS Department Award
- 2019 Adobe Research Women-in-Technology Scholar
- 2019 1st Place ACM Student Research Competition at SIGCSE for *Accessible Sign Language Recognition with the Leap Motion Controller*
- 2019 Computing Research Association for Widening Participation (CRA-WP) Grace Hopper Scholar
- 2018 Phi Kappa Phi Research Award
- 2018 Anita Borg Foundation Grace Hopper Scholar
- 2018 CRA-WP Collaborative Research Experience for Undergraduates Program Fellow supported by the NSF

## Teaching

- UC Berkeley Summer 2022 *CS160: User Interface Design & Development*  
Course Instructor  
Co-teacher: Diyah Mettupalli; Head TA Timothy Yang
- UC Berkeley Spring 2022, Summer 2021 *CS160: User Interface Design & Development*  
Head Teaching Assistant, Disability Support Program Point of Contact
- TCNJ 2017 – 2019 Peer Tutor, Computer Science, Math & Science

## Advising

- Fall 2022 – Present Ace Chen, Pradeep Saravana Rathnam, Isabel Li, Timothy Yang

## Leadership and Service

- UC Berkeley 2020 – Present Computer Science Graduate Student Association  
Officer, Visit Day Coordinator
- 2022 – Present House Rabbit Society Volunteer
- TCNJ 2019 – 2020 Diversity and Inclusion Group in Tech for All (DIGIT.all)  
President
- Fall 2017 – Spring 2020 Association for Computing Machinery (ACM) Student Chapter  
Executive Board, Outreach Chair, Vice President

Fall 2017 Barkada (Filipino Cultural Association)  
- Spring 2020 General Board Member, Mentor, Graphic Designer

Fall 2017 The Society for Creative Endeavors (Multimedia Club)  
- Spring 2020 General Board Member, Graphic Designer

2017, 2018, 2019, HackTCNJ (Annual Hackathon)  
2020 Organizer, Executive Board Member