

Diversity Statement

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In my lived experience, computer science empowers and motivates. However, this experience is far from universal. For others, computer science feels unwelcoming and inaccessible. The technology that computer scientists create can discriminate and exacerbate inequities.

Representation in computer science determines what technology gets built, for whom, and who gets to share in the benefits. I realize that an equitable society depends on a representative STEM that embraces and empowers those marginalized due to race, gender, or other reasons. As someone who is overrepresented in STEM, I look for ways that I can listen, learn, and act as a teacher, mentor, and colleague to support diversity in STEM and equity in society.

Teaching

Supporting marginalized learners: Knowing that underrepresented students choose to seek help based on an instructor's in-class demeanor,¹ I strive to be approachable by inviting students to office hours, learning names, and welcoming questions. I make space for students to seek help and mentorship by creating unstructured workshop time outside of lecture and meeting with students one-on-one. In these conversations, underrepresented students have sought academic accommodations and advice about getting into research.

Teaching design for diversity and equity: As a teacher, I train future designers and builders of widely-used technical systems. The students I teach could create the next Uber, a system where a choice to benefit the envisioned user has ripple effects on the experience and even livelihood of those from marginalized groups.² It is my responsibility to teach students to design with diversity and equity in mind.

I plan to do this in two ways. First, I will teach how to design for diverse users. For instance, students will learn the GenderMag design method from Burnett and Sarma's groups at Oregon State University³ for detecting interface design decisions that discriminate against marginalized users. We will discuss how designing for diversity isn't just about business, but our ethical responsibilities as designers.

Second, I will teach students to design systems that contribute to equity at the societal level. I teach courses with dedicated modules on ethics and special topics on designing for social good such as educational interfaces. I have taught on the staff for an intensive upper-division course on computer science for social good, "Design-

¹ Hurtado, Eagan, Tran, Newman, Chang, and Velasco. "We do science here': Underrepresented students' interactions with faculty in different college contexts". In: *Journal of social issues* 67.3 (2011)

² Frenken and Schor. "Putting the sharing economy into perspective". In: *A Research Agenda for Sustainable Consumption Governance*. Edward Elgar Publishing, 2019

³ Burnett, Sarma, Mendez, Oleson, Hilderbrand, Steine-Hanson, and Ko. "Gender biases in software for problem-solving". In: *Designing Technologies to Support Human Problem Solving Workshop at VL/HCC*. 2018

ing Technology for Countering Violent Extremism.” I am interested in taking these past experiences as a template for designing course modules that help students nurture a nuanced understanding of how technology can impede, and bring about, equity.

Mentoring

As a mentor, I support students from marginalized groups as follows:

Providing access to education and career advancement: For my mentees, I schedule regular one-on-ones to make space to discuss questions about research, graduate studies, and careers that they may not have considered before. As a mentor in the *Graduate Pathways to STEM* program,⁴ I coach first-generation college students on assembling effective applications to university and graduate school.

⁴ See also the *Graduate Pathways to STEM website*.

Because success in STEM is influenced by the experiences a student has long before they arrive at a university, I have also contributed to K–12 outreach programs, such as *Snap the Gap!*,⁵ to provide formative hands-on experiences in STEM and informal mentorship to young students from underrepresented groups.

⁵ See also the *Snap the Gap! website*.

Mitigating stereotype threat: I educate myself about the ways that stereotype threat can often unintentionally seep into mentoring. For example, knowing that one source of stereotype threat for women is praise in the form of gendered descriptors,⁶ I plan recommendations for mentees around concrete descriptions of their achievements.

⁶ Madera, Hebl, and Martin. “Gender and letters of recommendation for academia: agentic and communal differences.” In: *Journal of Applied Psychology* 94.6 (2009)

Valuing the work of students from marginalized groups: Students who assist in research should be able to advance their career without substantial personal cost to themselves. As a professor, I will strive to pay the undergraduate research assistants in my group to ensure that students don’t have to decide between pursuing research opportunities and supporting themselves and their families.⁷ Meanwhile, I will continue to give students meaningful design and engineering tasks that help them advance academically and professionally.

⁷ Estrada, Burnett, Campbell, Campbell, Denetclaw, Gutiérrez, Hurtado, John, Matsui, McGee, et al. “Improving underrepresented minority student persistence in STEM”. in: *CBE—Life Sciences Education* 15.3 (2016)

Collegial Collaboration and Service

Faculty from underrepresented groups often face unique challenges in the profession such as increased service and mentoring burden.⁸ One of my roles in the university is to listen to what my colleagues from underrepresented groups need, and take on additional responsibility to distribute the burden equitably. In the past, I have maintained spaces for colleagues to discuss burdens of research and life as a coordinator of the *EECS Peers* graduate student support group.⁹ I will continue making spaces where my colleagues can share their burden, and then offer my help by lending my attention, voice, and labor.

⁸ June. “The invisible labor of minority professors”. In: *The Chronicle of Higher Education* 62.11 (2015)

⁹ See also the *EECS Peers website*.