

SARAH MORRISON-SMITH | DIVERSITY, EQUITY, AND INCLUSION

As a woman in computer science and faculty fellow at a women's institution, I have experienced and examined the importance of creating a sense of belonging for students through diversity, equity, and inclusion. This statement will discuss how I plan to uphold these principles as a faculty member leading my research group, mentoring students, and in the classroom.

Diversity: Inviting People to The Table

To me, diversity means recruiting and encouraging students from a wide background of experiences in both areas of expertise and identity. Mentoring a diverse pool of students in research will allow them to bring a wide range of experiences to solve the interdisciplinary problems I set out to answer. This means recruiting students who have not yet been invited to discuss the breadth of research opportunities in computer science, as well as working with students with prior research experience. Thus far, I have done so by successfully mentoring twenty-two students who identify as women, fifteen of which have been women of color and three of whom have gone on to pursue graduate research. As a mentor, I have guided students through research projects, undergraduate studies, and navigating careers in STEM. My efforts to increase diversity by mentoring students were acknowledged by Colorado State University's College of Natural Science in 2015 when they awarded me the annual Excellence in Graduate Student Mentoring Award. While I have always focused on supporting students from underrepresented groups in computer science, the recent deaths of Breonna Taylor, George Floyd, and many other victims over the recent years, as well as the recent attacks on the AAPI community, have brought issues surrounding racism in our field to the forefront of my mind. In an effort to better understand the effects of racism on students and faculty in computer science, I completed the 3C Cultural Competence in Computing program at Duke University last year.

During my first computer science class, I witnessed many women without prior exposure to computer science switching their majors after the first semester. Along with lack of prior programming experiences, there were very few students who looked like us. This motivated me to serve as the Secretary for Montana State University's Association for Women in Computing organization. In this role, I organized outreach events for encouraging K-12 students to pursue computer science and engineering. I also helped disseminate information about issues affecting women and other minorities in STEM, such as imposter syndrome, to undergraduate and graduate students in the MSU Department of Computer Science.

Later, as a graduate student, Dr. Jaime Ruiz and I hosted several 4th-grade classes from underserved elementary schools in the Fort Collins area to learn about programming as part of Colorado State University's (CSU) Math Science & Technology Day. These outreach activities primarily focused on learning about and practicing computer programming using Scratch. In 2014 I was a founding officer of CSU's Association for Computing Machinery-Women organization to advocate for and support women in computer science, serving as the Vice-Chair from 2014-2015 and as the Chair during the 2015-2016 school year. I also represented this organization at a computer science department's industry board meeting to secure funding for future activities, such as attendance at Grace Hopper. In this role, I collaborated with faculty to develop and coordinate outreach events encouraging K-12 students, especially women and minorities, to pursue computer science and engineering.

Beyond being under my research guidance, I used my position as a faculty fellow at Barnard to recruit and encourage women undergraduate students interested in computer science to pursue research careers and graduate research studies through the program I co-organized, BEARS: Better, Enhance, and Advance Research Series. This program has featured monthly talks from women faculty in computer science, regular workshops on research skills, and a mentorship program connecting undergraduate students at Barnard to women Ph.D. students at Columbia. As an Assistant Professor at Hamilton, I have hired several first-generation and otherwise underrepresented students as undergraduate research assistants. As a faculty member, I will recruit students who identify with a broad range of marginalized identities in higher education, including students who identify as LGBTQ+, gender-nonconforming, disabled, international, and those who have served in our military.

Equity: Making Sure Everyone Has a Place to Sit

My definition of equity in education is that all students should have a fair shot once they get to the table. This can manifest as some students being at a disadvantage due to systematic processes that can disenfranchise their access to tools and resources necessary for success. In a research experience, this may look like receiving different types of

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feedback and guidance from their mentor. For example, this can include a mentor highly encouraging some undergraduate students to seek opportunities in graduate school and not doing the same to other students. In contrast, my goal in this scenario is to make sure that all students have the opportunity to pursue the career of their choice thus may require a different type of conversation about graduate school for one student from another. It is important to foster a research group that demonstrates this, and even further normalize that everyone will need different, not better, types of support in order to be successful. This normalization will contribute to structural justice by lifting up students who may otherwise slip through the cracks inside institutions of higher learning. As a faculty member, I will be sure to communicate what it means to be equitable to my students and encourage them to explore how that context will be applied in their career while being mindful of the different struggles and challenges they face.

Inclusion: Involving Everyone in The Conversation

Inclusion to me means fostering an environment where everyone feels comfortable actively engaging. Students of marginalized groups are often dropped off on the steps of a university and left to figure out how to cope with challenges of “being the only one” while trying to succeed in their technical endeavors. I can personally attest to this as there were no female professors in the computer science department when I was an undergraduate student. However, in order for these students to succeed it is important that they have the support of infrastructure in place. Many organizations struggle with this by placing the burden on the student to start these communities, forgetting that in order to truly foster an inclusive space for students, these mechanisms and communities should already be in place.

To best include students, opportunities to actively participate should not be limited to only cultural engagement, but also through scholarly work. For example, as a faculty member I will guide my students to be involved in the research community by connecting them with collaborators at other institutions, encouraging them to conduct and submit manuscripts about the impacts of their research, and selecting them for opportunities to enhance their technical contributions to our field.

In addition, at Barnard and at Hamilton, I have developed and taught a course focused solely on developing assistive technology and improving accessibility in technology. I further organized an accessibility-themed workshop, panel, and project judging criteria at Columbia’s DivHacks – a diversity-themed hackathon that occurred October 2020. This past summer, I co-organized and hosted AccessHack, an accessible hackathon themed on accessibility. My goal in these efforts was to both improve the accessibility of our world at large and foster an environment where students with disabilities feel welcome in computer science. As a faculty member, I hope to continue to be active in culturally engaging support services and research to help students identify that balance to make sure everyone has the resources to succeed.