Diversity Statement

Paul Gazzillo

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It is no secret that computer science has a diversity problem. It is heartening to see progress over the years, but we still have a long way to go. Diversity in the educational environment is especially important, because of the benefit to society and the positive influence it has on students' intellectual growth at an impressionable point in their lives. I have been fortunate to observe excellent leaders who cultivate diversity during graduate school and have had the opportunity to participate in a small way in the process. These experiences have enriched my life and broadened my worldview. As a future professor, I am committed to advancing diversity both inside and outside of the classroom by providing a safe, encouraging educational environment and supporting outreach programs.

In graduate school, I had the chance to participate in the Women in Computing club (WinC) at New York University and observe how its faculty advisor, Sana Odeh, encouraged diversity. WinC provided a community that gave a sense of belonging to an underrepresented group in computing. They held events aimed at providing real-world examples of successful women in computing and engineering fields. When I became president of the Masters Association of Computer Science (MACS), I had the opportunity to take action and support this mission. I guided MACS to work with WinC, co-hosting events, organizing events that brought female entrepreneurs to interact with students, and volunteering for WinC events.

One WinC event that I volunteered for stands out in my mind as an excellent example of outreach to encourage diversity. WinC co-hosts a yearly colloquium for high school girls to come to NYU [1]. There the students gain hands-on experience with computer science, working together with other girls on programming, puzzles, and more. Female professors and engineers hold panels to answer questions and speak openly about the challenges and rewards of pursuing computer science. These successful women provide good role models for young girls who may otherwise be dissuaded from the field due to a lack of females or a myth that computer science is for boys.

Events like these work. I plan to support such clubs at my new university and volunteer my time. I believe these same approaches can and should be used to encourage all underrepresented groups to enter computer science. In some sense, the problem is more difficult for underrepresented minorities, because of the continuing disparities in college enrollment compared to gender, where the gap has disappeared. This requires bringing computer science education out of the university and into communities historically lacking in such educational opportunities. One useful tactic is to develop volunteer programs where experts can provide education in programming and computational reasoning.

Inside the classroom provides an opportunity for me to cultivate a safe, nonjudgmental environment for students of all kinds. Much of what I believe makes a good teacher applies to encouraging diversity. I believe empathy for underrepresented students and an open mind to constantly learning about the challenges of others are core values important for diversity. When I taught recitation, there was a particular female student who felt uncomfortable asking questions in class, even though

she was an excellent student. During office hours, she asked good questions and demonstrated a solid understanding of the material, but expressed uncertainty about speaking during class. I started calling on her in class, especially when I was sure she knew the answer, to help ease her burden of speaking out. She eventually participated on her own more often, and became a model student for the rest of the class.

Computer science as a field still has progress to make. Given the many exceptional female computer scientists just in my own subfield, such as Jean Ferrante and Barbara Ryder, whose work I study and admire, it is a shame that women and underrepresented minorities have any extra obstacles to joining the field. I will encourage my own students to participate in diversity conferences to meet these and other role models. How many advances have been lost or delayed because someone has felt discouraged from pursuing computer science? By cultivating and encouraging diversity, together we can find a solution to one of computer science's most important problems.

References

[1] NYU's Courant's WinC, Google & Princeton's (GWISE). The Annual New York City Girls Computer Science and Engineering Conference. `http://nyuwinc.org/hs-conference`, 2017. [Online; accessed 27-Nov-2017].