Diversity Statement

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On a balmy August afternoon in 2012, I entered the hall where the orientation for new graduate students was taking place at my university (University of Wisconsin Milwaukee). As I looked around at my fellow new graduate students, I found I was the only woman in my cohort. The incoming class had only two international students, including me. Amongst the faculty in the research group which I hoped to join and pursue my research in, there was only one female research professor at the time. As a new graduate student, this was very surprising to me.

Over the next few years in graduate school, I became aware of the consequences of this intense lack of diversity. Other than me and a male student from China, everyone in my class was a caucasian male. The number of women in the years above me was similar. Over the years, the number of women did improve, but talking among ourselves, I found out, many of us were facing varying degrees of sexist and racist abuse, not just at my own university, but in other universities and departments as well. I listened to a number of the other women and international students talk about their experiences. Their experiences ranged from stalking to racist slurs to criticisms of their religious practices. All of these experiences increased my resolve to help increase diversity in my field of research. Climate surveys within my research collaboration still show concerning data regarding abuse of the less represented, thus showing we still have a long way to go.

I went on to pursue a PhD in the area of gravitational wave astrophysics with the LIGO-Virgo scientific collaboration. During this time, I sought out opportunities to take part in science outreach programmes at my department and within the university. I became a member of the outreach group called “Coffeeshop Astrophysics” that gave public talks and demonstrations at a local cafe. I encouraged other international students, women and other less represented students to be a part of these presentations. One of our main motives was to uphold the changing face of the idea of a scientist, particularly to the young girls and boys who attended. The bursting attendance at these events and the occasional “I want to be just like you when I grow up” from a little girl, restored our confidence in our purpose. Besides encouraging diversity, such outreach has shown to popularize the undergraduate and graduate programs to prospective students. It also leads to attracting donors from the community, thus increasing funding opportunities. I have been on the panel of Women in STEM events and advised incoming graduate students from underrepresented backgrounds. I also served on a panel about navigating male dominated spaces at the APS (American Physical Society) Conference of Undergraduate Women in Physics January 20 - 22, 2023.

There is a lack of adequate representation of women in STEM fields in the U.S and there is also a significant gender based wage gap (Beede et al. 2011). This is particularly persistent and pronounced in the field of Physics (Barthelemy et al. 2016) and astronomy (Caplar et al. 2017). Being a woman of color increases the problem (Clancy et al. 2017).

While a teaching assistant during my graduate school years, I realized that women students tend to underestimate themselves and associate mathematical abilities only with men. I found that helping them through problems during my office hours helped restore their confidence, helping them succeed and hence reversing the notion. I think the lack of equity problem can be addressed at least partially by organized and better mentoring, so that women feel less isolated in male dominated fields, find a safe space to talk about the issues they face and receive the career resources needed to succeed. Encouraging groups of

under-represented students, postdocs and faculty within the department to meet regularly to discuss issues and take advice from peers or seniors, can help. I aim to take the lead in organizing such activities. Increasing equity in physics can also be achieved by taking the help of organizations like the American Physical Society (APS) and the National Science Foundation (NSF) that are already working on it. APS and NSF hold several events and conferences aimed at increasing the training and retention of women and other under-represented groups and also provides funding opportunities. Making myself aware of these and applying for such grants myself and encouraging others to apply for them, would eventually help level the playing field.

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