Statement on Contribution to Diversity, Equity, and Inclusion for Ananda Shankar Bhattacharjee

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As a member of the STEM (Science, Technology, Engineering and Mathematics) research community, and a citizen of a developing nation, I am acutely aware of the importance of creating diverse and inclusive research programs that support equity in all facets of academia. I have been fortunate to be a member of several different work environments, all of which were strengthened by gender, ethnic and racial diversity. I have whole-heartedly supported the efforts of my wife, who recently secured an academic position in the USA in a STEM field, after benefitting from an inclusive academic environment herself. I have witnessed the value of an inclusive environment in my personal life and recognize that diversity brings new ideas and approaches to the table that are the backbone of valuable research. Therefore, I strive in my teaching, mentoring, and research efforts to acknowledge, embrace, and strengthen diverse viewpoints and voices.

As a result of experiences, I had, I encouraged others who start their professional careers from a position of social disadvantage. For example, during my years as an undergraduate student in India, I helped to organize, as well as teach, at events that encouraged the underprivileged parents to enroll their children in elementary school. During my doctoral program at the University of Utah, I taught and mentored middle school students in Salt Lake County, Utah, who participated in the "Lab Ambassadors Summer Program" during 2013 and 2014. This program introduces the youth to a laboratory environment and encourage them to work in STEM field. Additionally, I have mentored both female and male high school students who were interested in environmental engineering research. My mentoring experiences proved to be very helpful to the students who I worked with and helped me improve my communication style. Those positive experiences solidified my belief that greater number of, female, and minority professionals in STEM fields will significantly benefit society.

Improving diversity in STEM fields is critical to the future success or our research. Currently the lack of women in STEM fields is a worrying and a difficult problem. The dramatic increase in women's educational achievement in engineering has yet not been matched by a similar increase in the representation of women as working engineering professionals. The last comprehensive study indicated only 12 percent (1990-2013) of engineers are women[1]. The STEM-related industries are projected to generate millions of jobs over the next decade, the vast majority of these will be filled by men, even though women have formed a higher percentage of the underlying workforce. Since the representation of women and minorities in STEM fields is low, I plan to recruit women and minority students to participate in my research programs. A professional institution should reflect the diversity of society, so one of my goals will be to train my students to be comfortable working with a diverse group of colleagues.

I plan to use evidence-based approaches such as (a) communicate high expectations and provide students with the support to meet them; and (b) facilitate the students' senses of identity in the environmental engineering field. My pedagogical approach focuses on student-centered learning. This approach helps me to appreciate the diverse backgrounds, experiences, and needs of individual students.

I intend to provide students from developing or war-torn nations with opportunities to train under my guidance by offering many semester-long research internships that will provide assistance for future higher education plans. All the universities have the ability to ensure greater diversity in the future of STEM field studies, and consequently, the future of STEM industries. I plan to do my part to create a diverse and inclusive research environment for all of my students that will empower the disadvantaged and reduce chances of disenfranchisement. I am committed to working on this goal as I believe this will contribute significantly in obtaining global peace and prosperity.

[1] https://www.aauw.org/research/solving-the-equation/