

Diversity, Equity, and Inclusion Statement

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I believe the mission of a teacher is to treat every student from diverse background equally and help them grow up. Having worked with several excellent mentors and colleagues from diverse background, I now understand the benefit of diversity, from a wide range of life experiences and various research directions. Also, growing up as a female student in the field of computer engineering, through the inclusive teaching and mentoring activities by my advisors and co-authors, I am gradually gaining confidence, becoming brave when facing with research challenges and becomes a better self. **It is my mission to promote diversity, ensure equality through inclusive teaching and mentoring throughout my career.**

During my doctoral and postdoctoral research career, I have attended teaching workshops at Yale to learn about DEI. I have also participated in diversity workshops (the Women in Communications Engineering Workshop in Globecom2021) and have been awarded travel grant (WICE travel grant 2021). I also have hands-on experience in teaching and mentoring students from under-represented groups. Looking back on these experiences, I not only learn more about DEI topics, but also began to summarize my own efficient ways to work with under-represented groups. These experience help to formulate my future plan of DEI in future career.

1 Actions I have taken

1.1 Research Mentoring and Advising

During my graduate studies, I have been an undergraduate mentor in Tsinghua University. I hold one-one lunch meetings with every student in my class, lead group discussions on career paths, sharing my own experiences and providing career advices to younger students in the Department of Electrical Engineering, Tsinghua University. I was awarded the “**Zijing Scholar**” for my outstanding service.

I have been mentoring undergraduate research project since the third year of my PhD studies. Together with my advisor, we advertise our project and welcome students from under-represented groups to take part. I was fortunate to have guided the research projects of 8 undergraduate students (2 of them are from UR), from setting up the research topics, leading the discussions and help them paper writing. During the process, I found that under-represented minorities are prone to be inconfident and continuously questioning themselves. It is important to give them instaneous feedback, enough courage and enough support to guide them go along. One of the mentee Xinyu Hou has finished her graduate studies and have now become an research engineer in communication engineering. In her thesis acknowledgement, she wrote:

“I’m grateful to Haoyue for figuring out the suitable research direction together with me, and guide me through paper reading and writing. I was timid and afraid previously when facing with uncertainty, but after the journey, I was brave to have a try and will be looking forward to my next hop research career.”

1.2 Diversity Workshop Organization

During my internship during Microsoft Research, I was an active participant in Ada Workshop, and have hosted the Ada-Dialog [3]. I invite outstanding female researchers in the company, call for participation and gathering interested questions from the audience. Positive feedback from the audience are given after the event:

“For girls, Ada Dialogue provides a unique oppotunity for learning from excellent female researchers, and is also a great oppotunity for self-expression, sharing and peer encouragement. Meanwhile, more female interns in Microsoft are experiencing the differences and changes MSRA brought them.”

2 Future Plan for Prioritizing DEI

According to the National Center for Science and Engineering Statistics (NCSES) 2021 report [1], the most recent women recipients of the electrical engineering and computer science doctoral degree is as low as

22%. On the other hand, the “leaky” STEM pipeline, i.e., drop-out rates during the degree programme, is particularly disproportionate for women, URM, and other UG [2].

As a future faculty and a female researcher, I plan to boost the participation of under-represented group by building up myself, advertising and call for broader participation of research projects and though inclusive teaching and mentoring. Below are detailed actions I will take:

2.1 Working Hard and Becoming a Better Researcher

I still remembered when I took the first lectures in Physics, my teacher told the whole class:

“There is no evidence that girls are not good at physics and engineering. Look at me, I liked physics and I’m good at it”

As a female researcher in the field of electrical engineering and computer science, the first thing to promote the participation of historical under-represented groups is to work hard and become a better self. This will set up a role model for my students and fellows and ultimately build up their confidence of taking a research career in electrical engineering and computer science.

2.2 Encouraging Broader Participation in Research Activities

I will continue to design research projects for undergraduate students, give them hands-on experience in research and enlightening their interests in pursuing research careers in electrical engineering and computer science. I will leverage the Computing Research Association on Widening Participation, ACM Women in Computing society to recruit undergraduate and graduate students. I will target magnet STEM-focused high schools in our respective areas to attract students to research projects and calls for application to undergraduate degree programs in our department.

2.3 Retention Efforts to Maximize Students’ Success

For under-represented minorities in my lectures and groups, I will work closely with them and design personal retention plans to maximize their participation and success in the project (Table 1). I will also use peer discussions and mentoring to increase the confidence of UGs.

Table 1: Retention Plans for Underrepresented Students

Category	Evidenced-Based Retention Activity(ies)	How Often Will Occur
Research Projects	1. Vertical Mentoring and Meeting with Advisors	Once a week
	2. Peer Review and Discussion Workshop	Twice a month
Professional Development	Internship Opportunities, Career Consulting and CV preparations	Upon Requests

2.4 Committing to Service

As a PhD students and postdoctoral researcher, I am fortunate enough to have been guided by amazing faculties and researchers. In return, it is my obligation to participate in particular DEI-related service, sharing my own experience and mentoring the next generation students. I will join the Women in Engineering Society, Academic Research and Leadership Network at department and school level; organize workshops and mentorship programmes in the school (e.g., the Women in Communication Engineering event in Globecom conference, N2Women Workshops in Infocom); and taking DEI into consideration during my services such as student admission.

References

- [1] National Center for Science and Engineering Statistics. 2021. *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2021*. Special Report NSF 21-321. Alexandria, VA: National Science Foundation. Available at <https://nces.nsf.gov/wmpd>.
- [2] Anniek van den Hurk, Martina Meelissen, and Annemarie van Langen. *Interventions in education to prevent stem pipeline leakage*. *International Journal of Science Education*, 41(2):150–164, 2019. 21
- [3] Microsoft Research Asia. 2021. *Ada Dialog: When Girls Studying Computer Science Getting Together, what will they talking about? (in Chinese)* <https://www.msra.cn/zh-cn/news/outreach-articles/ada-dialogue%E5%BD%9C%E5%BD%93%E8%AE%A1%E7%AE%97%E6%9C%BA%E9%A2%86%E5%9F%9F%E7%9A%84%E5%A5%B3%E5%AD%A9%E4%BB%AC%E8%81%9A%E5%9C%A8%E4%B8%80%E8%B5%B7%E5%A5%B9%E4%BB%AC%E4%BC%9A%E8%81%8A>