

## **Diversity Statement** **Boon Thau Loo**

Growing up in multi-racial Malaysia and Singapore, I have enjoyed living among people of different races and backgrounds. Through my own life experiences, I fully appreciate the power of education in uplifting the underprivileged in our society. My mother migrated from China to Malaysia during the chaos caused by the Chinese Civil War. She settled with her parents in Langkap, a small town in the Perak state of Malaysia. Her family worked in the tin mines along the rivers of Perak. While my mum could only attend six years of school, she made sure that all of her children were able to go to college. I myself grew up in Ulu Tiram in the late 70s, another small town then in the state of Johor, Malaysia, and moved to Singapore when I was older. As a “twice immigrant” (from Malaysia to Singapore, and from Singapore to the US), I experienced the challenges of assimilating into a new culture and environment, and developed empathy for others in similar situations.

As an undergraduate at a large public university (UC Berkeley) in the 90s, I met several classmates who were uplifted by the educational opportunities provided by the UC system. I vividly remember a classmate who was a refugee from Vietnam, and one of the boat people who lived in camps in Malaysia before he was granted refugee status to come to the US. Another classmate who came from Myanmar taught me everything about Aung San and Aung San Suu Kyi, and to this day, inspired me on how he worked at a supermarket pushing carts while making enough to attend community college before coming to UC Berkeley. Even as someone who just arrived in the US, it was ingrained in me the impact that public universities have to achieve the American dream for many.

Given the background above, I have always been a champion of the less fortunate in our society, and also a strong advocate for diversity and inclusion in our education system. One of the books that I have read *Redefining Realness: My Path to Womanhood, Identity, Love and So Much More* by Janet Mock left an indelible impression on me and made me realize that our LGBTQ+ students also need to be a focal part in our diversity conversations. In the rest of this statement, I would like to highlight some of my contributions to diversity and inclusion in my role as an educator, researcher, manager, and university administrator.

At the University of Pennsylvania, I have graduated four female doctoral students: Behnaz Arzani (Microsoft Research), Mengmeng Liu (Walmart Labs), Anduo Wang (Temple University), and Zhuoyao Zhang (Google). Zhuoyao Zhang won the ACM ICAC'12 best student paper award, as well as an honorable mention for the SPEC dissertation award in systems performance. Behnaz Arzani received the Rubinoff award for best dissertation in Computer Science at the University of Pennsylvania. She is currently a senior researcher at Microsoft Research. Anduo Wang is a faculty member at Temple University. Mengmeng Liu leads a big data team at Walmart Labs.

Several under-represented minorities (URM) and female students have worked in my research group, many of them have gone on to Ph.D. programs or to be technical leaders in their industry. Four female undergraduate/master's researchers in my team (Sangeetha Jyothi, Meryem Essaidi, Simran Arora, and Liana Patel) have gone on to Ph.D. studies at UIUC, Princeton, and Stanford University (x2) respectively. Two female undergraduate researchers (sisters Cam Nguyen and Ahn Nguyen), notably children of Vietnam war refugees, were members of the founding team in a company (Netsil) that spun out of my research group. The company was successfully acquired by a public company Nutanix in 2018. A Hispanic undergraduate researcher (Rick Correa) worked in my research group and is now a technical lead in the security team at Google. Currently, I am the proud adviser to three female Ph.D. students (Bhavana Mehta, Heena Nagda, and Lan Lu), and Gerald Whitters, an African-American Ph.D. student.

As Penn Engineering Associate Dean, I launched three diversity fellowship programs in our school: (1) the Dean's master's fellowship given to outstanding master's students who qualify as under-represented minorities (URM) or first-generation low-income (FGLI) students, and (2) a bridge-to-PhD master's program aim at giving URM and FGLI students the opportunity to pursue a Ph.D. studies at Penn after two years of coursework, and (3) the Dean's Doctoral diversity fellowship to fund outstanding URM Ph.D. students in their studies in our engineering school. I created these programs to address the low rate of minority and FGLI students attending our graduate programs. The bridge program was created in order to ensure URMs and FGLI students gain sufficient academic foundations before entering the Ph.D. program. Admitting URM and FGLI graduate students is only the first step. We also have to ensure that they thrive at Penn. We also put together a comprehensive academic program where the students are paired with faculty mentors and attend several professional development workshops aimed at helping them do well in graduate school.

Together with Rebecca Hayward, director of Penn Engineering Online, I co-led the launch of Penn's MCIT Online, a fully-online master's degree program in Computer Science, targeting learners without engineering background. The program started in January 2019 and currently has around 1600 students. Many URMs and female students, particularly those who are working parents and will otherwise not have access to this opportunity if not for the online nature of the program. The program tuition is less than 1/2 of the Penn on-campus tuition and has attracted a large number of under-represented minorities. A new Data Science master's targeting mid-career professionals launches in Spring 2023. Both programs enable a large spectrum of mid-career professionals to obtain an Ivy League professional master's degree at an affordable cost. Our program attracts full-time mums and dads looking to do a career pivot, and has truly made a difference in the lives of many. The program has graduated hundreds of students to-date, many of whom found well-paid jobs in the tech industry and helped transform lives. To this date, I am most proud of the 60+ "MCIT Online babies" that were born to parents in our online programs. In a student meetup in Singapore, I was touched when a student told me how she attended our program while in an advanced stage of pregnancy, something she would not otherwise be able to do without MCIT Online.

As Associate Dean, I emphasize diversity in staff hiring, and support a diverse workforce to make sure everyone feels that they belong, and are given equal access to opportunities to excel. I hired our engineering school's first African-American woman (Christina Burton) to lead our graduate admissions department. I further created a new position and hired a Director for Graduate Students Programming (Dr. Ocek Eke) to support underrepresented graduate students. I created the Dean's Doctoral Diversity Board, consisting of URM Ph.D. students who meet me on a regular basis to advise me on DEI issues. In 2020, I advocated for and made the GRE test optional for all applications to our 16 master's and 6 Ph.D. programs when I realized how this standardized test was not only disadvantageous to URMs and FGLI students, but were not good predictors of academic success in graduate school. In the subsequent two years, we received a significant boost in Ph.D. application numbers for URMs (64% increase) since GRE was made optional and as we drive up our URM recruitment efforts.

Below are some testimonials provided by students on a recent retreat for 1st year URM graduate students:

*I truly appreciate that I had the chance to meet other URM students before even starting classes and to hear about the resources Penn has to offer for us. I felt seen. I also am ecstatic to have the opportunity to be part of a tight-knit community where I may feel safe to discuss some of the issues I may face as a URM student at SEAS. Please continue this programming for us SEAS graduate/doctoral candidates at SEAS!*

*I want to extend my thanks again to the folks who made this retreat possible as well as the staff, faculty, and students who came in to speak to us. It was a great experience and makes me excited for future URM events. I am thrilled to have such an amazing support system during my time here at Penn. Thank you from the bottom of my heart!*

*I am extremely grateful to have been able to participate in this retreat. The only reason I can maneuver what little part of the campus I can is because of this program that lets me see campus and Penn Engineering before the start of classes. I do not feel so behind as a result. Plus, I met some cool people who I have plans to see outside of the retreat. As someone who is new to the area and knows essentially no one, I am appreciative of this opportunity to meet people outside of a classroom setting and outside of my program. Thank you!*

I have also worked hard to improve the welfare of our Ph.D. students. In 2021, I led the efforts to increase Ph.D. stipends by up to 8.6% and provide school funded dental insurance to all Ph.D. students, while lowering the tuition burden on our faculty for grant-funded students. To help students cope with the challenges of Ph.D. studies, I engaged an external wellness consultant to provide wellness support programs (bi-monthly support groups and workshops) for all graduate students. Resources for these programs were made possible due to our record-breaking success at growing our professional master's programs (online and on-campus), which has seen the largest increase in quality and demand since I became Associate Dean.

At the height of the COVID pandemic, some of our Asian and Asian-American students felt marginalized and blamed for the pandemic. Throughout 2020 and 2021, I organized town hall meetings open to all graduate students to troubleshoot visa/travel issues, and raise the morale of our international students. After the Atlanta shooting incident of six women of Asian descent, I organized a school wide listening session that was attended by hundreds of faculty, staff, and students. I also worked with Penn Police to increase its presence and surveillance on campus so that our Asian students feel safe.

One of my top priorities as Associate Dean is to ensure that our university remains an inclusive place for all students, and that we continue to provide opportunities to URMs, FGLI, and LGBTQ+ students to thrive. Ultimately, we want our university to continue to be a warm and welcoming community for everyone, regardless of citizenship, race, gender, sexual orientation or socioeconomic status.