BROADER IMPACT STATEMENT
Tricia J. Ngoon

My commitment to diversity and impacting a larger community come from my experiences growing up as a minority within a minority. My hometown was predominantly white with very few Asian Americans. Though my family is ethnically Chinese, my parents immigrated from Myanmar. People typically boxed me into the "model minority" because of my Chinese descent, but my experiences were more aligned with those of Southeast Asian immigrant families, a group whose underrepresentation often goes unrecognized. At first, I struggled to straddle my identity as a Chinese-American with Burmese influences. But these life experiences as a minority within a minority contributed to my view that diversity of thought and perspectives contribute to the strength of an academic institution and the foundation of knowledge. My goals for fostering diversity are providing greater access to learning resources and opportunities and sharing a love of learning through equitable and inclusive teaching.

For many students from lower socioeconomic backgrounds, higher education is often inaccessible because of a lack of resources and educational opportunities. During high school, I helped Burmese-American high school students better understand the college application and financial aid process to lower the financial barrier of applying to college. I also tutored students in a remedial algebra class in which high school seniors had not yet passed the math requirements for graduation. Many of these students were the first in their families to even attend high school, and without the individual attention and resources to improve, the math requirement was their primary obstacle preventing them from receiving a high school diploma. Helping these students earn their high school diplomas gave them access to greater educational opportunities within their reach.

In college, I was grateful to receive the need-based Regents' and Chancellor's scholarship to help me focus on academics and research. I served the Regents' and Chancellor's Scholars Association as External Vice-President to help strengthen scholars' professional development through externship programs with alumni and mentorship events with faculty. I also advocated for priority registration for scholars so students could focus on academics and without worrying about fulfilling their degree on time. Berkeley's diverse student body not only gave me new perspectives on research and learning, but also on social issues and how they impact behavior and society. During my time as a research assistant at the Stanford Cognitive Systems and Neuroscience Lab after college, I had the opportunity to develop a website of short, adaptive math games to provide an accessible, inexpensive way to assess mathematical ability for children without access to forms of diagnostic testing for learning disabilities. This was my first foray in bridging research with learning technologies and sparked my curiosity in how interactive technologies can influence learning and creative thinking in STEM, ultimately driving my decision to pursue cognitive science research in graduate school.

As a woman in science and computing, I am fortunate that my parents and educators fostered my interest in science and encouraged my research endeavors. Issues surrounding

the representation of women in STEM have always been of great concern for me. I served as Events Coordinator and K-12 Outreach Coordinator for UCSD's Graduate Women in Computing (GradWIC). As Events Coordinator, I worked with campus psychological services to plan mental health workshops to support graduate student mental health. As K-12 Outreach Coordinator, I provided interactive demonstrations and programs to K-12 classrooms to broaden early interest and participation in computing in underserved San Diego schools. My commitment to helping underrepresented groups at UCSD extends to teaching as well. As Head Teaching Assistant for the Cognitive Science Department, I hold bi-weekly teaching chats and training to discuss how to support students and create an equitable and inclusive learning environment for our diverse student body. I also organize training sessions for other teaching assistants on giving formative feedback and incorporating active learning experiences that engage students in different ways.

As a faculty member, I will continue to make higher education more accessible and give personalized instruction and resources to all students, especially those who have historically been excluded from such opportunities. I would like to explore creating mentorship programs to encourage underrepresented students to join research labs and consider graduate school. I would also like to build a community of feedback and teaching within the department to better improve inclusive teaching for at both the undergraduate and graduate levels. My research and teaching philosophies are to support creativity and learning for all. I hope to achieve this goal through research in scaffolding problem-solving and programs that encourage engaged and inclusive teaching and learning.