

My goal as a mentor and educator is to foster a learning environment that is welcoming, supportive, and accessible to students and mentees from diverse backgrounds. Raised as the daughter of Middle Eastern immigrants during the 9/11 crisis, I am cognizant of how feelings of not belonging impacted my education and strive to help future generations overcome these hurdles. For example, as an undergraduate, I found my initial engineering courses challenging, but I was hesitant to ask for help for fear that doing so would confirm that I did not “belong”. To my surprise, I passed the courses, but the lack of support led me to believe that it was luck, not skill, that helped me do so. These feelings, which I can now identify as “imposter syndrome”, remained, but thanks to a phenomenal set of allies, I have grown my confidence to produce strong computational neuroscientific research. However, I believe that feelings of imposter syndrome, combined with the opaqueness surrounding the structure of academia, is one of the critical downfalls of our progress to diversify the field. Therefore, I strive to create an environment of inclusion via open discussions surrounding work, professional development, and my own experiences throughout my teaching, mentorship, and outreach practice. I approach this goal by: **1) using “student-centered” teaching, which engages students in the learning process, 2) incorporating a holistic mentoring approach, and 3) engaging with the next generation in scientific discovery.**

Teaching: As an instructor, I promote diversity retention by a) providing transparency on the academic system, and b) addressing relevant non-research topics. I dedicate course time to discussing university life (e.g., the purpose of office hours) to ensure that all students, regardless of background, can participate fully in their educational experience. I have also initiated a career development seminar series that is currently being expanded through CU’s Center for Teaching and Learning (CTL), focusing on topics such as mentorship and work-life balance. Having personally benefited greatly from professional development programs focused on diversity retention in neuroscience, such as the “Broadening the Representation of Academic Investigators in NeuroScience” (BRAINS) fellowship, the goal of this series is to address the dearth of programs focused on non-research activities that impact our productivity and happiness in science and academia, improving retention of diverse researchers.

Mentorship: In all my mentorship endeavors, I strive to move beyond research-only advice and incorporate discussions of diversity, inclusion, and overall well-being. I have been a mentor to graduate students (6 current students, 7 previous; 7 female, 6 male), medical residents (3; 1 female, 2 male), NeuroMatch Academy trainees (5; 3 male, 2 female), and to members of our Association for Women in Mathematics branch. Beyond scientific guidance, I have spent time with these students discussing their future careers, current concerns and struggles and helping them to identify relevant resources. Recently, I developed a postdoc-student mentoring program, creating materials, coordinating workshops, and organizing activities to help students find and be successful in their postdocs. This fall, I am also participating as a TA for the “NeuroBridges” Summer School, focused on developing neuroscientific opportunities across the Middle East and Mediterranean. Previously, I sat on the inaugural mentorship board for the University of Chicago “Initiative for Maximizing Student Development”, which aims to enhance diversity of the biological research workforce by pairing junior graduate students with more senior students from diverse backgrounds. Finally, I have begun compiling relevant resources on diversity and inclusion and have made the compilation publicly available on my personal website, tahraeissa.com. Topics include, “diversity through mentorship”, “gender bias in the workplace”, “racism in science”, and “tokenism”. These resources are the current basis for a series of quarterly journal clubs that I lead within our lab.

Outreach: I have engaged the next generation in scientific discovery to inspire and validate those who may not feel that they belong academia. I have served as an invited guest scientist to multiple programs, including Sisters 4 Science and the Lang Youth Medical Program, aimed at engaging underprivileged youth in science. Additionally, I served as both volunteer facilitator and coordination captain at the Museum of Science and Industry (MSI) in Chicago and the Denver Botanic Gardens to promote a sustained interest in science. During graduate school, I also volunteered as a “TA” for local schools that took field trips to learn about neuroscience through the “Backyard Brains” activities. Finally, I served as a math and science tutor to local middle and high school students, encouraging them to develop their interests in STEM while helping them work through their understanding of the material.

Future Plans: In the future, I hope to continue my outreach via collaborations with local science museums and schools. Additionally, I plan to expand my compilation of diversity education resources to broader audiences, including across universities and online resources. With my students, I will encourage them to perform introspective “checks” about their goals and priorities and work with them to develop a plan for achievement. I believe that this approach is critical for the growth and success of mentees from diverse backgrounds and hope that it will support a more community-minded, rather than hierarchical, lab environment.