

Richard W. Nuckols - Diversity Statement

Diversity, inclusion, and equity are not ideals that just happen, but instead their existence requires active engagement, intent, and self-reflection. I am committed to being an active participant in promoting a diverse, inclusive, and equitable academic culture and feel that all students, faculty, staff, and visitors should be welcomed regardless of, and in celebration of, their age, religion, ethnicity, race, gender, sexual orientation, disability, and/or socioeconomic status. I am committed to listening and learning and taking action so that I can help to better achieve this mission.

In the academic climate, I can afford much of my experience with understanding the importance of diversity and inclusion to the excellent examples displayed by my academic mentors, which I hope I can emulate. During grad school, my advisor set an excellent example in how to develop an inclusive lab and it was through this lab I had the opportunity to be trained by two excellent female post-docs. In my current role as a post-doc, I work between two labs that are structured quite differently but achieve a diverse and dynamic environment. The first is a large lab which brings together a wide-ranging team including apparel designers, engineers, and clinicians to solve difficult problems. The second lab is more established and much smaller. A different but successful approach in this lab is that the PI recruits with a focus on the person with an emphasis on including different backgrounds, ideas, and perspectives. My desire is to emulate and build off these examples to build a culture in my academic sphere and set an example for the next generation of student and researcher.

As a graduate student, I was active in promoting engagement in science for individuals who otherwise might not have access. I helped organize and volunteered at hosted events for local middle and high-school students and have given presentations at science museums and stroke support groups. As a post-doc at Harvard, I have been involved in two funded projects that have been related to improving equitable access to technology for healthcare. For the “Technology for Equitable and Accessible Medicine” (TEAM) initiative, I was co-chair and led meetings that brought together faculty across STEM fields to develop collaborations that would support the TEAM philosophy. The second project titled “Social Tech for Eldercare in China” aimed to address the development of technology through the lens of social anthropology and brought together a diverse team made up of both Chinese and Americans citizens with specialties in social anthropology, medicine, business, and engineering. As part of this project, the team visited China for two weeks to experience their culture firsthand. I have found that these types of collaborations have helped to shape my thinking on the importance of fostering awareness of and the value of different perspectives and backgrounds.

As a faculty member, I will pursue activities to generate a diverse, inclusive, and equitable research lab, classroom, and campus. The principles of inclusion and promotion of diversity apply to teaching and general mentoring of university students.

Research Lab:

As the director of a research lab, there are several areas I will focus on and commit to fulfilling.

- One of my primary roles as the lab director will be to help my students thrive. Each student brings something unique and special to the lab and my job will be to provide mentoring and support. The form that these relationships take will likely vary depending upon student needs and I will need to constantly self-evaluate and have open discourse.
- Diversity in the lab is crucial to cultivating a vibrant and innovative academic and research environment. I will actively seek out and recruit underrepresented minorities. To this point, I will ensure that my lab and my mentoring methods support and promote different perspectives and

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ideas. As an extension of this, my lab will work towards providing awareness and opportunities for individuals who might otherwise not be aware of higher education opportunities.

- The lab will have a clear statement that establishes a lab culture that is welcoming of all regardless of ethnicity, race, gender, sexual orientation or socioeconomic status, and that each lab member's individuality will be celebrated.
- I will seek out collaborations with researchers that are underrepresented in STEM. These collaborations will be aimed at increasing depth and diversity of the academic knowledge base and, importantly, the diversity of the people involved will help promote different perspectives, motivations, and ideas.
- As an extension of the lab, I believe that promoting the study of movement biomechanics is an effective way to generate interest in science and engineering. This topic is extremely relatable and linked to many activities that people enjoy, including exercise and recreation. Therefore, the lab will be intentional about outreach, making science interesting, and expanding recruitment of under-represented populations that otherwise may not know about these opportunities or fields of study.

Teaching:

My philosophy for teaching is similar to that of how I would want to run my research lab. A primary role as a teacher is to help the students learn and help them learn to think critically. How individuals learn and how individuals can demonstrate their proficiency can vary dramatically. Thus, the methods by which I teach and evaluate students will need to account for these differences. As a graduate student, I worked closely with a non-traditional undergraduate student who volunteered in the lab. He was 'street-smart', had very clever ideas, and through verbal communication could explain answers, but he wasn't book smart and was a terrible test taker. He barely graduated and struggled emotionally through college but is now successful. I want my teaching and learning strategies to be able to support people like him.

Research:

The research itself will also address issues of diversity, inclusion, and equity. Equitable access to medical technology is important yet rarely accomplished. My research into wearable robotics is partially aimed at assisting and rehabilitating people with disabilities such as stroke, MS, and Parkinson's Disease and improving their quality of life. Individuals with a lower socioeconomic status are not able to afford prolonged rehabilitation services and thus are not able to recover as successfully, putting a further burden on their financial welfare. Technologies that are low cost could potentially be more accessible and if technologies are able to allow people to recover more quickly or allow people to rehabilitate outside the clinic, then the financial burden will be lessened. These areas will be a pursuit for the research in the lab.

Broader Community:

We can help develop a well-rounded department and enrich the overall experience for the campus and community by creating opportunities for persons to share their diverse backgrounds, experiences, and research. Some examples for how this process can be done include inviting speakers and hosting workshops and conferences. It would be exciting to think about how we can include local student diversity groups and centers that help promote underserved groups. Another option could be to hold summer camps for local and regional students. How these can be structured such that disadvantaged groups can attend will be important.