

Over the past 11 years, I have taught and conducted research in different countries and under a variety of conditions. In Brazil, for instance, I had to design low-cost acceleration sensors due to the lack of funds to buy commercial ones and self-fund my conference attendances. In contrast, in France or the USA, I had access to state-of-the-art facilities, abundant travel funds, and weekly research seminars over department-sponsored lunches. During this time, I taught soccer to low income 8 year-olds, probability to undergraduates in two different countries, and non-destructive testing to senior engineers. These experiences have made me realize that the challenge of building a diverse education system goes beyond *bringing* people with different views and backgrounds (diversity and inclusion), but must also include *supporting* them once they come (inclusion and equity). I plan to address these aspects through recruiting, mentoring, and community. While these are integrated efforts, I detail them separately below.

Student recruitment. The lack of research resources in Latin America often leads students, myself included, to believe that they are not fit to pursue a graduate degree, even more so in world-class universities abroad. I have witnessed the same pattern when working with undergraduate research in the USA (e.g., during [SUNFEST](#), an undergraduate research experience program at Penn), especially in students from groups underrepresented in the sciences. These challenges are only exacerbated at the undergraduate level, especially for first-generation students. An important part of my decision to apply for a Ph.D. was having professors that had studied abroad and seeing leading Brazilian scientist working in American institutions (e.g., Miguel Nicolelis). I aspire to also be such a role model and plan to actively reach out to a diverse group of students with an emphasis on promoting the role of Latin American and Latino women in engineering. I have been involved in such recruiting efforts throughout my Ph.D., leveraging my close ties with universities in Brazil to help bring Luana Ruiz, a Brazilian-American student, to Penn and participating in multiple meetings with [Meyerhoff Scholars](#), a program from the University of Maryland, Baltimore County (UMBC) to increase diversity in STEM fields.

Teaching and mentoring. Not all students are equally prepared for the challenges of higher education and research. This issue is amplified by the non-technical obstacles faced by international students and members of marginalized groups in STEM fields, such as navigating cultural and institutional differences or dealing with a lack of relatable references. For those reasons, I make it a point to teach ancillary research skills such as methodology, science communication, and peer-reviewing, that are often foreign to junior academics, especially first-generation ones. As the mentor of [SUNFEST](#), I would take the time to discuss with the students the communication techniques deployed by seminar speakers and use personal experiences to help them navigate and cope with failure, lack of structure, and an academic culture that can appear (and sometimes be) cruel and unforgiving. In teaching, I address these issues by allowing students to resubmit homework, thus providing them with additional time and feedback without them having to ask for it. I also highlight contributions of under-represented scientists in class, an initiative I intend to extend by also promoting research seminars from under-represented scholars.

Community. Support, however, should come not only from professors and mentors, but from the whole community surrounding students. When studying in France, my classes were spread across three campuses and the lack of a cohort made it difficult for me to engage with my peers. To a lesser extent, the same happens in graduate school where classes are often elective. It is therefore fundamental to actively foster a welcoming and inclusive community, especially since campus climate reports repeatedly show that the primary coping mechanism of distressed students is to seek out their

peers. A strong community is also an effective way to cope with and tackle the sexual harassment issues of higher education. At Penn, I ran the department Ph.D. colloquium, a student-run seminar series where Ph.D. students would present their recent work, practice their communication skills, and learn about their colleagues' research. I also lead activities such as welcoming BBQs and the Women in ESE BBQ with the goal of fostering stronger bonds in the department. For these initiatives, I received the 2018 ESE Good Citizen award. Beyond the department, I also co-founded the [Philadelphia Open Soccer](#), a student organization that runs weekly after-school activities for public school and refugee children. I intend to continue incentivising similar actions with student groups and campus associations.

To conclude, I believe that diversity, inclusion, and equity are not only an ethical matter, but also a strategic action for the department to promote cultural progress and remain attractive to future students and scholars. I believe that fostering these values requires not only bringing together diverse individuals, but also continuously supporting them. I intend to do so by recruiting a diverse group of students; supporting them as they navigate the technical and non-technical challenges of their programs; and working with campus associations to build a participative, welcoming community.