

Maritza Sanchez

*IDEA Center's Spotlight for UC San Diego's
César E. Chávez Celebration Month*

Quick Facts

Grade: Ph.D.

Major: Materials Science and Engineering

Outside Interests: Community outreach, spending time with family and friends, hiking, paddle boarding, dancing, eating good food, traveling, coffee

Questions about your experiences:

In April, UC San Diego celebrates the 21st annual César E. Chávez month-long celebration. Throughout your academic journey, you have embodied leading for change, promoting solidarity, and exemplifying servingness. What motivates you to be so involved in the community?



My community is everything. I aim to push boundaries so that the journey is easier for those that come after me. So that they can accomplish bigger and better things. My successes don't have much value unless they are shared with other people. Without community outreach/service and mentorship I would not be where I am now so it is just as important for me to continue those efforts to help other people from my community. The more people that focus on community service and mentorship, the more positive of a change we will see in the world.

What has your experience been like at SHPE? What impact did SHPEtinas have in your journey at UC San Diego?

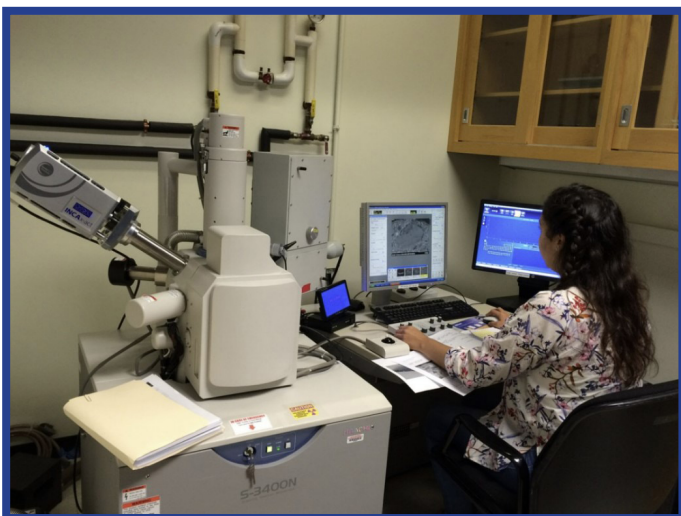
I became involved with SHPE as an undergraduate at UC Santa Barbara and since then have held different leadership roles at the regional and national level, so I really immersed myself into the organization. Because of this SHPE has had a tremendous impact on my academic and career success. SHPE is the reason why I am where I am now. I have built my professional network, have made numerous lifelong friends, and have had opportunities that I would not have had outside of the organization. SHPEtinas in particular is very dear to my heart because through it I have found inspirational and hard-working Latina engineers who have motivated me to be a better scholar, mentor, and person.



What advice would you give to an incoming engineering student that wants to get involved on campus but doesn't know where to start?

Talk to people. Ask your friends what kind of things they are involved in. Talk to your TAs, professors, mentors about the things that they do outside of their research. Go to the IDEA Center and see what things you can get involved with there. Check the website for all the things offered at UCSD. Look for events happening in the community, like the broader San Diego area. Identify what are the things that you are passionate about and look for those types of opportunities.

What sparked your interest in postgraduate education? What inspires you about studying engineering?



I had the opportunity to be a part of a number of undergraduate research opportunities through the CAMP, LSAMP, and REU programs. I was able to participate in 5 different research projects all over the country at 4 institutions. These experiences were what sparked my interest in pursuing a PhD. I learned a lot about what research areas interested me and which ones did not, which ultimately led me to pursue a PhD in Materials Science and Engineering.

How did you get engaged in research? What makes you interested in your specific field?

I was able to get my first research experience thanks to SHPE! The president of my chapter at the time put me in contact with the program coordinator for the CAMP program at the Materials Research Lab at UC Santa Barbara. That connection led to me starting my first summer research opportunity working on ceramic materials for thermal barrier coatings. That was my first exposure to ceramic materials research and what inspired me to continue in that field now as a graduate student. Materials make up everything in the world and really determine the limitations of a lot of the current technology. By manipulating various parameters we can really make a difference on how a material can behave overall creating more potent materials. This is what drives my motivation in this field.

What advice do you have for undergraduate students who are considering getting involved with research? What about for students who are struggling with their research?

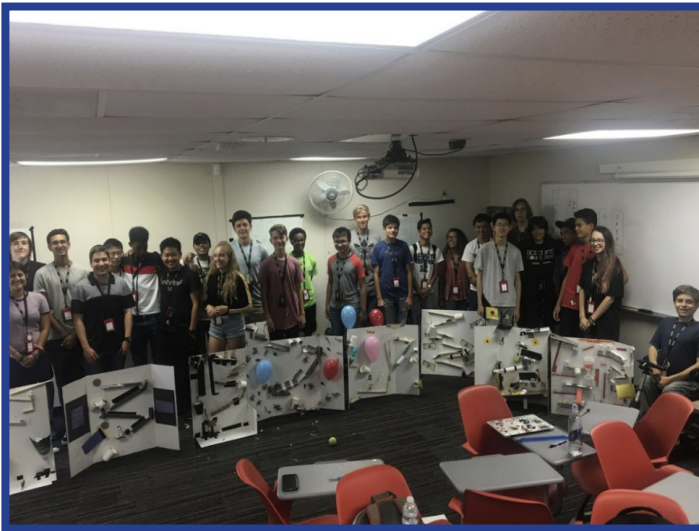
I would advise you to do it, get involved in research! The experience overall will help you better understand and discover what you are interested in. I think as a researcher you gain a lot of skills that you may not necessarily get from being in the classroom. I would also advocate for internships because I think it is important to be a well rounded engineer and scientist. If you do get the opportunity to participate in both research and internships then I highly recommend you do it so you can see what type of work environment is more fitting for you.

For students struggling with their research, I would advise them to seek help. This is something that I go through all the time in my PhD and what I wish someone would have told me before. Seek help and talk to people who might have the answers that you don't. Even having discussions with others can lead to clarity and possible solutions to the issues you are having in your research.



What attracted you to education roles, as an Instructor and Instructional Assistant? What do you enjoy about it?

For me, teaching has been the most rewarding experience. This is why although I came in not wanting to pursue an academic position post graduation, I am now working towards becoming a faculty member at a primarily teaching institution. As a first-generation Latina in the engineering fields I went through my undergraduate studies constantly feeling like I didn't belong and that I couldn't understand the content in my classes as well as my other peers. Now as an instructor, I aim to be the change I wanted to see as an undergraduate, providing resources and teaching methods that help reach all students in the STEM fields. Most importantly, creating a space in which all students feel included and like they can master the concepts of the class.



What has been the biggest lesson you have learned throughout your years at UC San Diego?

Resiliency is real. Things do get harder in graduate school, but not in the sense that the intellectual content is more difficult. The emotions and decisions get harder, especially for students from underrepresented backgrounds. It is during these difficult times that resilience keeps you going. It is important to keep in mind that you have more control over your life and career than you think. Reach out to people, do things that make you happy, explore other options, do all the things that you can to overcome all those difficulties and challenges.