

## Engineer Earns Presidential Award for Improving Underrepresented Student Access to STEM Experiences

Olivia Graeve, a UC San Diego professor of mechanical and aerospace engineering, has received the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring from the White House.

The award was created in 1995 to honor extraordinary individuals whose efforts have helped provide underrepresented groups with access to opportunities in STEM.

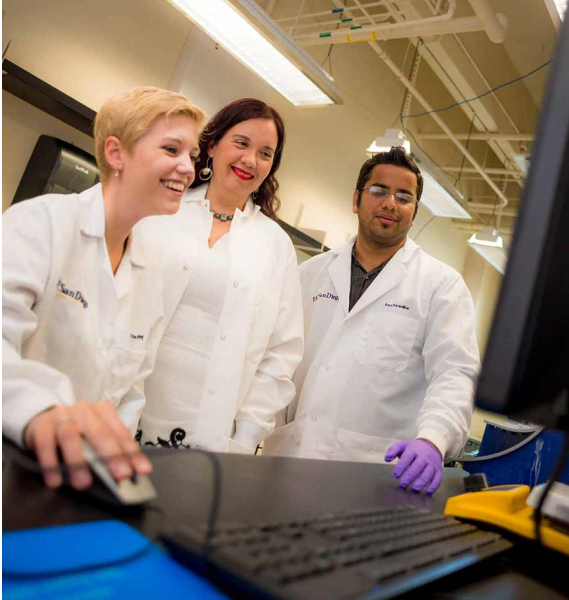
Graeve is recognized for her role as the director of the IDEA Engineering Student Center at the Jacobs School of Engineering; her work promoting binational research opportunities for high school and college students across the U.S.–Mexico border; and her efforts within the Society of Hispanic Professional Engineers (SHPE) to increase opportunities for Hispanic students and faculty. She received the award virtually on Monday.

“As I build programs for students, I am filled with hope that we can build something extraordinary, with kindness, compassion and respect for others,” Graeve said. “I hope that we will eliminate borders and bring down walls.”

Graeve, a Tijuana native and UC San Diego undergraduate engineering alumna, conducts research on novel materials in the Xtreme Materials Laboratory, which she leads.



*Olivia Graeve, a materials science expert, is being recognized by the White House for her outreach work in STEM.*



*Graeve is an expert in materials science research.*

As founding director of the CaliBaja Center for Resilient Materials and Systems at UC San Diego, Graeve has made the center the home of bi-national materials research, with scientists and engineers developing advanced materials for extreme environments such as high temperatures, extreme strain rates and deformations, and radiation.

She also serves as faculty director of the IDEA Engineering Student Center, creating programs to support students from underrepresented backgrounds in engineering through graduation and beyond.

For the past eight years, Graeve has been leading a binational summer research program for high school and undergraduate students called ENLACE. The program gives students from underrepresented

backgrounds in engineering in the United States and Mexico the opportunity to work together to promote the development of cross-border friendships in a research setting.

She is also the driving force behind the CaliBaja Education Consortium, a collaboration between UC San Diego and 20 institutions in Mexico. The consortium, launched in June 2017, helps researchers and students work together across the border. Through the consortium, students from high school to graduate school are able to do research and take classes both at UC San Diego and at various Baja California institutions.

In 2018, Graeve conducted a survey of engineering Latinx faculty members in the United States and found that only 48 out of 600 were born in the United States. This, Graeve says, is due to the virtual lack of pipeline to academia for Latinx in the United States.

As a result, Graeve worked with SHPE to boost the attendance of Latinx faculty members at the annual meetings, leading to the creation of a new Latinx engineering faculty cohort dedicated to Hispanic engineering education. Graeve's support also helped transform part of the SHPE National Conference into a successful mentoring event for both students and faculty.

Graeve is a member of the Mexican Academy of Engineering, the Mexican Academy of Sciences and a Fellow of the American Ceramic Society. She was named one of the 100 Most Powerful Women of Mexico by Forbes in 2017.

Keep up with campus news by subscribing to *This Week @ UC San Diego*