Mentoring STEM Pathways in **Puerto Rico**

José A. Lasalde-Ramírez  
Caltech Y  
Student-Faculty Programs
Puerto Rico... the island of enchantment

Brief history:
• Colonized by Spain in 1493 and it is considered a stepping-stone in the passage from Europe or Africa to the Caribbean.
• Mixed culture between Spanish, African and Taíno traditions.
• Became a possession of the United States in 1898 and Puerto Ricans became US citizens by 1917.
• Population is ~3.3 million (2021).
Puerto Rico

An example of diversity
Caltech

**Hurricane belt**
Puerto Rico is prone to receiving storms and hurricanes in peak strength due to its location in the hurricane belt.

**Hurricane María & Irma**
In recent years, Puerto Rico has been hit by multiple devastating hurricanes.

**Earthquake prone**
Puerto Rico is in an active boundary between two tectonic plates: the North American and Caribbean plates.
For the 2022 Summer internship term, only approximately 0.8% of students participating in any of the summer research programs were from Puerto Rico.
In the graduate community, only approximately 0.2% of students are from Puerto Rico.
Caltech Y Advocate Change Together (ACT) Award

The Caltech Y created the Advocating Change Together (ACT) Award to challenge students to be engaged citizens of the world, providing motivated Caltech students with an opportunity to learn about themselves and their place in society, and to impact the world through community engagement, activism, and leadership.

**Goals**

The goals of the Caltech Y ACT Award are to increase awareness and promote civic engagement and leadership development by:

- encouraging activists to *identify and explore* an issue or cause of local, national, or global significance, and
- empowering activists to get *educated and engaged* in the cause through trainings, workshops, conferences, and/or an immersion experience (learning from an established organization or volunteering beside experienced activists).
Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)

“There is a future where STEM reflects the demographics of our country, so the field is better equipped to solve our world’s most pressing problems. Through our people, programs, and partnerships, SACNAS has taken a radical approach to lead with culture and identity as the means to achieve true diversity in STEM.”
Caltech graduate and summer research opportunities talk and recruitment at UPR
Mentoring opportunities at SACNAS

SACNAS
Largest scientific conference for minority students (approx. 6000 attendees).

Meeting up with alumni
Meeting the students that we sponsored and connecting them to other alumni that are pursuing grad school.

Mentored students networking
Sponsored students participating in networking activities with schools and companies.
Student testimonies

Diego Martínez-Sebastián
Being able to go to the SACNAS NDiSTEM conference was a marvelous experience for me. It was a fantastic opportunity to meet people that I understand are there to help me reach my goals through a relationship with their institution. I feel that I have learned so much about the way research works in undergraduate and graduate opportunities, which I barely knew about beforehand. Also, I received feedback and expert tips from people who know much more than me and will strive to apply their advice. My gratitude to the Caltech Y and José for this opportunity is immense and I can ensure his trust will not be in vain. I look forward to exploring all the professional prospects I learned about at the conference and am excited about what my future as a researcher holds!”

Carlos Ortiz-Medina
The SACNAS National Diversity in STEM 2022 conference was an experience I will cherish forever. Getting this opportunity as a freshman in college is one of the best things that could have happened to me. It gave me a great deal of guidance, information, and opportunities that I believed would never be possible. The amount of people who were there with the purpose of extending their knowledge, expertise and opportunities to the attendees was very impressive and somewhat overwhelming, in a good way. Everybody was extremely cordial, and respectful and wanted to offer what catered most to your interests. Even though I am just getting started in my academic and professional life, I believe that this opportunity could not have come at a better time, I will be forever grateful for it.
Jean Vega-Díaz

Ever since I was little, I longed to become a scientist to address the shortages our society faces. As a result, the disciplines comprised of STEAM flourished and rooted themselves within me as I sought to combine science and math with the arts.

Growing up in a low-income household, I never thought I would have access to research opportunities or STEAM programs. However, through opportunities like SACNAS I was able to overcome some of those limitations with one of the most valuable tools, networking. After participating in the 2022 NDSTEM conference, I had the opportunity to meet many recruiters and organizations that are dedicated to working together with college students on undergraduate research and special projects. Therefore, it exposed me to a new thought process where I would be able to apply all the theoretical knowledge taught in college in real-world problem solving. One of the most memorable experiences I had during the conference happened at NASA’s booth where I learned more about the programs they offered and their recruiters. In short, it was an eye-opening experience that will guide me throughout my next years as an undergrad while I prepare myself for grad school and internships. I am grateful for all the thought and effort that went into it since, without it, I wouldn’t have found out about many of these opportunities.
Mentoring opportunities at SACNAS
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Caltech Y
• Advocate Change Together (ACT) Award

Student Faculty Programs
• Candace, Maria, Carol

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