UC Irvine becomes host campus for Cal-Bridge program

Initiative benefits underserved California students in STEM fields.
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Brian Bell
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The 2024 Cal-Bridge Fall Conference, which took place at the UC Irvine Student Center on Sept. 14 and 15, was attended by hundreds of Cal-Bridge scholars and faculty members representing University of California, California State University, and California Community College institutions throughout the Golden State.

Picture Credit:
Eddie Cisneros

Irvine, Calif., Sept. 25, 2024 – Cal-Bridge, a statewide program to promote participation by traditionally underrepresented groups in California's higher education systems and technology workforce, is entering its second decade of service with new administrative headquarters at the University of California, Irvine.

During the summer break, Cal-Bridge co-founder and executive director Alexander Rudolph relinquished his faculty position at California State Polytechnic University, Pomona, to join the UC Irvine School of Physical Sciences. He will continue to lead Cal-Bridge from an institution that has played a significant role in the program's origination and growth.

"Of all of the University of California campuses, UC Irvine has been the most strongly engaged in Cal-Bridge," Rudolph said. "Combined with involvement from UC Irvine's Office of Inclusive Excellence and substantial backing and resources from the Department of Physics & Astronomy, Cal-Bridge flourished at UC Irvine and, as a result, more broadly in the UC and CSU systems. That's one key reason why we decided to make Irvine the home of the program."

He added that UC Irvine has accepted by far the most Cal-Bridge scholars into Ph.D. programs of any UC campus.

"One of the strategic goals of the School of Physical Sciences is to foster greater engagement in STEM fields, and Cal-Bridge has a proven track record of doing just that," said Dean James Bullock. "We in the School of Physical Sciences are proud of our historical partnership with Cal-Bridge, and we're delighted that the program now calls UC Irvine home. We look forward to working with the entire Cal-Bridge team in its efforts to strengthen and diversify California's science and technology workforce."

At its founding, Cal-Bridge was designed to help traditionally underrepresented students in California community colleges and the CSU system to move up to participating UC campuses to pursue advanced degrees in physics and astronomy. Currently, Cal-Bridge serves students studying physics and astronomy, computer science and computer engineering, and math and statistics, and Rudolph said that more STEM fields are planned for inclusion as funding allows.

With financial support from the National Science Foundation, the earliest iteration of the program emerged in 2009 as a summer research initiative for underserved

students called the California Minority Partnership for Astronomy Research and Education, or CAMPARE. In 2014, with additional NSF funding, Cal-Bridge was officially launched, combining summer research, close mentoring by UC and CSU faculty, substantial financial aid and workshops to prepare students to apply to Ph.D. programs.

In the past three years, with financial support from the state of California, Cal-Bridge has grown to include Ph.D. fellowships, professional development workshops, cohort-building activities, mentorship and a postdoctoral program, creating what Rudolph calls a “comprehensive, end-to-end pathway” to the technology workforce or the California public university professoriate.

He stressed that among the drivers of Cal-Bridge’s success are engagement and mentorship. Undergraduates are “dual mentored” by CSU and UC faculty, he said, giving them direct access to people with intimate knowledge of the ins and outs of UC-level Ph.D. research and education.

“While other similar programs provide mentorship opportunities a few times a year or once or twice a semester, Cal-Bridge mentors meet with our undergraduate scholars at least twice a month – and more frequently as needed,” Rudolph said. “This sort of hands-on, intensive mentorship is key, because we have found that students need more than just occasional check-ins.”

Workshops and interactions with UC faculty help Cal-Bridge scholars develop skills in such areas as essay writing and foster socio-emotional competencies and mental preparation to succeed as Ph.D. students. Another benefit, according to Rudolph, comes from camaraderie and community building with other Cal-Bridge participants.

“There are now almost 350 scholars across the country at various stages, from undergrad all the way through faculty positions,” he said. “All of those people support each other, and that’s key. There’s this huge community – many of them in California, of course. I’d say that besides the mentorship, the community of support is one of the most important reasons why the program has been so successful.”

An additional Cal-Bridge benefit is financial assistance, which means that students – many of whom come from lower-income backgrounds – can devote more of their time to study versus work.

“We require our undergraduate scholars to cut their outside work to under 10 hours a week so they can focus on the schoolwork they need to do to maintain the grade levels they need to be accepted into a Ph.D. program,” Rudolph said. “You might be the best student in the world, but if you have to work 30 hours a week while you’re attending college, it may be hard to keep up.”

By bringing him and a small team of staff from CSU and UC campuses to UC Irvine to run Cal-Bridge, Rudolph noted, the university has better equipped him to achieve one of his main goals: strengthening the financial sustainability of the program. He gives a lot of the credit for the move to Bullock, as well as program co-founder Tammy Smecker-Hane, UC Irvine professor emeritus of physics and astronomy; Kevork Abazajian, professor of physics and astronomy; and Franklin Dollar, professor of physics and astronomy.

UC Irvine’s Brilliant Future campaign: Publicly launched on Oct. 4, 2019, the Brilliant Future campaign aims to raise awareness and support for the university. By engaging 75,000 alumni and garnering $2 billion in philanthropic investment, UC Irvine seeks to reach new heights of excellence in student success, health and wellness, research and more. The School of Physical Sciences plays a vital role in the success of the campaign. Learn more by visiting https://brilliantfuture.uci.edu/uci-school-of-physical-sciences.

About the University of California, Irvine: Founded in 1965, UC Irvine is a member of the prestigious Association of American Universities and is ranked among the nation’s top 10 public universities by *U.S. News & World Report*. The campus has produced five Nobel laureates and is known for its academic achievement, premier research, innovation and anteater mascot. Led by Chancellor Howard Gillman, UC Irvine has more than 36,000 students and offers 224 degree programs. It’s located in one of the world’s safest and most economically vibrant communities and is Orange County’s second-largest employer, contributing $7 billion annually to the local economy and $8 billion statewide. For more on UC Irvine, visit www.uci.edu.

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