

SAN DIEGO STATE UNIVERSITY DEPARTMENT OF PHYSICS AND DEPARTMENT OF  
ASTRONOMY COLLOQUIUM

Speaker: Prof. Alexander Rudolph (California State Polytechnic University)

Topic: CAMPARE and Cal-Bridge: Two Synergistic Programs Forming a Successful  
New Model for Promoting Participation of Women and Underrepresented  
Minority Students in Astronomy

Time: 3:00 PM, Friday, March 18, 2016 (refreshments served at 2:45 PM)

Place: Room 146, Physics Building (P-146) \*NOTE ROOM CHANGE\*

Abstract:

The level of participation by underrepresented minority (URM) and female students in physics and astronomy PhD programs is shamefully low (2-4% for URM v. 30% in the general population). I will begin by discussing research highlighting role the physics and general GRE tests play in suppressing diversity in our field, while providing little to no benefit in helping predict long-term success. I will then describe some alternative methods of conducting graduate admissions, including the role of programs like CAMPARE and Cal-Bridge.

I will then describe these two programs, CAMPARE and Cal-Bridge, with the common mission of increasing participation of underrepresented minorities and women in astronomy and physics through summer research opportunities, in the case of CAMPARE, scholarships in the case of Cal-Bridge, and significant mentoring in both programs, leading to an increase in their numbers successfully pursuing a PhD in the field.

CAMPARE is an innovative REU-like summer research program, currently in its seventh year, comprising a network of 25 comprehensive universities and community colleges in Southern California and Arizona (most of which are minority serving institutions), and 14 major research institutions throughout California, and around the nation.

In its first six summers, CAMPARE has sent 62 students from 14 different CSU and community college campuses to 8 research sites of the program. This is a very diverse group: 85% of participants are from underrepresented minorities, female, or both. The graduation rate among CAMPARE scholars is 97%, and of the 37 CAMPARE scholars who have graduated with a Bachelor's degree, almost 60% (21) have completed or are pursuing graduate education in astronomy or a related field, at institutions including UCLA, USC, UC Riverside, Stanford, Univ. of Rochester, Georgia Tech, Kent State, Indiana Univ., Univ. of Oregon, Syracuse, and the Fisk-Vanderbilt Master's-to-PhD program.

The Cal-Bridge program is a diverse network of higher education institutions in Southern California, including 5 UC campuses, 9 CSU campuses, and 10 community colleges dedicated to the goal of increasing the number of underrepresented minority (URM) and female students attending graduate school in astronomy or related fields, targeting the UC astronomy programs in Southern California. To date, 12 Cal-Bridge Scholars have been selected, of whom 4 are women, 8 are Hispanic (six men and two of the women), and 2 are part Native American. Nine of the 12 Cal-Bridge Scholars are first-generation college students. In total, 10 of the 12 Cal-Bridge Scholars are URM, women, or both. All are physics majors working to attend graduate school in astronomy or physics.

Once selected, Cal-Bridge Scholars benefit from financial support, intensive, joint mentoring by CSU and UC faculty, professional development workshops, and exposure to research opportunities at the participating UC campuses.

There are plans for an expansion of the Cal-Bridge program to include students interested in physics PhDs, as well as to make it statewide. I will be talking about how SDSU physics and astronomy faculty can get involved in the program and these expansion efforts.