

0653292 Louise Pagotto (PI), John Rand, Maria Bautista, Hervé Collin, Kapi`olani Community College, **STEP-UP Science Talent Expansion Program in Urban Polynesia**

Kapi`olani Community College's STEP-UP goals are to increase the number of (1) students in the College's STEM pipeline, (2) Associate in Science in Natural Science (ASNS) degree completers, and (3) students matriculating to two collaborating four-year institutions, and to institutionalize and provide ongoing support for those STEM students through pre-college-recruitment; support of their learning through mentoring, tutoring, and Peer-Led-Unit-Study (PLUS) sessions; and their involvement in research activities.

Our pre-college recruitment was conducted during one week-long workshop and one three-week workshop in the summer. Both involved computer-building and telemetry activities (cricketSAT) and/or a Computer-Aided Design project (CAD). We have enhanced program outcomes from Year 1 to Year 2 by increasing the number of (1) participating feeder high schools from two to four, (2) workshop participants from 34 to 40, (3) increasing the number of mentors and tutors from 3 to 9, and (4) courses supported by PLUS sessions from four to six including Life Science and Mathematics majors in addition to Physical Science. Our STEP-UP students have had a variety of research emphases: underwater robotic (UROV) projects, including a MATE competition; fuel cell projects; the CANSAT competition, and a project on sleep and cortical arousals.

The project encountered challenges in aligning PLUS sessions with all course sections taught by different instructors, as well as conducting workshops at the high schools. To resolve these difficulties, personalized strategies will be developed for individual instructors and henceforth, the workshops will be conducted at the College. Progress has been made on moving from recruitment through STEP-UP activities to matriculation. Twenty-three students have enrolled, this year, in our new ASNS degree, and 153 students have declared themselves STEM majors.