

LETTER FROM THE DIRECTOR OF THE UNIVERSITY HONORS PROGRAM

Intellectual creativity and exploration are the hallmarks of our Honors Program. The Honors Program builds relationships among all colleges on campus and seeks to educate students in the connections between the disciplines, from Engineering to English, Agriculture to Art, or Business to Biology.

What better way to experience “intellectual creativity and exploration” than to work closely with a professor and other students on an interdisciplinary undergraduate research project? The model that was developed in 2006 as part of the deliverables for a National Science Foundation grant has grown since both in quality and quantity. The number of research projects increased from 20 to 27, and the number of students who receive NSF scholarships increased from 21 to 30 over the past three years. The infrastructure of the Honors Program makes it possible to transcend some of the cross-college challenges that typically emerge in the administration of interdisciplinary efforts as students are matched with the faculty projects.

While the National Science Foundation (NSF) Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) grant provided scholarships to students participating in these research projects, institutional funds were given to faculty to support the projects they undertook with the students. I feel it is important to acknowledge all of those who supported this program with matching funds and their enthusiastic leadership. This includes Susan Opava, Dean of Research and Graduate Programs; Phil Bailey, Dean of the College of Science and Mathematics; Mohammad Noori, Dean of the College of Engineering; David Wehner, Dean of the College of Agriculture Food and Environmental Sciences, and Linda Halisky, Dean of the College of Liberal Arts. I would also like to send special thanks to Bill Durgin for his leadership in promoting research at our university during his tenure as the Provost.

The second volume of the Honors Undergraduate Research Journal contains peer-reviewed articles — just a small sample of the outstanding undergraduate research that took place in the 2007–2008 academic year. I would like to recognize the students and research faculty who participated in this program and submitted and reviewed papers for inclusion in this journal. I would also like to acknowledge all of the faculty mentors who made these research opportunities available for the students. Their time and efforts are evident in the work high-

lighted in these papers. Without their support, Cal Poly's Honors Undergraduate Research Program would not have been possible.

This volume is dedicated to the memory of Ed Sullivan (1944-2009), Associate Dean of the College of Engineering, who served as a member of the selection committee making the research funding decisions for the past three years. Ed's leadership and the technical expertise provided the tools for the committee to have a fair distribution of funds among the various Colleges and projects. But what made his contributions most valuable was his willingness and ability to recognize and support non-engineering as well as engineering projects — especially those with the potential to benefit the society as a whole. He will be terribly missed.

Although the research program was originally designed to provide opportunities for those who are already in the Honors Program, it has also become a very effective recruitment tool for the Honors Program. Participation in this Honors Undergraduate Research Program is available not only to Honors students, but to all students on campus with a desire to engage in undergraduate research. Many new students decided to join the Honors Program once they became aware of the research opportunities.

The feedback from students has been very positive. One student commented, "It's made me really proud to be a part of the Honors Program that gets undergraduates researching." We are already receiving feedback from prior year participants that the experience was both valuable and an excellent addition to their resumes, helping to distinguish them in job and graduate school applications.

This volume's editor is one of our very own Honors students, a contributor to the previous volume of this journal, Jennifer Merriam. She has also provided valuable assistance in the development of the Honors Undergraduate Research Program, including activities from proposal writing to assessment of the research program and analyzing results. Special thanks also go out to Cheri Baumgarten for all her tireless efforts in mentoring and advising students on research project availability and selection.

As in the past, this effort has been both rewarding and enriching for me personally, and I believe for all the students and faculty involved. In light of the current budget uncertainty, we are hopeful that we will be able to continue this beneficial program in the coming years.

Sema Alptekin, Director of the University Honors Program
Managing Editor, Honors Undergraduate Research Journal