

## **UCLA Mathematics REU**

Since 2005, undergraduates from UCLA and other local colleges have joined faculty and graduate students to conduct a broad variety of theoretical, numerical and experimental research projects in Applied Mathematics. The physical experiments are conducted primarily in UCLA's Applied Mathematics Laboratory. This program has been funded by the National Science Foundation since its inception; in 2006 it became part of UCLA's Research Training Group in Applied Differential Equations and Scientific Computing (supported NSF grant DMS-0601395). The program is now expanded to include students from more schools in southern California.

The REU is an 8 week summer program in the Applied Mathematics group at UCLA. Students will have the opportunity to join an active research group with projects in image processing, control theory, fluid dynamics, mathematical biology and medicine, mathematics of crime, computer graphics, and other topics. The successful applicant will work with faculty members, postdoctoral fellows, graduate students and other undergraduates. Throughout the summer, the REU program will be augmented by faculty-run informational sessions on research, careers in mathematics, and preparing for graduate school.

Students will start June 17 and finish August 9. On the final day of the program, students are expected to present the results of their research in both a written report and an oral presentation. For some projects the students may be asked to write software. The faculty mentor will identify the "deliverables" at the beginning of the summer and will work closely with the students in preparing the final result.

The stipend for the summer is roughly \$6,000 some of which should be expected to pay for housing costs. Students are responsible for finding their own housing in the UCLA area. Descriptions of the planned projects for summer 2013 can be found on the website below. California Training Program.

### **Eligibility**

- The UCLA Applied Math REU is available to undergraduate students from southern California institutions. Some space is available for masters students from non-PhD granting institutions.
- Applicants need not be US Citizens although the majority of the funding comes from a federal grant restricted to US Citizens and Permanent Residents. Limited space is available for foreign students.
- Students must be available for the full 8-week period June 17 to August 9, on a full time basis. Courses and other employment activities may not be conducted concurrent with the program.
- The target applicants for this program are undergraduate students who are applied math majors with advanced standing, but all scientific majors are encouraged to apply. Past REU participants have been majors in pure mathematics, computer science, physics, and engineering. Some funding is available for masters students from non-PhD granting institutions - with a preference given to those who wish to apply to PhD programs after completion of their degree.
- We expect to have projects in experimental fluid dynamics and robotics ideal for students in engineering and physics.
- Please indicate your project preference in your statement of purpose.
- As a special feature in 2012 we may have funding for a few UCLA PhD students in the early years of the program and information will be sent to them separately.
- Students will be on their own to find housing during the program. There are generally many apartments in the UCLA area available for sublet during the summer. Many postings can be found on websites such as UCLA's Community Housing Office.

For more info visit: <https://www.mathprograms.org/db/programs/116>

