



## Program Basics

The Department of Electrical & Computer Engineering at Texas A&M University offers undergraduate students the opportunity to participate in ongoing research with faculty members. The Research Experiences for Undergraduates (REU) program funded by the National Science Foundation and Department of Defense spans 10 weeks and involves undergraduate students from Texas A&M as well as students from other colleges and universities. The program focuses on research topics in processing, communication, and transmission of timely information in resource-constrained environments. Nine electrical & computer engineering faculty members, whose research includes novel high-performance and low complexity solutions for state-of-the-art problems in the dynamic area of Homeland Security, will serve as mentors for REU students. This year's program will involve approximately 10 students.

During the summer research experiences, participants work closely with faculty members and graduate students on current research projects, attend tours of labs of faculty involved with REU students, participate in ethics seminars, attend seminars on graduate school related topics and GRE review sessions, and present a poster of their research experience at a symposium held at the end of the program.

## Funding

- Each grant (stipend) will be \$4,000 and will be for support of the student for ten weeks. The program will also: 1) pay tuition and fees for one credit hour of required independent study/research course (for on-campus housing requirements), 2) provide and pay for housing in campus facilities, 3) pay a weekly meal allowance, and 4) pay partial reimbursement for travel expenses.
- Arrangements for equipment, supplies and other miscellaneous items will be coordinated with the Faculty Mentor, with whom student will work.

## Method of Award

Each student applicant will submit a completed application, one faculty recommendation letter and a current official transcript. Be sure to include a description of special research area(s) of interest within your field. This description will aid in pairing the applicant with a faculty mentor. It is not the intent of this activity to stimulate "student generated" research ideas; rather, the purpose is to seek contributions to ongoing faculty research areas. Each application will be reviewed upon receipt.

Announcements of acceptance will be made no later than March 29, 2010. Review of applications will be performed by ECE REU faculty mentors.

## Student Requirements

- Students selected for grant support may not be enrolled in additional courses during either summer school session.
- Research hours to be worked are determined by individual faculty members (typically 40 hours/week).
- Each student will be required to give two brief presentations on his/her respective project during the course of the ten-week grant period.
- Each student will be required to prepare an abstract and a poster presentation describing the results of his/her research program.
- Applicants must be U.S. Citizens or permanent residents

## FACULTY MENTORS AND TOPICS

Dr. K. Butler-Purry

Enhanced Survivability of Shipboard Electric Power Systems

Dr. P. Hemmer

Improved Chemical and Biological Sensors

Dr. S. Khatri

Extreme Low Power VSLI Design for Biological Sensor Platform

Dr. D. Kundur

HoLISTiC: Heterogeneous Lightweight Sensors Nets for Visual Computing

Dr. C.K. Madsen

Fiber and Integrated Optical Sensors

Dr. T. Zourntos

Autonomous Mobile Robots

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Please check [www.ece.tamu.edu/~reu](http://www.ece.tamu.edu/~reu) for 2009's mentors for more information on research topics and faculty mentors

## Purpose

The purpose of this program is to involve in a summer research program outstanding students who have completed at least their sophomore year and are interested in pursuing graduate studies. It is hoped that these students will make a contribution to ongoing faculty research and, more importantly, will gain an appreciation for and an interest in a research career.

The success of this program will be measured in two ways: (a) the proportion of participants who apply for and enter graduate programs. (b) the proportion of those students supported for research activities during the year(s) following participation in the summer research program.

# TEXAS A&M DEPT. OF ELECTRICAL & COMPUTER ENGINEERING

## RESEARCH EXPERIENCES FOR UNDERGRADUATES APPLICATION

\_\_\_\_\_  
Last Name                      First Name                      Middle Initial

\_\_\_\_\_  
University                                      Major

\_\_\_\_\_  
School Mailing Address

\_\_\_\_\_  
City                                      State                      Zip

(\_\_\_\_\_) \_\_\_\_\_

Phone #

\_\_\_\_\_  
Permanent Address

\_\_\_\_\_  
City                                      State                      Zip

(\_\_\_\_\_) \_\_\_\_\_

Phone #

\_\_\_\_\_  
Email Address

Citizenship

US Citizen      Permanent Resident      Other

\_\_\_\_\_  
Ethnicity:

African Am.     Hispanic Am.     Native Am.

Asian Am.     Anglo Am.     Other

Gender:  F  M      Cumulative GPA \_\_\_\_\_

Expected Date of Graduation:

Spring     Summer     Fall    \_\_\_\_\_ Year

Freshman     Sophomore     Junior     Senior

Number of Hours completed: \_\_\_\_\_

Upon graduation, are you planning to attend graduate school? \_\_\_\_\_

(Please, complete the other side of this form.)