

# COMPUTER ENGINEERING

## SENIOR DESIGN PROJECT (2004/2005)

**Title:** ANGEL: embedded platform for improving on-campus security

**Supervising Professor:** Alex Doboli

**Description:** The goal of the project is to develop an embedded, wireless platform that can constitute a cost efficient implementation solution for security related applications.

The hardware platform will be microprocessor based, and will incorporate a variety of sensors, like GPS receiver, compass and proximity sensor. The software part will include a library of procedures that will allow quick development of certain security related applications. Related procedures might involve (1) automated sending of messages, (2) backtracking, and (3) notification of objects or events considered as dangerous.

The platform will be used to develop several security related applications, like aiding visually impaired people in an environment with heavy traffic.

**Requirements:** embedded systems, C/assembly code programming.

**Project cost:** Supported by the Sensor Consortium.

**The selected CE student will receive an Undergraduate Research Internship - in the amount of \$2,000/year - offered under the *Consortium for Security and Medical Sensor Systems* program, sponsored by the *National Science Foundation*. This is a collaborative program between SUNY Stony Brook, **Hofstra University**, SUNY Farmingdale, and Suffolk Community College. The objective of the program is to educate students on technology entrepreneurship activities. For more info please check <http://www.ece.sunysb.edu/~sensorconsortium/>**

The duration of the program is 1 year. Students will work on a research project and attend a Business course and seminars on Entrepreneurship and Technology Transfer. Each student will be part of an E-team with three other students, one from each participating universities, under the assistance of a faculty advisor and a graduate student, both from Stony Brook. The Business course will be taught at Stony Brook campus on Saturday mornings.

CE students applying for this project should have (a) GPA higher than 3.0, (b) interest in working in an inter-institutional team on an exciting research project, and (c) interest in learning about entrepreneurship activities.

**To apply, email your CV to Prof. A. Doboli ([adoboli@ece.sunysb.edu](mailto:adoboli@ece.sunysb.edu)). Final decisions will be made before September 20<sup>th</sup>.**