

**Department of Electrical and Computer Engineering
COLLEGE OF ENGINEERING**

**SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN**

APPLICATION DEADLINE: March 2, 2009

The Department of Electrical and Computer Engineering is pleased to offer the following research project for the summer of 2009. Interested students are urged to contact the faculty member(s) directing the project that most interests them. By contacting the faculty member, you can discover more about the project, learn what your responsibilities will be and, if possible, develop a timetable for the twelve-week research period.

ENABLING MORE EFFICIENT COMPUTATIONS FOR PROBLEMS IN BIOINFORMATICS

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PROJECT DESCRIPTION

Problems in bioinformatics typically involve the study of very large sets of data, and thus the need to use the most efficient methods possible to analyze these data is obvious. Two approaches that show promise in bioinformatics applications are agent-based modeling, typically a software method, and the use of hardware accelerators based on FPGAs, essentially a hardware method. Several ongoing projects in our lab are exploring these approaches. The student will learn more about how these approaches can be applied to bioinformatics problems in general and will work on applying one or both to one specific problem.