

**Department of Biomedical Engineering
COLLEGES OF ENGINEERING & MEDICINE**

**SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN**

APPLICATION DEADLINE: March 3, 2008

The Department of Biomedical Engineering is pleased to offer the following research project for the summer of 2008. 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.

Cutting Forces in Minimally Invasive Surgery Devices

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Project Description

This NSF funded project aims to develop an in-depth understanding of the localized fracture and tearing mechanisms in soft tissues during minimally invasive surgery. The WISE program student will be involved in conducting cutting studies in bovine and porcine liver tissue models and developing instrumentation to measure the cutting forces to characterize the mechanical parameters that define the energy/work and power dissipation during cutting. The student will work closely with the faculty mentor (Dr. Haridas) as well as graduate students and post doctoral researchers currently working on this project, and will use this opportunity to learn about the current and future technologies being explored to develop minimally invasive surgical procedures and cutting tools.