

**Department of Aerospace Engineering & Engineering Mechanics  
COLLEGE OF ENGINEERING**

**SUMMER RESEARCH OPPORTUNITIES  
FOR UNDERGRADUATE WOMEN**

**APPLICATION DEADLINE: March 2, 2009**

*The Department of Aerospace Engineering and Engineering Mechanics 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.*

**PROJECT TITLE: Acoustic Liner Design Technology Research**

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**Project Description**

**Acoustically absorptive liners are used on the inside walls of the nacelle of a turbofan engine to attenuate the noise generated in it. The principal sources of noise include the fan (and compressor) assembly, the turbine assembly and the combustor assembly. The main objective of the research work is to improve the design methods for acoustic liners. An additional goal is to investigate new or novel concepts for liner design or manufacturing methods and processes that may lead to greater noise suppression or to lower cost and higher quality acoustic liners.**

**To aid the research on acoustic liners, a number of acoustic apparatuses and measurement methods have been developed at UC. The analytical methods and the measurement techniques require a strong academic background in Mathematics and in Fluid Dynamics. The selected student will work with undergraduate co-ops and graduate students. The work hours will be flexible within reasonable limits. The Acoustic Liner Research laboratory is part of the Gas Dynamics and Propulsion Lab (a.k.a. the Fluid Dynamics Lab), 300 Rhodes Hall.**