DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING AND COMPUTER SCIENCE
College of Engineering

SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN

APPLICATION DEADLINE: MARCH 3, 2003

The Department of Electrical and Computer Engineering and Computer Science is pleased to offer the following research project(s) for the summer of 2003. Interested students are urged to contact the faculty member(s) directing the project(s) that most interest 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.

Computer Modeling of the Operation of New Semiconductor Devices

Professor K. P. Roenker
642 ERC 556-4761 FAX: (513) 556-7326 E-Mail: Kenneth.Roenker@UC.Edu

This project provides an opportunity to work on the computer modeling for the operation of new semiconductor devices including advanced, high-speed transistors in new materials for applications such as cellular phones. There also exists the possibility for simulation work on advanced optoelectronic devices for optical fiber communications. These projects make use of a state-of-the-art commercial simulation package running on workstations so the student need not write and develop new programs. Prior knowledge of semiconductor devices is not expected, but this work will provide an opportunity to learn about the devices and their operation. Summer students will work side by side with current graduate students working on similar projects that will be available to provide an introduction and continuing help in running the software.

Synthesis and Characterization of Network Glasses

Professor Punit Boolchand
820 Rhodes (513)556-4758 Fax : (513)556-7326 E-Mail:Punit.Boolchand@uc.edu

The student will receive hands-on experience in synthesis of semiconducting glasses. The produced glasses will be characterized to establish softening temperature and structure. The methods will include thermal and optical ones. The undergraduate student will work closely with a graduate student. It is anticipated that the research activity could lead to a publication in the archival literature.