

Department of Physics
MCMICKEN COLLEGE OF ARTS AND SCIENCES

SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN

APPLICATION DEADLINE: March 1, 2006

The Department of Physics is pleased to offer the following research project for the summer of 2006. 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.

COMPUTER SIMULATIONS: TRANSITION PATHS IN THERMODYNAMIC SYSTEMS

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The aim of this project will be to explore basic understanding of some very simple physical systems using computer simulation techniques. This work may be of interest to students in Physics, Chemistry, Computer Science, Mathematics, and Material Science. The student selecting this topic will be asked to help develop and run a computer code to simulate the path dynamics connecting different configurations of small clusters of particles. The physical laws on the microscopic level are quite simple. The algorithm is grounded in an approach that uses stochastic differential equations. The emphasis of this project can be altered to reflect the interest of the student.