

**Department of Biological Sciences
MCMICKEN COLLEGE OF ARTS AND SCIENCES**

**SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN**

APPLICATION DEADLINE: March 2, 2009

The Department of Biology 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.

UNDERSTANDING HOW ANIMALS FIND THEIR HOME

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Project Description

Nearly all animals periodically return to a place of interest such as a home or favorite foraging area. How do they find it? The strategies for accomplishing this behavior, called "homing", differ widely among different animals, and depend on factors such as how the animals' sensory systems work, its neural processing capabilities (i.e. its "intelligence"), details of the animals' behavior, and the spatial cues available in a particular habitat. I am working on a project that will discover how fiddler crabs find their homes (small holes in the sand), and in particular, what role the position and movements of their eyes and landmarks have play in how they remember where they are relative to home.