

## Mathematical Sciences

### 1. Endowed Chair in Statistical Genetics - One Million Dollars

The Department of Mathematical Sciences has developed a strong research team in statistical genetics consisting of five faculty, two post-doc's, and eight graduate students under the leadership of Dr. Shuanglin Zhang. Their work develops mathematical, statistical, and computational tools to identify genes underlying many diseases such as hypertension, obesity, diabetes, and cystic fibrosis. The research group has been able to attract over one million dollars in grant money from the National Institute of Health which is the largest grant from NIH at MTU to date. It represents an important breakthrough to one of the largest funding agencies in the United States. Nationally, their research and funding record has put our statistical genetics group on the map.

Most statistical genetics groups in the U.S. are associated with large medical centers and they usually have at least one endowed chair in their research group. The establishment of an endowed chair in statistical genetics would substantially enhance the reputation of our statistical genetics group.

### 2. Outstanding Graduate Student Teaching Award - \$20,000

The Department of Mathematical Sciences has forty graduate students, most of whom are employed in some teaching capacity such as teaching their own course, assisting a professor in a large class or assisting in the computer labs.

Over the last five years, the department has developed an intensive teaching preparation program for the graduate students that has dramatically improved the teaching effectiveness of our graduate teaching assistants. To recognize the significant contributions that our TAs are making to the teaching mission of our department, we would like to establish an endowed teaching award for graduate students that recognizes our most outstanding teacher among our graduate teaching assistants with a \$1,000 award each year.

### 3. Outstanding Undergraduate Award - \$10,000

The Department of Mathematical Sciences is able to attract outstanding undergraduates to major in the various mathematics options.

During the 2005-06 academic year, two teams from the Mathematical Sciences Department placed second and seventh in a mathematics contest held by Alma College in which eighty teams from the universities across the state of Michigan competed.

We would like to endow an undergraduate scholarship of \$500 to recognize each year the outstanding undergraduate major in the Department of Mathematical Sciences.

4. Colloquium Speakers Fund - \$200,000

The Department of Mathematical Sciences has established a research reputation in applied mathematics, discrete mathematics, and statistics that is recognized internationally. Our faculty are frequently asked to be the featured speakers at conferences in their field or are asked to deliver colloquia at universities in the U.S. and abroad. We would like to bring outstanding researchers in mathematics to MTU to deliver colloquia and interact with our faculty on various research projects. In order to bring this about, we seek an endowment of \$200,000 to support this activity.