<h1 style="text-align:center">Seminar Announcement</h1>

**Time:**      Friday, March 3, 2000, 3:15pm

**Place:**      Auburn University Montgomery, Goodwyn Hall, Room 202

**Speaker:**  Yafang Song, Auburn University Montgomery

**Title:**      A Genetic Algorithm Based Approach for Solving Differential Equations

**Abstract:**

Genetic Algorithms (GAs), as search procedures based on the mechanics of natural selection and genetics, are finding increasing applications in areas such as optimization, machine learning, and operations research. A new area of exploration is solving differential equations using GAs. In this work, we make our first attempt to explore this area. Since the idea and the processes of GAs are different from traditional numerical methods, it is possible to use GAs to solve problems when traditional methods fail.

In this talk, we will give a brief introduction to Genetic Algorithms, and pose a model problem: the key-hole laser welding problem, in which we will apply GAs. The solution to the model problem using traditional numerical methods (Runge-Kutta), will be compared to the solution using GAs.