

## CS Masters' Thesis Defense

**Title:** *An Interactive Mitochondrial Database*  
**Speaker:** Jimmie Dixon  
**Date:** Wednesday, August 31, 2011  
**Time:** 10:00 a.m.  
**Location:** GMCS 405  
**Thesis advisor:** Dr Robert Edwards

### **Abstract:**

This project focuses on the development of a custom interactive mitochondrial database software tool, utilizing Java computer programming language, Google Maps application programming interface, JavaScript computer scripting language, Extensible Markup Language for encoding computer data, and HyperText Markup Language. This tool can aid researchers in studying human migration through mitochondrial deoxyribonucleic acid research. This software tool will be used in conjunction with existing mitochondrial databases, such as the mtDB Human Mitochondrial Genome Database and GenBank. In addition, advanced algorithms are incorporated to search downloaded human genome sequences on the desktop. Also, interactive maps can be utilized using a customized Google Maps feature.