**Mentor:** Gary G. Hoffman

**Student:** Ryan Thomas

**Project Description:** This project will apply computational electronic theory to some molecular systems.  In one project, the stable conformers of alanine will be determined using a series of computational methods.  Relative energies can be deduced and IR spectra predicted.  The second project studies the orientation of the hydroxide group on an aromatic ring and its effect on the electronic structure.  This will be correlated with the observed orientations in several estrogen molecules.