

## Discrete Mathematics Seminar

Time: Friday, 2 March 2012, 12:30-1:30 PM  
Room: 238 Derrick Hall  
Title: On the symmetry of a floating drop  
Speaker: Dr. Raymond Treinen, Mathematics Department

### Abstract:

Consider the equilibrium state of three fluids with different densities. The configuration depends on surface tension values, as well as densities when in a gravitational field. A survey of results will be presented, however we will focus on configurations filling  $\mathbb{R}^3$ , considering symmetry about a vertical line. Under certain conditions both light and heavy drops are shown to have this symmetry. Preliminary work will be presented for other configurations, where symmetry is not always expected.