Candice Price
will be presenting
A Discussion on the Tangle Model:
An Application of Topology

On Sunday, June 15, 2014 at 5:30 pm
in Campus Center 301

The tangle model was developed in the 1980's by professors DeWitt Sumner and Claus Ernst. This model uses the mathematics of tangles to model protein-DNA binding. An n-string tangle is a pair \((B,t)\) where \(B\) is a 3-dimensional ball and \(t\) is a collection of \(n\) non-intersecting curves properly embedded in \(B\). N-string tangles are formed by placing \(2n\) points on the boundary of \(B\), and attaching \(n\) non-intersecting curves inside \(B\). Tangles, like knots and links, are studied through their diagrams. In the tangle model for DNA site-specific recombination, one is required to solve simultaneous equations for unknown tangles which are summands of observed DNA knots and links. This discussion will give a review of the tangle model including definitions.