

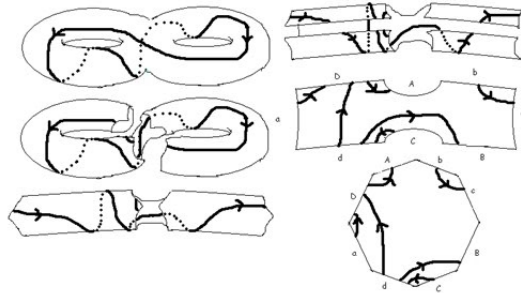
Stony Brook Math Club and Graduate Student Seminar

Wednesday, October 14, Math P-131

This is the first of a series of meetings of the Stony Brook Math Club aimed to give undergraduate students a glimpse of actual math research and math related activities. If you are curious about and/or interested in math, do not hesitate to come.

12:50-1:45pm Chris Arettines, *Visualizing curves and their intersections on surfaces*

In the mathematical fields of topology, group theory and geometry, it is often useful to study a surface by representing it as a sequence of symbols, called a surface word, which captures the essential properties of the surface. Likewise, we can represent a curve on this surface by another sequence of symbols, called a cyclic word. This is done by cutting the surface in an appropriate way, flattening it into what is called the fundamental polygon, and labeling the cut edges. The surface is then represented by the labels of the edges, and the curve is represented by the labels of the edges of the polygon that it passes through. An example of this process is shown below.



For this talk, I will go through the above concepts in more detail and present a simple algorithm which determines certain properties of a curve represented by a given word. (Links to a more detailed abstract and applet of the algorithm can be found in www.math.sunysb.edu/~moira) **The talk will be very informal and won't assume any advanced knowledge, so I encourage you to come and ask questions.**

1:45-2:15pm *Pizza social*

Chris is currently a first-year graduate student in mathematics at CUNY Graduate Center. He graduated from Stony Brook in May 2009, having written an honors thesis on topology of surfaces under the supervision of Moira Chas.