The Humboldt State University Department of Mathematics Presents:

The 61st Harry S. Kieval Lecture **

Thursday, April 18, 2013 7:30 P.M. Science B Room 135

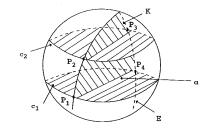
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"3-Dimensional Universes: What are the Options?"

Our local universe looks 3-dimensional, but globally we don't know which 3-dimensional universe it might be. For example, if we could program a rocket to go "straight" forever, what would happen? Would it fall off the edge of the universe? Come back to where it started? If it does come back to where it started, could the trace of its path be knotted in the underlying space? These are some of the problems motivating the area of low-dimensional topology. I'll talk about how we can think of some of these questions by looking at 2-dimensional spaces, or surfaces, and how we can formulate and (occasionally) answer some of these questions mathematically.