

**Undergraduate Math Club
Winter 2005
2nd floor Nesbitt Common Room
January 27, 4:10-5:05pm
(free pizza, pop, and popcorn)**

Math Movie Night

featuring

Movies from The Geometry Center

Titles

The Shape of Space (1995, 11 min). Explicitly intended for distribution to high schools, this movie examines the question, what does it mean for space to have a shape?

Not Knot (1991, 20 min). Provides a guided tour into computer-animated hyperbolic space. It proceeds from the world of knots to their complementary spaces -- what's not a knot. Profound theorems of recent mathematics show that most known complements carry the structure of hyperbolic geometry, a geometry in which the sum of three angles of a triangle always is less than 180 degrees.

Outside In (1994, 22 min). Explains the amazing discovery, made by Steve Smale in 1957, that a sphere can be turned inside out by means of smooth motions and self-intersections. Along the way, the narrators discuss the related case of closed curves and why they generally cannot be turned inside out.