The SUMO Speaker Series for Undergraduates
Thursday, March 6th
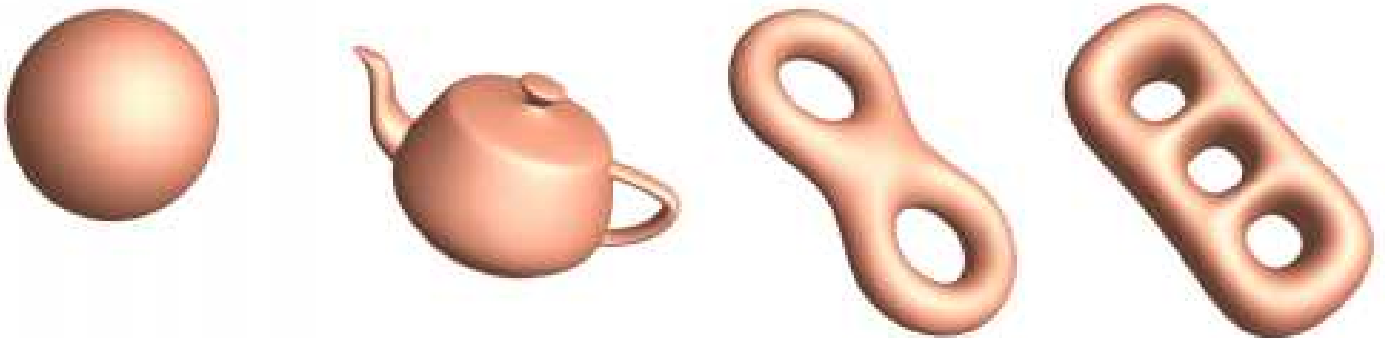4:15-5:05, room 380C
(Food Provided)

Curvature and Holes

Dr. Mario Micallef (University of Warwick)

Abstract:

Is a circle curved? Or does it merely bend in the plane? If a surface bends in 3-space, must it be curved? A discussion of these questions lead us to the precise formulation of bending and curvature due to Gauss and Riemann.

We shall next consider the mathematical description of a hole which will lead to an informal discussion of homology theory. The Gauss-Bonnet theorem provides the simplest link between the curvature of a surface and its homology. Hopefully, there will also be time to consider notions of optimal shape, which are of much current interest.

sumo.stanford.edu/speakers