Slicing Algebraic Varieties and Resolving Singularities

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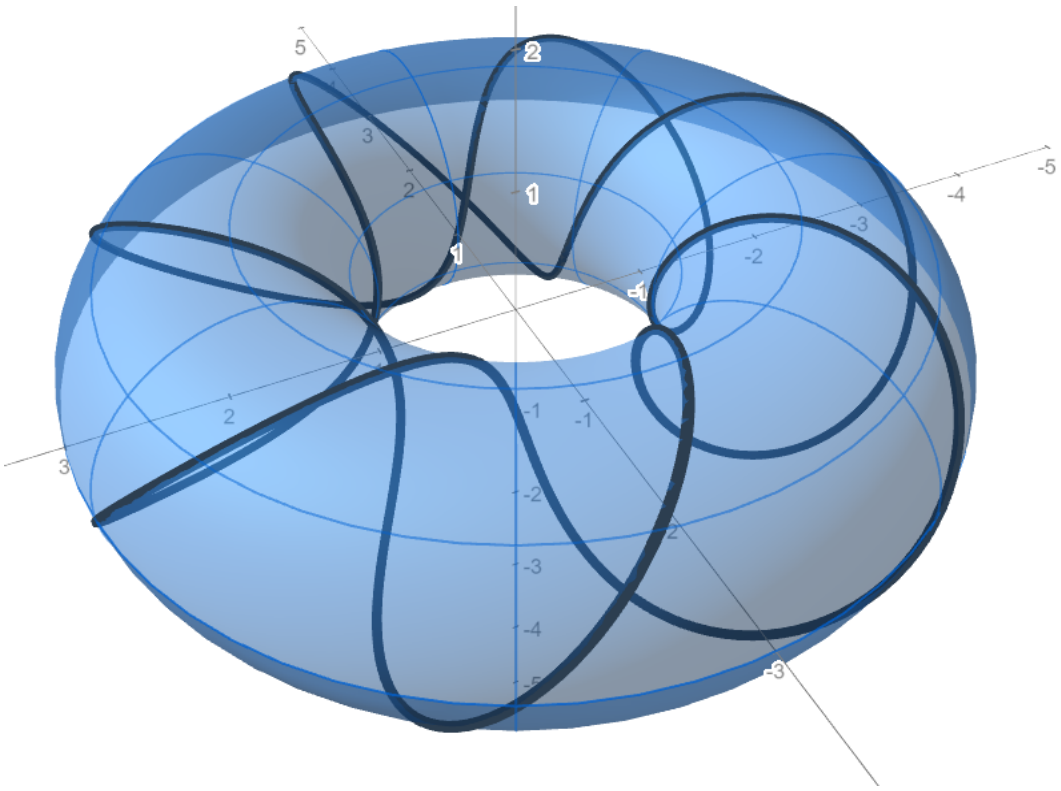

Picture a knot tied in a piece of rope and then glue the ends together. You can move it around, but if it is really knotted, you can't simplify it without cutting the rope. Many mathematicians study knots! In the mathematical field of algebraic geometry, knots arise naturally as the "links" of singular points of algebraic surfaces. I will explain what this means using classical examples: torus knots. Then I will discuss how we can "resolve" a singular point by cutting it out and gluing back a smooth piece of surface in its place. How does this work? What kind of surface can we glue in? I will discuss all this and more.

Date: Tuesday November 19, 2019
Time: 7:00 pm
Place: Park 328