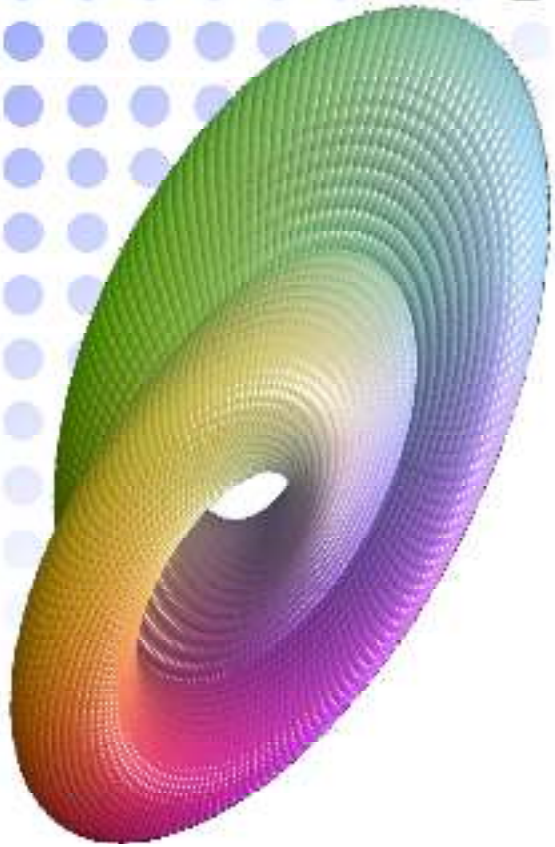
Michigan Math Club

Thursday at 4pm in the Commons

Free Pizza and Pop



Plane Ol' Birational Geometry

Zachary Maddock
(Columbia)

Abstract for 12 February

Given a polynomial equation like $y^2 = x^3 + x^2$, one can ask whether one can parameterize the solutions (x,y) with rational functions $x = ß(t)$ and $y = \mu(t)$. It turns out, we can reformulate this question into the language of field theory to obtain a satisfactory answer. In this talk, I will explore these first steps into the branch of algebraic geometry called birational geometry. Furthermore, for all those Calc II enthusiasts (I know you're out there), I will show how one can use these parameterizations to compute some tricky integrals.