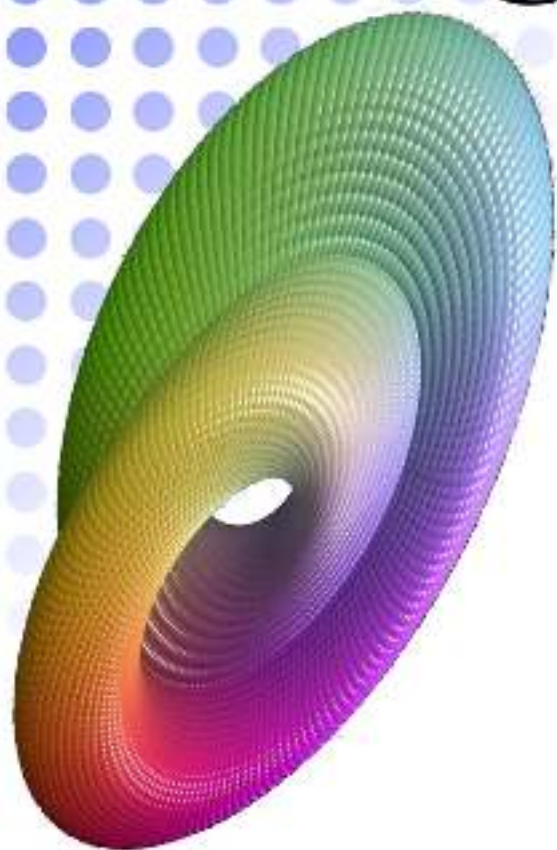


Michigan Math Club

Thursday at 4pm in the Nesbitt Room

Free Pizza and Pop



Knot theory and the Jacobian conjecture

Takumi Murayama

Abstract for 18 January 2018



Complex 2-space \mathbb{C}^2 is one of the most basic objects in mathematics, but it is still very mysterious. For example, the Jacobian conjecture asks whether a polynomial self-map of \mathbb{C}^2 with invertible Jacobian has a polynomial inverse. The Abhyankar--Moh theorem gives a partial answer to this question. While these statements are purely algebraic, we will use knot theory to prove a special case of the Jacobian conjecture, following Rudolph and Gwozdziwicz.