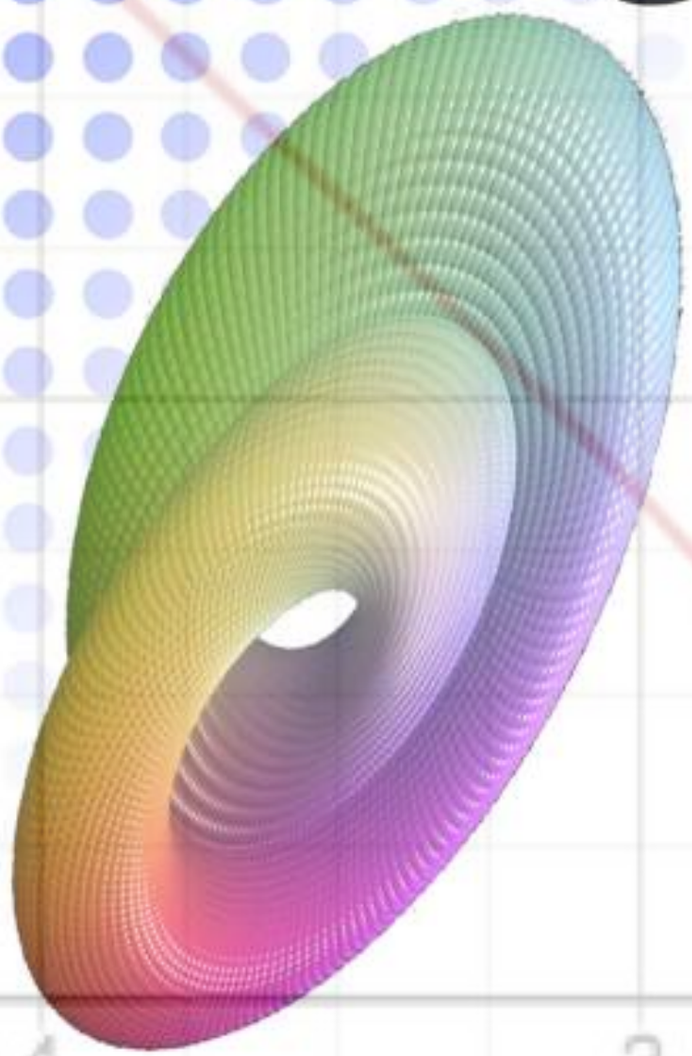
Michigan Math Club

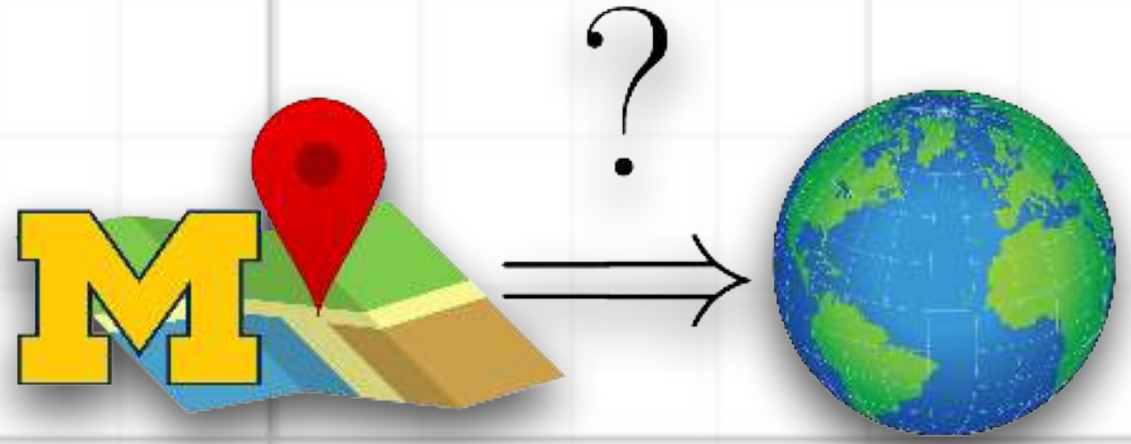
Thursday at 4pm in EH1360

Free raffle prizes afterwards!



Solutions of polynomials mod q

Lena Ji • 17 February 2022



Let's count modulo q: $1, 2, \ldots, q-1, 0$. We can reduce any given integer mod q, and similarly, given a polynomial equation with integer coefficients, we can also consider its reduction mod q. One might wonder if there is any relationship between the solutions of a polynomial mod q and its integer solutions.

In this talk we'll mention some connections between these "local" and "global" solutions and introduce the Hasse principle.