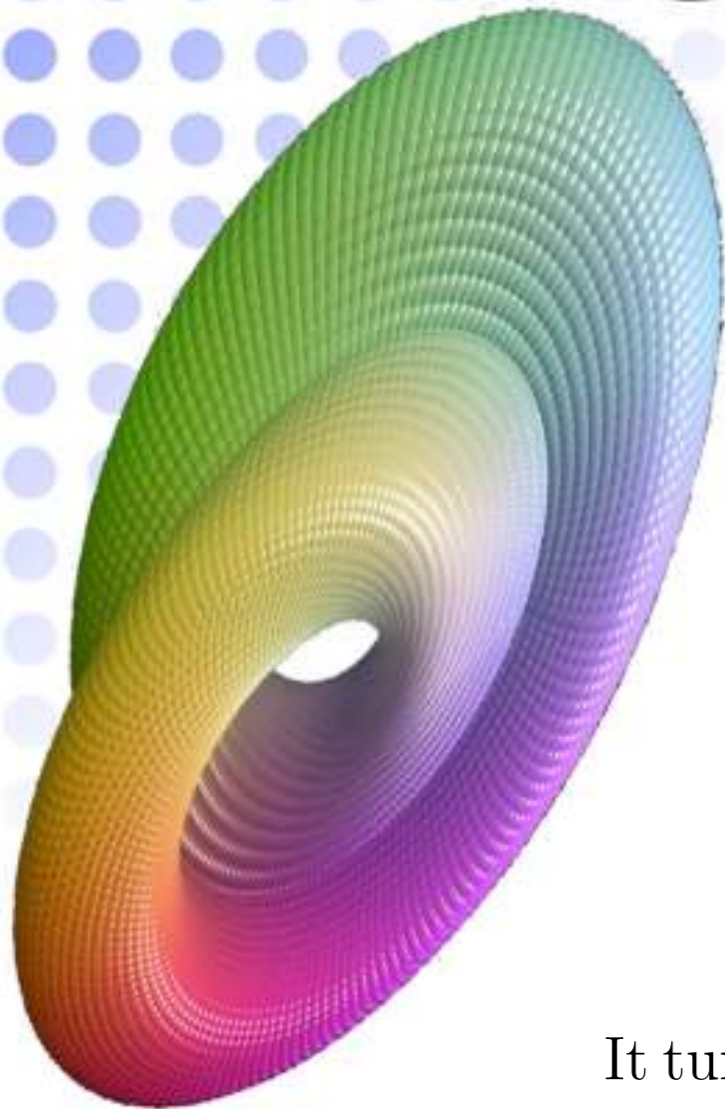


Michigan Math Club

Thursday at 4pm in the Nesbitt Room
Free Pizza and Pop



The geometry of continued fractions

Anton Lukyanenko

Abstract for 08 September 2016

It turns out that any real number can be written as a continued fraction:

$$x = a_0 + \frac{1}{a_1 + \frac{1}{a_2 + \dots}}$$



We'll see how working with continued fractions leads to thinking about hyperbolic geometry, and then talk about generalizations to complex continued fractions and Heisenberg continued fractions - and the related hyperbolic spaces. Lots of pictures, videos, and 3D prints will guide our intuition for the geometries we encounter along the way.