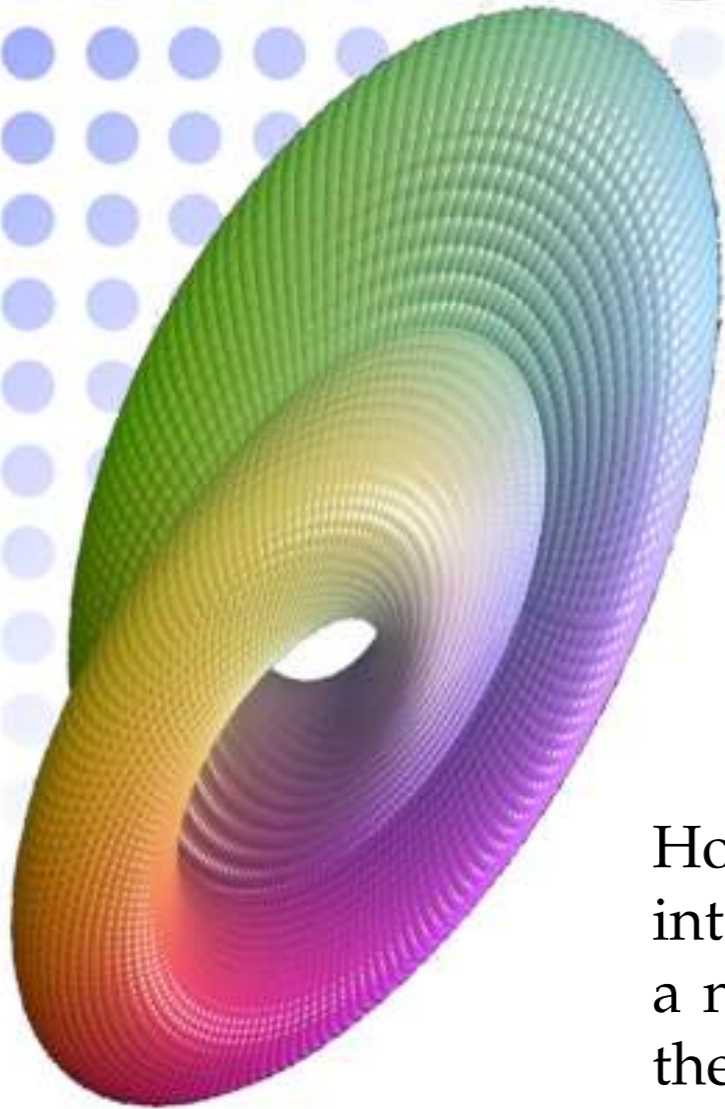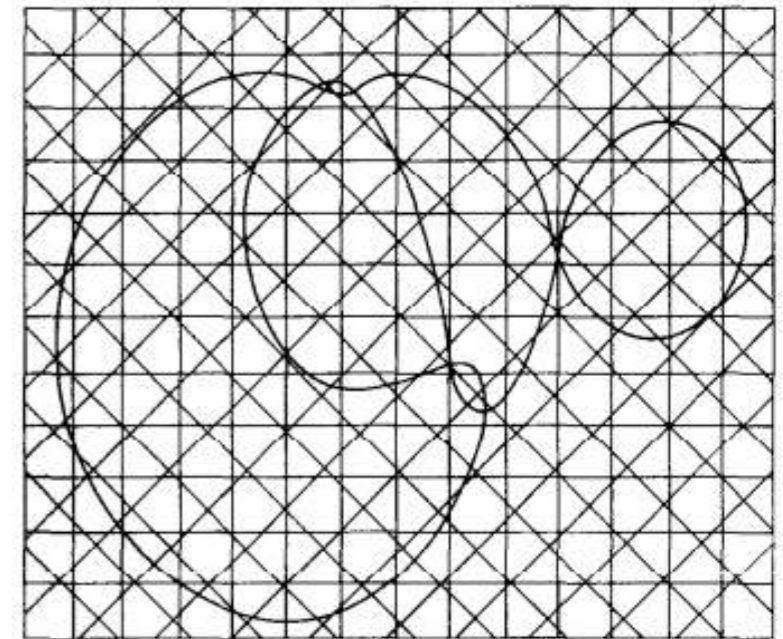# Michigan Math Club

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

Crofton's formula, Buffon's needle, and the isoperimetric inequality

Carsten Peterson • 18 April 2019

How many times does a "random" line intersect a curve in the plane? If you drop a needle onto a hardwood floor, what is the chance that it lies across one of the cracks? Given a fixed amount of fence material, what shape should you make your fence to enclose maximal area?

All of these questions can be answered using a few beautiful ideas which build a bridge between geometry and probability. This talk should be accessible to anyone familiar with calculus.