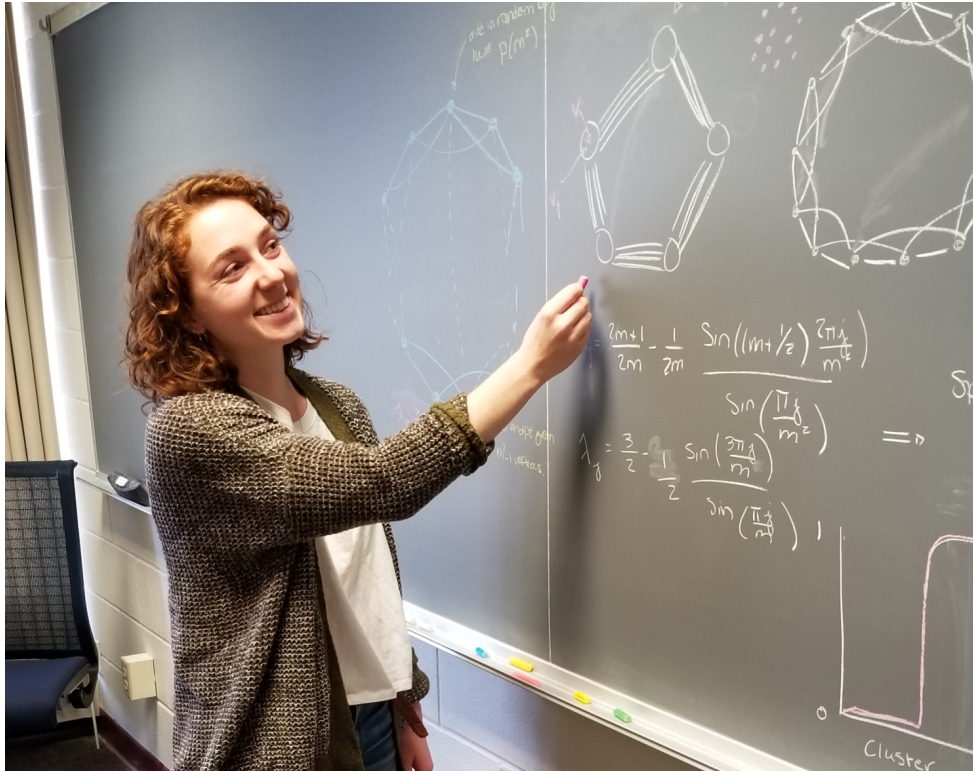


The MATHEMATICS Honors Lecture Series



Hannah Pieper '18

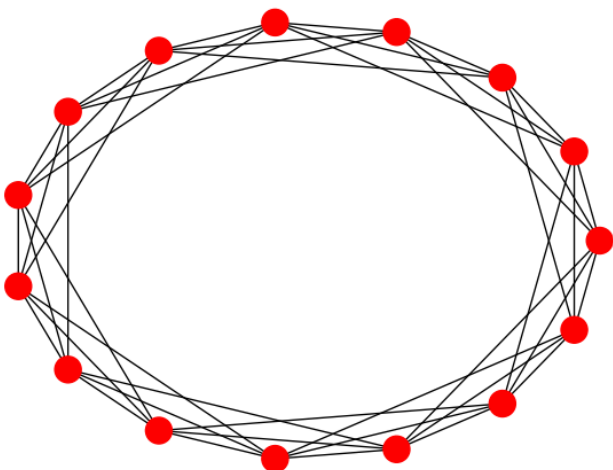
Monday, April 30

Reception 4:00, King 203

Lecture 4:30, King 239

Comparing Two Thickened Cycles

Complex networks play an important role in a variety of disciplines, ranging from computer science, physics, sociology, and biology. One of the most significant classes of graphs are those that demonstrate "small-world" phenomenon; meaning that they are highly connected and display local clustering but have a relatively small diameter. The most famous example of this is the concept of six degrees of separation; meaning that on average, any two people can be connected via a sequence of five or fewer mutual friends.



In this talk, we will give an overview of the standard mathematical tools used to analyze networks. We will also discuss a variation of a known small-world random graph model, as well as some novel results that arose from our explorations.