

# Fall 2019 Undergraduate Seminar

Department of Mathematics



## A note on the Collatz Conjecture

### Derek Orr

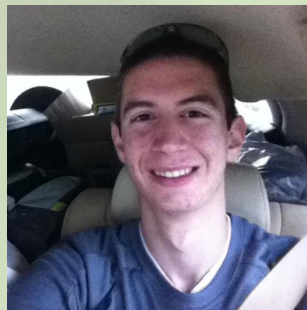
Math PhD Student, University of Pittsburgh

**Date:** Tuesday, September 24

**Time:** 12:00 - 12:50 pm

**Location:** Room 703, Thackeray Hall

Derek Orr received his BS in both math and physics from the University of Pittsburgh in 2016. As a PhD student, he's received the Elizabeth Baranger Teaching Award in his first year, and he got an MS in number theory. He currently works under Dr. Bard Ermentrout in mathematical biology, studying oscillatory and excitable neuron interactions. He has been an organizer of the UMS since 2016.



Take your favorite positive integer. If it's even, divide it by 2. If it's odd, multiply by 3 and add 1. Continue these steps with the new number you get and repeat forever. The Collatz conjecture claims that any positive integer you start with, you will eventually end up at 1. Recently, Terence Tao proved some strong partial results on this conjecture. In light of this, I will remark on some (not new) theorems involving this infamous conjecture. Food and drinks will be provided!

### SPEAKER(S) FOR NEXT WEEK:

Behnam Esmayli



Organized by: Derek Orr, Tom Everest, Jeremiah Morgan, and Jeff Wheeler