

# Michigan Math Club

Thursday at 4pm in the Commons

Free Pizza and Pop

## Continued Fractions

Ian Shipman

Abstract for 29 January 2015

Continued fractions are a way to describe real numbers as sequences of integers. Using continued fractions, one can show that the golden ratio is among the most difficult irrational numbers to approximate by rationals. The construction of continued fractions also leads to a natural dynamical system on the interval. By studying this system, Khinchin showed that for almost any real number, the limiting geometric mean of the integers defining a continued fraction is about 2.6854!

