

Geometry, Groups and Dynamics/GEAR Seminar
(held at the Illinois hub of GEAR)

12:00 pm, Thursday, February 15, 2018, 243 Altgeld Hall

Merriman Claire (Illinois Math)

Coding geodesic flows and various continued fractions

Abstract: Continued fractions are frequently studied in number theory, but they can also be described geometrically. I will give both pictorial and algebraic descriptions of the flows that describe continued fraction expansions. This talk will focus on continued fractions of the form

$\frac{1}{a_1 + \frac{1}{a_2 + \frac{1}{a_3 + \ddots}}}$, where the a_i are odd. I will show how to describe these continued fractions as geodesic flows on a modular surface, and compare it to the modular surface needed when a_i are even.

[Video](#)