Department of Mathematics and Computer Science

Friday, Febuary 23, 2018, 4:10 pm

COLLOQUIUM TALK

Speaker: Anush Tserunyan (UIUC)

Old Main 2231

Orbit equivalence, cost, and decompositions

Abstract:

Let $\mathbb{F}_n \curvearrowright [0,1]$ and $\mathbb{F}_m \curvearrowright [0,1]$ be free actions of the free groups on n and m generators and assume that these actions preserve the Lebesgue measure and are ergodic (i.e. indecomposable). If these actions produce the same orbits (i.e. their orbit equivalence relations are equal), must $n = m$? This is an instance of the more general question: how much of the group is "remembered" by the orbit equivalence relations of its free measure-preserving actions? The answer for free groups was given by D. Gaboriau in '98 via *cost*: a numerical invariant for measure-preserving equivalence relations involving measured graphs and their combinatorics. I will introduce this invariant and discuss relevant results, obtained in joint work with B. Miller, on decomposing ergodic graphs of cost n into at most n ergodic $\mathbb{Z}$-actions.

SNACKS IN FACULTY LOUNGE AT 3:30 PM.
EVERYONE WELCOME (EVEN IF YOU ARE UNABLE TO ATTEND THE TALK)