Department Colloquium

Speaker: Thomas Barthelmé, Pennsylvania State University
Date: Friday, January 22
Time: 2:30 p.m.
Place: Jeffery 234
Title: Counting orbits of Anosov flows in free homotopy classes

Abstract: Anosov flows are the archetypical examples of flows exhibiting a chaotic behaviour, and have been widely studied since the 1960's. In the late 60's, early 70's, Margulis and Bowen gave estimates of the growth rate of periodic orbits of Anosov flows, linking it to the topological entropy. Since then, there has been a lot of research furthering counting questions. If one consider only Anosov flows, these developments have been either into giving more precise estimates or into counting periodic orbits given a homological constraint, i.e., counting periodic orbits that are in the same fixed homology class.

I will give an expository talk about the theory of Anosov flows in 3-manifolds, and will explain how one can use their geometry and topology to obtain estimates in a previously unstudied direction: counting orbits in the same free homotopy class.