Algebra/Topology Seminar

BENA TSHISHIKU
Harvard University

SYMMETRIES OF EXOTIC NEGATIVELY CURVED MANIFOLDS

Thursday, October 11, 2018
1:15 p.m. in ES-143

ABSTRACT. Let $N$ be a smooth manifold that his homeomorphic but not diffeomorphic to a hyperbolic manifold $M$. How much symmetry does $N$ have? In particular, does $\text{Isom}(M)$ act on $N$ by diffeomorphisms? Farrell-Jones showed that in general the answer is “No”; however, for their examples, it is still possible for the orientation-preserving subgroup to act on $N$. In this talk, we will discuss this problem and its relation to Nielsen realization. We give examples of $N$ such that $\text{Isom}(M)$ does act on $N$, as well as examples where the largest subgroup of $\text{Isom}(M)$ that acts on $N$ has arbitrarily large index. This is ongoing joint work with Mauricio Bustamante.