

Algebra/Topology Seminar

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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 is 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.