

Mathematics Colloquium

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**Torelli Groups
and Pseudo-Anosov
Homeomorphisms**

Abstract: For a given closed orientable surface S , we consider the Torelli group $T(S)$, which is the group of isotopy classes of homeomorphisms acting trivially on the homology of S . This group is the “mysterious part” of the mapping class group (the group of isotopy classes of homeomorphisms of S), and has connections to 3-manifold theory, symplectic representation theory, algebraic geometry, and combinatorial group theory. We will explain some recent progress towards understanding the Torelli group, and will focus on a recent theorem of Benson Farb, Chris Leininger, and myself, which can be summarized as “algebraic complexity implies dynamical complexity” for surface homeomorphisms.

Tuesday, April 11

4:00-5:00 pm

204 Smith Hall

Please note special day