Abstract

In this two part work we prove that for every finitely generated subgroup $\Gamma < \mathsf{Out}(F_n)$, either Γ is virtually abelian or $H^2_b(\Gamma;\mathbb{R})$ contains a vector space embedding of ℓ^1. The method uses actions on hyperbolic spaces. In Part I we focus on the case of infinite lamination subgroups Γ—those for which the set of all attracting laminations of all elements of Γ is an infinite set—using actions on free splitting complexes of free groups. In Part II we focus on finite lamination subgroups Γ and on the construction of useful new hyperbolic actions of those subgroups.