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Torsion on some fibered cusp manifolds

Given a number field F with ring of integers O_F , one can associate to any torsion free subgroup of $SL(2, O_F)$ of finite index a complete Riemannian manifold of finite volume with fibered cusp ends. For natural choices of flat vector bundles on such a manifold, we show that analytic torsion is identified with the Reidemeister torsion of the Borel-Serre compactification. This is used to obtain exponential growth of torsion in cohomology for sequences of congruence subgroups. This is an ongoing joint work with Werner Müller.