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Cusps of arithmetic hyperbolic manifolds

The Margulis thick-thin decomposition implies that a non-compact n -dimensional hyperbolic manifold can be decomposed into a compact piece along with a collection of cusps, which are subsets diffeomorphic to the product of a flat $n - 1$ -manifold with an open interval. One natural question is thus to ask which combinations of flat manifolds can be realized as cusp cross-sections in some hyperbolic manifold. I will discuss some aspects of this question with an emphasis on the case of arithmetic hyperbolic manifolds. In particular, I will explain how one can characterize which flat manifolds arise as a cusp cross-section in a given commensurability class of arithmetic hyperbolic manifolds and, time permitting, some mildly interesting examples. This is joint work with Connor Sell.