

## Quasi-hyperbolic planes in relatively hyperbolic groups

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Abstract: In this talk, I will discuss the geometry of groups that are hyperbolic relative to virtually nilpotent peripheral groups. In particular, I'll characterise which of these groups admit a quasi-isometrically embedded hyperbolic plane.

This involves the interplay between the large scale geometry of relatively hyperbolic groups and analytic properties of their boundaries.

We apply this to study the same question for fundamental groups of closed 3-manifolds. (This is based on joint work with Alessandro Sisto.)