FINITE TOPOLOGY SURFACES OF CONSTANT MEAN CURVATURE IN HYPERBOLIC 3-MANIFOLDS.

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Resumo/Abstract:
If N is a noncompact hyperbolic 3-manifold of finite volume and Σ is a properly immersed surface of finite topology with constant mean curvature $H \in [0, 1)$, we prove that each end of Σ is asymptotic (with finite positive multiplicity) to a standard end, where by standard end we mean an embedded annulus whose lift to hyperbolic 3-space is contained in an equidistant surface to a totally geodesic plane. We also address the question of whether, given $H \geq 0$, there exists a finite topology H-surface properly embedded in some hyperbolic 3-manifold of finite volume. This is joint work with Bill Meeks.

References

[1] W. H. MEEKS III, A. K. RAMOS, *Finite topology surfaces in hyperbolic 3-manifolds*, preprint at arXiv:1603.02116 [math.DG]