ABSTRACT:

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The renormalized volume of quasifuchsian manifolds and extremal length

Quasifuchsian hyperbolic manifolds have infinite volume, but theyhave a well-defined "renormalized" volume, closely related to the Liouville functional. It has interesting "analytic" properties, in particular it provides a Kähler potential for the Weil-Petersson metric of the boundary at infinity, but also interesting "coarse" properties. We will describe an analogy between the renormalized volume and the volume of the convex core, where the length of laminations on the boundary of the convex core is analoguous to the extremal length of measured foliations at infinity. This analogy leads to a number of questions.