Benjamini-Schramm convergence of normalized characteristic numbers

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Abstract:

On the class of closed Riemannian manifolds with Ricci curvature and injectivity radius bounded from below we study the parameter given by a characteristic number over the volume of the manifold. The domain of this parameter is endowed with the Benjamini-Schramm (BS) topology, a weak version of pointed Gromov-Hausdorff convergence. This parameter is continuous and has a continuous extension to the completion of its domain in the BS topology. From the known fact that this completion is compact one can derive a testability result for characteristic numbers as well as a uniform bound on any fixed characteristic number in terms of the volume.

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