

On the geodesic flow on CAT(0) metric spaces

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We adopt the classical approach used in the proof of topological mixing of the geodesic flow for certain classes of Riemannian manifolds (see [1], [3], [2]) in order to establish, under certain necessary assumptions, topological mixing of the geodesic flow for CAT(0) spaces which are hyperbolic in the sense of Gromov. It has been shown recently [4] that mixing of the geodesic flow holds for rank one CAT(0) spaces under the additional assumption that the Bowen-Margulis measure is finite.

- [1] D.V. Anosov, *Geodesic flows on closed Riemannian manifolds with negative curvature*, Proc. Stelkov Instit. Math. 90, Amer. Math.Soc., Providence, Rhodes Island, 1969.
- [2] P. Eberlein, *Geodesic flows on negatively curved manifolds II*, Trans. Amer. Math. Soc. 178 (1973), pp.57-82.
- [3] P. Eberlein, *Geodesic flows on negatively curved manifolds I*, Annals of Math. 95(1972), 492-510.
- [4] R. Ricks, *Flat strips, Bowen–Margulis measures, and mixing of the geodesic flow for rank one CAT(0) spaces*, Ergod. Th. & Dynam. Sys. (2017) 37, 939–970.

* Joint work with Charalampos Charitos and Ioannis Papadoperakis