Sullivan, D.

The Dirichlet problem at infinity for a negatively curved manifold. (English) Zbl 0541.53037

J. Differ. Geom. 18, 723-732 (1983).

Let M be a simply connected Riemannian manifold with sectional curvature bounded between two negative constants. The author uses probability theory to prove that each continuous function on the sphere at infinity $\partial\bar{M}$ has a continuous harmonic extension to $M \cup \partial\bar{M}$. As a consequence it follows that there are many non-constant bounded harmonic functions on M. This result was proved independently by *M. T. Anderson* by a different method [see the preceding review].

Reviewer: G.Thorbergsson

MSC:

53C20	Global Riemannian geometry, including pinching
31C05	Harmonic, subharmonic, superharmonic functions on other spaces

Keywords:
Dirichlet problem at infinity; probability on Riemannian manifolds; harmonic functions

Full Text: DOI