

ON THE EXPONENT OF CONVERGENCE OF
NEGATIVELY CURVED MANIFOLDS WITHOUT
GREEN'S FUNCTION

MARÍA V. MELIÁN*, JOSÉ M. RODRÍGUEZ*[†], AND EVA TOURÍS*

Abstract: In this paper we prove that for every complete n -dimensional Riemannian manifold without Green's function and with its sectional curvatures satisfying $K \leq -1$, the exponent of convergence is greater than or equal to $n - 1$. Furthermore, we show that this inequality is sharp. This result is well known for manifolds with constant sectional curvatures $K = -1$.

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Key words: Riemannian manifold, negative curvature, Green's function, first eigenvalue, exponent of convergence.