**Title:** Regularity at infinity of Hadamard manifolds with respect to some elliptic operators with applications to asymptotic Dirichlet problems

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**Abstract:** Let $M$ be Hadamard manifold with sectional curvature $K_M \leq -k^2$, $k > 0$. Denote by $\partial_\infty M$ the asymptotic boundary of $M$. We say that $M$ satisfies the strict convexity condition (SC condition) if, given $x \in \partial_\infty M$ and a relatively open subset $W \subset \partial_\infty M$ containing $x$, there exists a $C^2$ open subset $\Omega \subset M$ such that $x \in \operatorname{Int}(\partial_\infty \Omega) \subset W$ and $M \setminus \Omega$ is convex. We prove that the SC condition implies that $M$ is regular at infinity relative to the operator

$$\mathcal{Q}[u] := \operatorname{div}\left(\frac{a(|\nabla u|)}{|\nabla u|}\nabla u\right),$$

subject to some conditions. We then obtain that under the SC condition, the Dirichlet problem for the minimal hypersurface and the $p$-Laplacian ($p > 1$) equations are solvable for any prescribed continuous asymptotic boundary data. It is also proved that if $M$ is rotationally symmetric or if $\inf_{B_{R+1}} K_M \geq -e^{2kR}/R^{2+2\varepsilon}$, $R \geq R^*$, for some $R^*$ and $\varepsilon > 0$ then $M$ satisfies the SC condition. This is a joint work with Miriam Telichevesky.