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Xiaodong Wang* (xwang@math.msu.edu). *Boundary effect of Ricci curvature.*

On a compact Riemannian manifold with boundary, we study how Ricci curvature of the interior affects the geometry of the boundary. First we establish integral inequalities for functions defined solely on the boundary and apply them to obtain geometric inequalities involving the total mean curvature. Then we discuss related rigidity questions and prove Ricci curvature rigidity results for manifolds with boundary.

This is joint work with Pengzi Miao at University of Miami. (Received September 02, 2014)