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T Toro* (toro@math.washington.edu), Department of Mathematics, University of Washington, Box 354350, Seattle, WA 98195-4350. *Potential Theory meets Geometric Measure Theory.*

A central question in Potential Theory is the extent to which the geometry of a domain influences the boundary regularity of solutions to divergence form elliptic operators. To answer this question one studies the properties of the corresponding elliptic measure. On the other hand one of the central questions in Geometric Measure Theory (GMT) is the extent to which the regularity of a measure determines the geometry of its support. The goal of this talk is to present a few instances in which techniques from GMT and Harmonic Analysis come together to produce new results in both of these areas. (Received September 08, 2010)