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**Dorina Mitrea\*** ([dorina@math.missouri.edu](mailto:dorina@math.missouri.edu)), 202 Math Sci Bldg, Department of Mathematics, University of Missouri-Columbia, Columbia, MO 65211. *Mapping properties of Green potentials in nonsmooth domains.*

The goal is to establish sharp  $W^{s,p}$ - $W^{s,q}$  estimates for the solution operator of the Dirichlet/Neumann Laplacian in a Lipschitz domain. The case  $s = 0$ , corresponding to  $L^p$ - $L^q$  estimates, is due to B.E. Dahlberg, who has dealt with the case of the Dirichlet boundary condition. The approach we develop, based on SIO's, embeddings, and interpolation, is more flexible and allows the treatment of other types of boundary conditions and PDE's. (Received February 06, 2006)