

The Dirichlet Green Potential in Convex Domains

Abstract: In this talk I will discuss mapping properties of the Dirichlet Green potential on the scale of Besov and Triebel-Lizorkin spaces when the underlying domain satisfies a uniform exterior ball condition or, it is a convex domain. In the process I deal with the Dirichlet and Regularity problems for harmonic functions in convex domains, with optimal nontangential maximal function estimates.