

NONLINEAR EQUATIONS WITH NATURAL GROWTH TERMS

IGOR VERBITSKY

(University of Missouri, Columbia)

Global bilateral estimates will be presented for Green's function of the fractional Schrödinger operator with general attractive potential. These results are deduced from sharp estimates of the kernel of the Neumann series associated with a general integral operator with positive kernel satisfying a quasimetric property. Analogous estimates will be discussed for some nonlinear operators, in particular the p -Laplacian with a natural growth term, as well as more general quasilinear and fully nonlinear elliptic operators. This talk is based on joint work with Michael Frazier and Fedor Nazarov, and Benjamin Jaye.