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TITLE: POSITIVE SOLUTIONS FOR QUASILINEAR ELLIPTIC INEQUALITIES

Abstract: In this talk, I will present a joint result with Marius Ghergu and Gurpreet Singh on the existence of positive solutions for quasilinear elliptic inequalities. Given a general differential operator  $L$  such as the  $m$ -Laplace operator, for instance, we study the elliptic inequality  $-Lu \geq (I_a * u^p)u^q$ , where  $I_a$  is the Riesz potential of order  $a$  and the asterisk denotes convolution. Our main result provides the sharp conditions on the parameters  $a, p, q$  for which positive solutions exist over general open subsets of  $R^n$ .