

Regularity results for a class of degenerate and singular nonlocal equations.

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Abstract

In this talk, we will discuss regularity estimates for a class of degenerate/singular fully nonlinear nonlocal equations. In the degenerate scenario, we establish that there exists at least one viscosity solution of class $C_{loc}^{1,\alpha}$, for some constant $\alpha \in (0, 1)$. In addition, under suitable conditions on the degree of the operator σ , we prove regularity estimates in Hölder spaces for any viscosity solution. We also examine the singular setting and prove Hölder regularity estimates for the gradient of the solutions.