Interior Regularity Results for Fractional Elliptic Equations that Degenerate with the Gradient

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In this talk we will show interior regularity estimates for viscosity solutions of nonlocal Dirichlet problems that degenerate when the gradient of the solution vanishes. We will presents Holder estimates when the order of the fractional diffusion is less or equal than one, and Lipschitz estimates when it is bigger than one. In the latter case, the estimates are robust enough to conclude interior $C^{1,\alpha}$ regularity by an improvement of the flatness procedure.