On fractional quasilinear equations with elliptic degeneracy.

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Abstract

In this talk, we present a systematic approach to investigate the existence, multiplicity, and local gradient regularity of solutions for nonlocal quasilinear equations with local gradient degeneracy. Our method involves an interactive geometric argument that interplays with the uniqueness property for the corresponding homogeneous problem, leading with gradient Hölder regularity estimates. This approach is intrinsically developed for nonlocal scenarios, where uniqueness holds for the local homogeneous problem.