

$C^{1+\alpha}$ regularity for the fractional p -Laplacian

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Abstract

The fractional p -Laplacian operator is the natural extension of the classical p -Laplacian to the nonlocal setting and appears as the first variation of the Gagliardo seminorm. In this talk, we will discuss a recent result obtained in collaboration with **Davide Giovagnoli** and **Luis Silvestre**, where we solve a standing conjecture asserting that, as in the local setting, solutions of the homogeneous equation are still Hölder differentiable.