REGULARITY FOR (s, p)-HARMONIC FUNCTIONS

FRANK DUZAAR

We report on higher Sobolev and Holder regularity results for local weak ¨ solutions of the fractional p-Laplace equation of order $s \in (0, 1)$ with $1 < p < \infty$. The relevant estimates are stable when the fractional order s reaches 1, and the known Sobolev regularity estimates for weak solutions of the local p-Laplace equation are recovered. The talk is based on joint work with Verena Bogelein (Salzburg), Naian Liao ¨(Salzburg), Giovanni Molica Bisci (Urbino), and Raffaella Servadei (Urbino).