

A SURVEY ABOUT REGULARITY RESULTS FOR ANISOTROPIC PARABOLIC OPERATORS

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Abstract

We will speak about the elliptic or parabolic anisotropic equations whose prototypes are

$$\sum_{i=1}^N D_i (|D_i u|^{p_i-2} D_i u) = 0$$

$$u_t = \sum_{i=1}^N D_i (|D_i u|^{p_i-2} D_i u)$$

with $1 < p_1 \leq p_2 \leq \dots \leq p_N < \infty$.

Note that when all the p_i are equal we have the p -Laplacean equation.

This kind of equations were introduced by Giaquinta and Marcellini. Many are contributions on the subject, but not very much is known about the regularity when the coefficients are not regular. We give an overview of the state-of-the-art.