

A Critical Neumann problem with anisotropic p-Laplacian

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Abstract

We are concerned with the existence of a positive solution of a critical Neumann problem involving the anisotropic p-Laplacian on a C^1 bounded domain inside a convex open cone in \mathbb{R}^N . Besides the critical growth, the main challenge to succeed with a variational approach, where the strong convergence of a bounded (PS) subsequence needs to be proved, is to deal with anisotropic norms in the absence of a Tartar's type inequality. The solution we obtain is a bounded $C^{1,\alpha}(\Omega)$ function which is strictly positive inside the domain.

This is joint work with **Olimpio Miyagaki** (UFSCar) and **Alânio Nóbrega** (UFMG).