

**REGULARITY RESULTS FOR THE VECTORIAL  $p$ -LAPLACIAN****Authors:**

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**Abstract:**

We prove some regularity results for solutions to vectorial  $p$ -Laplace equations

$$-\Delta_p \mathbf{u} = -\operatorname{div}(|D\mathbf{u}|^{p-2} D\mathbf{u}) = \mathbf{f}(x, \mathbf{u}) \quad \text{in } \Omega.$$

More precisely we address the issue of second order estimates.

**References:**

[1]

- [2] L Montoro, L Muglia, B Sciunzi, D Vuono. *Regularity and symmetry results for the vectorial  $p$ -Laplacian*. arXiv preprint arXiv:2311.05388