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Multiplicity of positive solutions for some quasilinear Dirichlet problems on bounded domains in $\mathbb{R}^n$

Abstract: We show that, under appropriate structure conditions, the quasilinear Dirichlet problem

$$\begin{cases} -\operatorname{div}(|\nabla u|^{p-2}\nabla u) = f(x,u), & x \in \Omega, \\ u = 0, & x \in \partial\Omega, \end{cases}$$

where Ω is a bounded domain in $\mathbb{R}^n$, $1 < p < +\infty$, admits two positive solutions u_0, u_1 in $W_0^{1,p}(\Omega)$ such that $0 < u_0 \leq u_1$ in Ω, while u_0 is a local minimizer of the associated Euler-Lagrange functional.