

عنوان مقاله:

A note on the existence of positive solution for a Class of Quasilinear Elliptic System Involving the indefinite weight functions

محل انتشار:

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خلاصه مقاله:

In this note, we consider the positive solutions to the singular problem $-\Delta u_1 = a_1(x)u_1^{-2}$, in Ω , $-\Delta u_2 = a_2(x)u_2^{-3}$, in Ω , ... $-\Delta u_n = a_n(x)u_n^{-1}$, in Ω , $u_i = 0$ for $1 \leq i \leq n$ on $\partial\Omega$ (1) where λ is a positive parameter, Δ is a Laplacian operator, $\lambda_i > 0$ for $i=1,2,\dots,n$. The weight functions $a_i(x)$ satisfies $a_i(x) \in C(\Omega)$ and $a_i(x) > 0$ for $x \in \Omega$ and $1 \leq i \leq n$. and Ω is a bounded domain in \mathbb{R}^N ($N > 1$) with smooth boundary $\partial\Omega$. By using the method of sub-super solutions we prove the existence of positive solutions for each $\lambda > 0$.

کلمات کلیدی:

Quasilinear elliptic system; positive solutions. AMS Subject Classification: 35J65

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