论文

UNIQUENESS OF THE POSITIVE SOLUTION FOR SINGULAR NONLINEAR BOUNDARY VALUE PROBLEMS

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摘要   This paper is concerned with the bounded value problems $1/p(t)(p(t)u')'+f(u)=0$, $t>0$, $u'(0)=0$, $\lim t\to+\infty u(t)=0$, where $f(0)=0$. Such problems arise in the study of semi-linear elliptic differential equa-tions in $R\sim n$. It is shown that the problem has at most one positive solution under appropriate conditions on f and p. Our result can include the important case that $p(t)=f\sim(n-1)$ and $f(u)=u\sim P-u$, where $n>1$, $p>1$ are some given constants.

关键词   Uniqueness,singular boundary value probl

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