

论文

半线性奇系数临界双调和方程的Dirichlet问题

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摘要:

主要探讨了两类半线性双调和Dirichlet问题: 奇系数次临界问题和临界但带较弱奇性问题, 得出了在临界维数和正常维数不同情况下都至少有一个正解的结论. 同时也研究了临界维数的消失问题, 比较了奇系数与较弱奇性不同情况下临界维数的变化, 得出奇性越大临界维数越少的结论.

关键词: 双重调和方程, 奇系数, 临界维数, 消失

分类号:

On the Dirichlet Problem of Semilinear Singular critical Biharmonic Equations

XIONG Hui, CHEN Yao-Tian

Abstract:

In this paper, the authors mainly study two semilinear biharmonic problems: singular subcritical and critical with lower singularity. The existence of "at least" a positive solution is obtained whether the dimensions are critical or not. In the meanwhile, the authors study the problem of the critical dimensions' disappearing and compare the change of them between higher singularity and lower singularity, and so the authors get the result, the higher the singularity, the less the critical dimensions.

Keywords: Biharmonic equation Singularity Critical dimensions Disappear

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