



偏微分方程及其应用中心

学术报告

报告题目: Nondegeneracy of blowing up solutions for a Halmitonian system with linear perturbation

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地点: 数学院南楼 N620

摘要:

In this paper, we consider the following elliptic system

$$\begin{cases} -\Delta u = |v|^{p-1}v + \epsilon(\alpha u + \beta_1 v), & \text{in } \Omega, \\ -\Delta v = |u|^{q-1}u + \epsilon(\beta_2 u + \alpha v), & \text{in } \Omega, \\ u = v = 0, & \text{on } \partial\Omega, \end{cases}$$

where Ω a smooth bounded domain in \mathbb{R}^N , $N \geq 3$, ϵ is a small parameter, α , β_1 and β_2 are real numbers, (p, q) is a pair of positive numbers lying on the critical hyperbola

$$\frac{1}{p+1} + \frac{1}{q+1} = \frac{N-2}{N}.$$

We first revisited the multiple blowing-up solutions and then we discuss its non-degeneracy.