ON THE BETTI NUMBERS OF SECOND-ORDER ELLIPTIC PDES

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Abstract

In this paper, we study the total Betti number of the nodal set to the solutions of second-order elliptic PDEs. Compared with the result on polynomial, we obtain an estimate on general second-order elliptic PDEs, that is, the total Betti numbers of $\mathcal{N}(u) \cap B_{1/2}(0)$ is bounded above by constant C, which depends on the vanishing order N_0.