

<<椭圆方程有限元方法的整体超收敛>>

图书基本信息

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内容概要

This book covers the advanced study on the global superconvergence of elliptic equations in both theory and computation, where the main materials are adapted from our journal papers published. A deep and rather completed analysis of global superconvergence is explored for bilinear, biquadratic, Adini's and bi-cubic Hermite elements, as well as for the finite difference method. Poisson's and the biharmonic equations are included, and eigenvalue and semi-linear problems are discussed. The singularity problems, blending problems, coupling techniques, a posteriori interpolant techniques, and some physical and engineering problems are studied. Numerical examples are provided for verification of the analysis, and other numerical experiments can be found from our publications. This book has also summarized some important results of Lin, his colleagues and others. This book is written for researchers and graduate students of mathematics and engineering to study and apply the global superconvergence for numerical PDE.

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