

<<有限元方法>>

图书基本信息

书名：<<有限元方法>>

13位ISBN编号：9787030166562

10位ISBN编号：7030166566

出版时间：2006-3

出版时间：科学

作者：本社

页数：320

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<有限元方法>>

内容概要

This book discusses the accuracy of various finite element approximations and how to improve them with the help of extrapolations and superconvergence ' s post-processing technique. The discussion is based on asymptotic expansions for finite element and finally reduce to the technique of integration by parts, embedding theorems and norm equivalence lemmas. Also, the book is devoted to explain the origin of theorems to make what is written correspond with what is originally in our mind.

<<有限元方法>>

书籍目录

Preface	1 Euler's Algorithm and Finite Element Method	1.1 Differential Equations of First Order: Fundamental Formula and Euler's Algorithm	1.2 Differential Equations of Second Order: Finite Element Method and Exact Solution	1.3 A Look Ahead	2 Function Spaces and Norm Equivalence Lemmas	2.1 Function Spaces, Norms and Triangle Inequality	2.2 Angle and Schwartz's Inequality	2.3 Inner Product	2.4 Orthogonality and Projection	2.5 Different Inner Products and Norms	2.6 Multi-index Notation	2.7 Norm Equivalence Lemma	2.8 Expansion Lemma in Order of Derivatives	2.9 For Example	2.10 Generalization to Bilinear Functionals	2.11 For Example	3 From to Eigenvalue Computation of PDEs	3.1 Reference: 's Algorithm	3.2 Eigenvalue Problem: One Dimensional Example	3.3 Eigenvalue Problem: Two Dimensional Example	3.4 Preparation: Finite Element Spaces and Finite Element Methods	3.5 Announcement for Eigenvalue Expansions	3.6 Abstract Expansion Lemma	3.7 Expansion for Rectangular Elements	4 Expansion of Integrals on Rectangular Elements	4.1 Bilinear Element	4.2 Biquadratic Element	4.3 Bi-degree Element	4.4 A Nonconforming Element	4.5 Adini Element	4.6 Bicubic Hermite Element	4.7 Bernadi-Raugel Element	4.8 Hood-Taylor Elements	4.9 Q1-Q0 Element	4.10 Q2-Q1 Element	4.11 Q2-Q1 Element	4.12 Raviart-Thomas Element	4.13 BDFM Element	4.14 ECHL Element	4.15 Nedelec Element	5 Expansion of Integrals on Triangle Elements	5.1 Linear Element	5.2 Quadratic Element	5.3 Hood-Taylor Element	5.4 P1-P2 Element	5.5 Raviart-Thomas Element	5.6 Linear Element on Equilateral Triangle Mesh	5.7 Triangular Element on Fishbone Shape Mesh	6 Quasi-superconvergence and Quasi-expansion	6.1 Poisson Equation	6.2 Bi-Harmony Equation	6.3 Stokes Problem	6.4 Maxwell Equation	7 Postprocessing	7.1 Postprocessing Operator	7.2 Real Superconvergence	7.3 Extrapolation	Second Part Bibliography
---------	---	--	--	------------------	---	--	-------------------------------------	-------------------	----------------------------------	--	--------------------------	----------------------------	---	-----------------	---	------------------	--	-----------------------------	---	---	---	--	------------------------------	--	--	----------------------	-------------------------	-----------------------	-----------------------------	-------------------	-----------------------------	----------------------------	--------------------------	-------------------	--------------------	--------------------	-----------------------------	-------------------	-------------------	----------------------	---	--------------------	-----------------------	-------------------------	-------------------	----------------------------	---	---	--	----------------------	-------------------------	--------------------	----------------------	------------------	-----------------------------	---------------------------	-------------------	--------------------------

<<有限元方法>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>