

1. Record Nr.	UNINA9910138858903321
Autore	Dhatt G
Titolo	Finite element method [[electronic resource]] / Gouri Dhatt, Gilbert Touzot, Emmanuel Lefrancois ; series editor, Piotr Breitkopf
Pubbl/distr/stampa	London, : ISTE Ltd. Hoboken, N.J. : John Wiley and Sons Inc., 2012
ISBN	1-118-56976-8 1-118-56970-9 1-118-56974-1 1-299-18683-1
Descrizione fisica	1 online resource (612 p.)
Collana	Numerical methods series
Altri autori (Persone)	TouzotGilbert LefrancoisEmmanuel BreitkopfPiotr
Disciplina	518.25
Soggetti	Finite element method
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Finite Element Method; Title Page; Copyright Page; Table of Contents; Introduction; 0.1 The finite element method; 0.1.1 General remarks; 0.1.2 Historical evolution of the method; 0.1.3 State of the art; 0.2 Object and organization of the book; 0.2.1 Teaching the finite element method; 0.2.2 Objectives of the book; 0.2.3 Organization of the book; 0.3 Numerical modeling approach; 0.3.1 General aspects; 0.3.2 Physical model; 0.3.3 Mathematical model; 0.3.4 Numerical model; 0.3.5 Computer model; Bibliography; Conference proceedings; Monographs; Periodicals Chapter 1. Approximations with finite elements1.0 Introduction; 1.1 General remarks; 1.1.1 Nodal approximation; 1.1.2 Approximations with finite elements; 1.2 Geometrical definition of the elements; 1.2.1 Geometrical nodes; 1.2.2 Rules for the partition of a domain into elements; 1.2.3 Shapes of some classical elements; 1.2.4 Reference elements; 1.2.5 Shapes of some classical reference elements; 1.2.6 Node and element definition tables; 1.3 Approximation based on a reference element; 1.3.1 Expression of the approximate function $u(x)$;

1.3.2 Properties of approximate function $u(x)$

1.4 Construction of functions $N(\cdot)$ and $N(\cdot)$

1.4.1 General method of construction; 1.4.2 Algebraic properties of functions N and N ; 1.5 Transformation of derivation operators; 1.5.1 General remarks; 1.5.2 First derivatives; 1.5.3 Second derivatives; 1.5.4 Singularity of the Jacobian matrix; 1.6 Computation of functions N , their derivatives and the Jacobian matrix; 1.6.1 General remarks; 1.6.2 Explicit forms for N ; 1.7 Approximation errors on an element; 1.7.1 Notions of approximation errors; 1.7.2 Error evaluation technique; 1.7.3 Improving the precision of approximation

1.8 Example of application: rainfall problem

Bibliography; Chapter 2. Various types of elements; 2.0 Introduction; 2.1 List of the elements presented in this chapter; 2.2 One-dimensional elements; 2.2.1 Linear element (two nodes, C_0); 2.2.2 High-precision Lagrangian elements: (continuity C_0); 2.2.3 High-precision Hermite elements; 2.2.4 General elements; 2.3 Triangular elements (two dimensions); 2.3.1 Systems of coordinates; 2.3.2 Linear element (triangle, three nodes, C_0); 2.3.3 High-precision Lagrangian elements (continuity C_0); 2.3.4 High-precision Hermite elements

2.4 Quadrilateral elements (two dimensions)

2.4.1 Systems of coordinates; 2.4.2 Bilinear element (quadrilateral, 4 nodes, C_0); 2.4.3 High-precision Lagrangian elements; 2.4.4 High-precision Hermite element; 2.5 Tetrahedral elements (three dimensions); 2.5.1 Systems of coordinates; 2.5.2 Linear element (tetrahedron, four nodes, C_0); 2.5.3 High-precision Lagrangian elements (continuity C_0); 2.5.4 High-precision Hermite elements; 2.6 Hexahedric elements (three dimensions); 2.6.1 Trilinear element (hexahedron, eight nodes, C_0); 2.6.2 High-precision Lagrangian elements (continuity C_0); 2.6.3 High-precision Hermite elements

Sommario/riassunto

This book offers an in-depth presentation of the finite element method, aimed at engineers, students and researchers in applied sciences. The description of the method is presented in such a way as to be usable in any domain of application. The level of mathematical expertise required is limited to differential and matrix calculus. The various stages necessary for the implementation of the method are clearly identified, with a chapter given over to each one: approximation, construction of the integral forms, matrix organization, solution of the algebraic systems and architecture o

2. Record Nr.	UNISALENTO991002401959707536
Titolo	Il compito della metafisica / scritti di Gustavo Bontadini ... [et al.]
Pubbl/distr/stampa	Milano : Bocca, 1952
Descrizione fisica	128 p. ; 24 cm
Collana	Archivio di Filosofia
Altri autori (Persone)	Bontadini, Gustavoauthor
Disciplina	110
Soggetti	Metafisica
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia