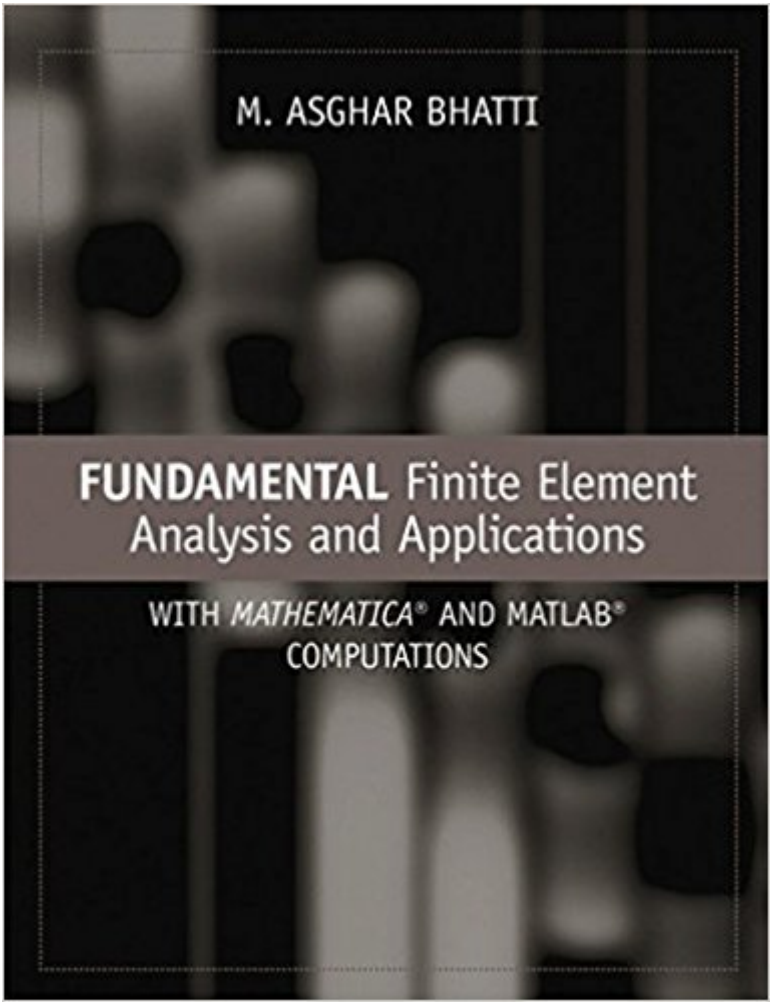
Fundamental Finite Element Analysis And Applications: With Mathematica And Matlab Computations



Synopsis

*Finite Element Analysis with Mathematica and Matlab Computations and Practical Applications is an innovative, hands-on and practical introduction to the Finite Element Method that provides a powerful tool for learning this essential analytic method. *Support website (www.wiley.com/go/bhatti) includes complete sets of Mathematica and Matlab implementations for all examples presented in the text. Also included on the site are problems designed for self-directed labs using commercial FEA software packages ANSYS and ABAQUS. *Offers a practical and hands-on approach while providing a solid theoretical foundation.

Book Information

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Customer Reviews

"The book is an innovative, hands-on and practical introduction to the nite element method that provides a powerful tool for learning this essential analytic method." (Zentralblatt MATH 2016) The book is an innovative, hands-on and practical introduction to the nite element method that provides a powerful tool for learning this essential analytic method.

A unique, hands-on introduction to the Finite Element Method Fundamental Finite Element Analysis and Applications: with MathematicaÂ® and MATLABÂ® Computations is an innovative, practical guide to discovering the Finite Element Method (FEM). Providing a helpful balance between theory and application, it presents the FEM as a tool to find approximate solutions of differential equations, making it a useful resource for students from a variety of disciplines. Using a unique combination of

live MathematicaÂ® and MATLABÂ® implementations, along with problems in both ANSYSÂ® and ABAQUSÂ® formats, this hands-on book reveals the logic behind the equations to facilitate a full understanding of methods and solutions. In nine convenient chapters, Fundamental Finite Element Analysis and Applications: with MathematicaÂ® and MATLABÂ® Computations covers: Finite Element Method: The Big Picture Mathematical Foundation of the Finite Element Method One-Dimensional Boundary Value Problems Trusses, Beams, and Frames Two-Dimensional Elements Mapped Elements Analysis of Elastic Solids Transient Problems p-Formulation An associated Web site (wiley.com/go/bhatti) includes interactive application files and notebooks for MathematicaÂ®, MATLABÂ®, ANSYSÂ®, and ABAQUSÂ®, with expanded exercises to use with the book. Fundamental Finite Element Analysis with MathematicaÂ® and MATLABÂ® Computations is a clear and accessible learning tool for senior undergraduate and graduate-level students.

Clear examples given and explains very thoroughly

great book.

This is a solid book for learning the basics of finite element analysis.I prefer more mathematically inclined texts such as Reddy for example.

This book found the balance between FEM applications and theory. I recommend to graduate students who wants to get some help with FEM programming and learn the underlying fundamentals of the finite element method.

Fluid and Solid Mechanics) Introduction to Finite Element Analysis and Design Introduction to Finite Element Analysis Using SOLIDWORKS Simulation 2017 Introduction to Nonlinear Finite Element Analysis Finite Element Analysis (Engineering) Fundamentals of Finite Element Analysis Introduction to Finite Element Analysis for Engineers Fundamental Concepts and Computations in Chemical Engineering (Prentice Hall International Series in the Physical and Chemical Engineering Sciences) Finite Mathematics and Calculus with Applications Plus MyMathLab with Pearson eText -- Access Card Package (10th Edition) (Lial, Greenwell & Ritchey, The Applied Calculus & Finite Math Series) The Handbook of Five Element Practice (Five Element Acupuncture) Signals and Systems using MATLAB, Second Edition (Signals and Systems Using MATLAB w/ Online Testing) Accelerating MATLAB Performance: 1001 tips to speed up MATLAB programs Forex: Using Fundamental Analysis & Fundamental Trading Techniques to maximize your Gains. (Forex, Forex Trading, Forex Strategy, Forex Trading Strategies, ... Forex Trading Books, Trading Strategies)