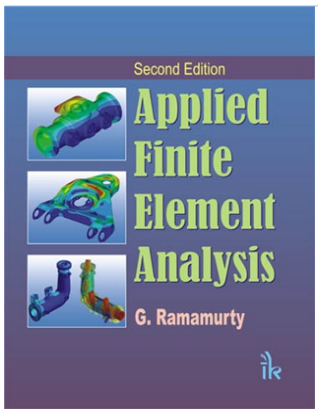
Book Information Sheet



Applied Finite Element Analysis, 2/e

G. Ramamurty

2010 | 448 pp | Paperback | ISBN: 9789380578453 | Price: 325.00

About the Book

This book is intended for presenting the basic concepts of Finite Element Analysis applied to several engineering applications.

New to this Edition

Apart from moderately revising the whole text three new chapters "Dynamic Analysis", "Non-linear Analysis", "Bending of Thin Plates", three appendices and short questions and answers have been added in the present edition to make it more useful.

Salient Features

1. Covers several modules of elasticity, heat conduction, eigenvalue and fluid flow analysis which are necessary for a student of Mechanical Engineering.
2. Finite Element formulations have been presented using both global and natural coordinates. It is important for providing smooth transition form formulation in global coordinates to natural coordinates.
3. Special focus has been given to heat conduction problems and fluid flows which are not sufficiently discussed in other textbooks.
4. Important factors affecting the formulation have been included as Miscellaneous Topics.
5. Several examples have been worked out in order to highlight the applications of Finite Element Analysis.

Table of Contents

- Preface
- Acknowledgements
- Introduction
- One-dimensional Elasticity Problems
- Analysis of Truss
- Analysis of Beams
- Steady State Conduction Heat Transfer
- Unsteady State Heat Condition
- Two Dimensional Problems of Elasticity
- High Order Elements
- Steady, Inviscid, Incompressible Flows and Torsion Analysis
- Eigenvalue Problems
- Three Dimensional Elasticity Problems
- Dynamic Analysis
- Non-linear Analysis
- Bending of Thin Plates
- Miscellaneous Topics
- Short Questions and Answers
- Answers to Selected Problems
- Appendix
- References
- Index

About the Author

G. Ramamurty :- is a former Professor of the Department of Mechanical Engineering, Osmania University, Hyderabad. He obtained his BE (Mech), ME (Machine Design) degrees from Andhra University, Visakhapatnam, and PhD (Mech. Engg) in the area of Heat Transfer from Osmania University, Hyderabad. He had nine years of industrial experience before entering the teaching profession and for twenty-nine years

taught several subjects including design, heat transfer, fluid mechanics, robotics and in particular finite element analysis. His research areas of interest include heat transfer, vibrations, robotics and composite materials.