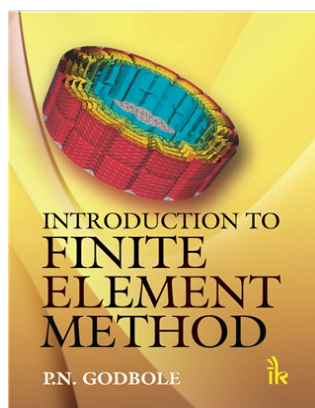


Introduction to Finite Element Methods, 1/e

P.N. Godbole



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About the Book

The book discusses the basics of the finite element method in a simple and systematic way. The book will serve as a basic learning tool for the undergraduate and postgraduate students in civil and mechanical engineering whose main interest is to carry out stress analysis. However, the concepts are presented in sufficiently general form so that the book serves as a valuable learning aid for students with other backgrounds, as well as practising engineers.

Salient Features

- ▶ Steps in the finite element method described with examples of bar and CST element.
- ▶ A separate chapter on shape functions with large number of examples.
- ▶ Isoparametric elements and numerical integration explained in detail.
- ▶ Advanced topics on plate and shell elements, non-linear problems and dynamic analysis.
- ▶ Educational program of isoparametric elements with explanation of input, output, test example and source code included in the CD appended with the book.
- ▶ Detailed appendices on Rayleigh-Ritz method, solution of equations and numerical integration.

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About the Author

P.N. Godbole :- P.N. Godbole obtained B.Tech (Hons.) in Civil Engineering from IIT, Bombay and joined the University of Roorkee (IIT Roorkee) under Technical Teachers Training Programme of Government of India wherein he completed his Master of Engineering in Structural Engineering. He obtained his Ph.D. from the University College of Swansea, United Kingdom under the Commonwealth Scholarship and Fellowship programme under the guidance of Prof. O.C. Zienkiewicz. He has served in various capacities at the University of Roorkee, including Dean (Research) and retired as Professor of Civil Engineering. After superannuation he was with VNIT, Nagpur for more than 10 years where he was awarded AICTE and UGC Emeritus Fellowships and later on continued as Professor Emeritus. He has wide experience of teaching, research, consultancy and has published more than 120 research papers in national and international journals and conferences. He has supervised 25 Ph.D. candidates. His main areas of interest are the finite element method, computer aided design, wind effects on structures

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