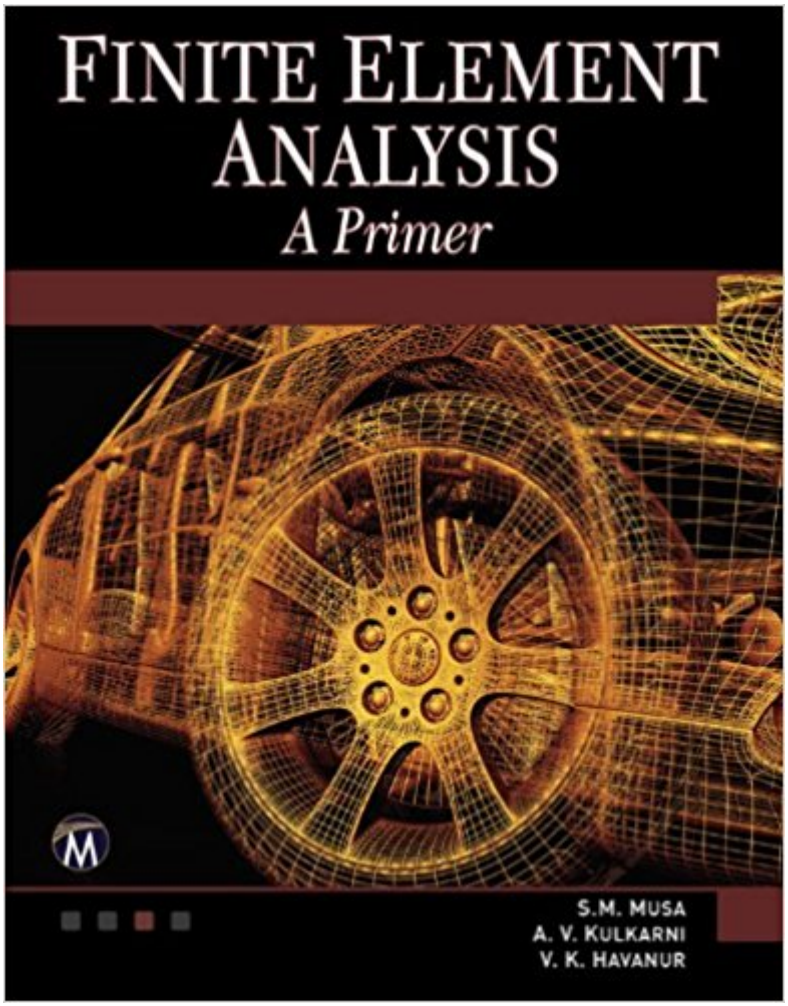
Finite Element Analysis (Engineering)



Synopsis

Today, the finite element method (FEM) has become a common tool for solving engineering problems in many industries for the obvious reasons of its versatility and affordability. This book contains materials applied to mechanical engineering, civil engineering, electrical engineering, and physics. It is written primarily as a simple introduction to the practice of FEM analysis in engineering and physics. It contains many 1D and 2D problems solved by the analytical method, by FEM using hand calculations, and by using ANSYSÃ Â®, COMSOLÃ Â®, and MATLABÃ Â® software. Results of all the methods have been compared.Features: Ã¢â ¬Â¢Includes a comparison of solutions to the problems obtained by the analytical method, FEM hand calculations, and the software methodÃ¢â ¬Â¢Includes over 35 solved problems using software applications such as MATLAB, COMSOL, and ANSYSÃ¢â ¬Â¢Accompanied by a DVD with applications and figures from the text Ã¢â ¬Â¢Careful, balanced presentation of theory and applicationseBook Customers: Companion files are available for downloading with order number/proof of purchase by writing to the publisher at info@merclearning.com.

Book Information

Series: Engineering

Hardcover: 300 pages

Publisher: Mercury Learning & Information; Hardcover with CD-ROM edition (September 27, 2013)

Language: English

ISBN-10: 1938549341

ISBN-13: 978-1938549342

Product Dimensions: 7.1 x 1.2 x 9.1 inches

Shipping Weight: 2 pounds (View shipping rates and policies)

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Customer Reviews

Finite Element Analysis: A Primer may seem like it’s an introductory text, but it’s a recommendation not for novices but for college-level students used to calculations revolving around math software applications such as MATLAB or ANSYS. Such calculations are covered in over thirty-five examples

of applications that balance theory with real-world considerations, with chapters showing how the FEM method has become a common engineering tool. Materials applied to mechanical, civil and electrical engineering as well as physics offer students a basic introduction to FEM analysis methods and problems. The result is an excellent pick for any student of engineering or physics.

Sarhan M. Musa holds a PhD in electrical engineering and is currently an associate professor in the engineering technology department at Prairie View A&M University, Texas.A.V. Kulkarni is a professor of mechanical engineering with over twenty-two years of teaching experience.V.K. Havanur is an instructor in mechanical engineering with nine years of experience in teaching and industry.