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Nota di contenuto	ENGINEERING ANALYSIS WITH ANSYS SOFTWARE; COPYRIGHT PAGE; CONTENTS; PREFACE; THE AIMS AND SCOPE OF THE BOOK; CHAPTER 1 BASICS OF FINITE-ELEMENT METHOD; 1.1 METHOD OF WEIGHTED RESIDUALS; 1.1.1 Sub-domain method (Finite volume method); 1.1.2 Galerkin method; 1.2 RAYLEIGH-RITZ METHOD; 1.3 FINITE-ELEMENT METHOD; 1.3.1 One-element case; 1.3.2 Three-element case; 1.4 FEM IN TWO-DIMENSIONAL ELASTOSTATIC PROBLEMS; 1.4.1 Elements of finite-element procedures in the analysis of plane elastostatic problems; 1.4.2 Fundamental formulae in plane elastostatic problems; 1.4.2.1 Equations of equilibrium 1.4.2.2 Strain-displacement relations1.4.2.3 Stress-strain relations (constitutive equations); 1.4.2.4 Boundary conditions; 1.4.3 Variational formulae in elastostatic problems: the principle of virtual work; 1.4.4 Formulation of the fundamental finite-element equations in plane elastostatic problems; 1.4.4.1 Strain-displacement matrix or [B] matrix; 1.4.4.2 Stress-strain matrix or [D] matrix; 1.4.4.3 Element stiffness equations; 1.4.4.4 Global stiffness equations; 1.4.4.5 Example: Finite-element calculations for a square plate subjected to uniaxial uniform tension; BIBLIOGRAPHY

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Sommario/riassunto

For all engineers and students coming to finite element analysis or to ANSYS software for the first time, this powerful hands-on guide develops a detailed and confident understanding of using ANSYS's powerful engineering analysis tools. The best way to learn complex systems is by means of hands-on experience. With an innovative and clear tutorial based approach, this powerful book provides readers with a comprehensive introduction to all of the fundamental areas of engineering analysis they are likely to require either as part of their studies or in getting up to speed fast with the us
