1. Record Nr. UNINA9910816942303321

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Titolo	Elasticity in engineering mechanics / / Arthur P. Boresi, Ken P. Chong, James D. Lee
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, 2011
ISBN	9780470950005 (e-book) 9780470402559 (hbk.) 1-61344-604-7 0-470-88038-4 1-282-90476-0 9786612904769 0-470-88036-8 0-470-95000-5
Edizione	[3rd ed.]
Descrizione fisica	1 online resource (xviii, 638 p.) : ill
Altri autori (Persone)	ChongK. P <1942-> (Ken Pin) LeeJ. D (James D.)
Disciplina	620.1/1232
Soggetti	Elasticity Strength of materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 INTRODUCTORY CONCEPTS AND MATHEMATICS -- 2 THEORY OF DEFORMATION -- 3 THEORY OF STRESS -- 4 THREE-DIMENSIONAL EQUATIONS OF ELASTICITY -- 5 PLANE THEORY OF ELASTICITY IN RECTANGULAR CARTESIAN COORDINATES -- 6 PLANE ELASTICITY IN POLAR COORDINATES -- 7 PRISMATIC BAR SUBJECTED TO END LOAD -- 8 GENERAL SOLUTIONS OF ELASTICITY -- INDEX.
Sommario/riassunto	Comprehensive, accessible, and logical - an outstanding treatment of elasticity in engineering mechanics. Elasticity in Engineering Mechanics has been prized by many aspiring and practicing engineers as an easy-to-navigate guide to an area of engineering science that is fundamental to aeronautical, civil, and mechanical engineering, and to other branches of engineering. With its focus not only on elasticity theory, including nano- and biomechanics, but also on concrete applications in

real engineering situations, this acclaimed work is a core text in a spectrum of courses at both the undergraduate and graduate levels, and a superior reference for engineering professionals. With more than 200 graphs, charts, and tables, this third edition includes: Clear explorations of such topics as deformation and stress, stress-strain-temperature relations, plane elasticity, thermal stresses, and end loads; Discussions of deformation and stress treated separately for clarity, with emphasis on both their independence and mathematical similarities; An overview of the mathematical preliminaries to all aspects of elasticity, from stress analysis to vector fields, from the divergence theorem to tensor algebra; Real-world examples and problem sets illustrating the most common elasticity solutions - such as equilibrium equations, the Galerkin vector, and Kelvin's problem; Highlights of the similarities and differences between molecular dynamics and continuum theory; Presentations of molecular dynamics, including the subjects of definition of temperature at atomistic scale, and interatomic potentials, forces, and stiffness matrices; Discussions and real-world examples of biomechanics, including the subjects of finite strain elasticity, constitutive equations of soft biological tissues, incompressibility, aneurysm, plaque on artery wall, and active stresses; A series of appendixes covering advanced topics such as complex variables, couple-stress theory, micromorphic theory, and concurrent atomistic/continuum theory.