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Nota di contenuto	Part I: Continuum Fields.- 1 Kinematics.- 2 Deformation.- 3 Strain.- 4 Stress.- Part II: Constitutive Equations.- 5 Explicit Elasticity.- 6 Implicit Elasticity.- 7 Viscoelasticity.- Appendices.- A Linear Algebra.- B Covariant and Contravariant Issues: Configuration Physics.- C Kronecker Products.- D General Linear ODE Solver -- E Solver for Convolution Integrals -- F Solver for the Mittag-Leer Function -- Bibliography -- Index.
Sommario/riassunto	This textbook presents the physical principles pertinent to the mathematical modeling of soft materials used in engineering practice, including both man-made materials and biological tissues. It is intended for seniors and masters-level graduate students in engineering, physics, or applied mathematics. It will also be a valuable resource for researchers working in mechanics, biomechanics, and

other fields where the mechanical response of soft solids is relevant. *Soft Solids: A Primer to the Theoretical Mechanics of Materials* is divided into two parts. Part I introduces the basic concepts needed to give both Eulerian and Lagrangian descriptions of the mechanical response of soft solids. Part II presents two distinct theories of elasticity and their associated theories of viscoelasticity. Seven boundary-value problems are studied over the course of the book, each pertaining to an experiment used to characterize materials. These problems are discussed at the end of each chapter, giving students the opportunity to apply what they learned in the current chapter and to build upon the material in prior chapters.
