

1. Record Nr.	UNINA9910437911503321
Autore	Gould Phillip L
Titolo	Introduction to Linear Elasticity [[electronic resource] /] / by Phillip L Gould
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2013
ISBN	1-4614-4833-6
Edizione	[3rd ed. 2013.]
Descrizione fisica	1 online resource (XIX, 346 p.)
Disciplina	531.382
Soggetti	Mechanics Mechanics, Applied Solid Mechanics Classical Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction and Mathematical Preliminaries -- Traction, Stress and Equilibrium -- Deformations -- Material Behavior -- Formulations, Uniqueness and Solutions Strategies -- Extension, Bending and Torsion -- Two-Dimensional Elasticity -- Thin Plates and Shells -- Dynamic Effects -- Viscoelasticity -- Energy Principles -- Strength and Failure Criteria -- Something New.
Sommario/riassunto	Introduction to Linear Elasticity, 3rd Edition, provides an applications-oriented grounding in the tensor-based theory of elasticity for students in mechanical, civil, aeronautical, and biomedical engineering, as well as materials and earth science. The book is distinct from the traditional text aimed at graduate students in solid mechanics by introducing the subject at a level appropriate for advanced undergraduate and beginning graduate students. The author's presentation allows students to apply the basic notions of stress analysis and move on to advanced work in continuum mechanics, plasticity, plate and shell theory, composite materials, viscoelasticity and finite method analysis. This book also: Emphasizes tensor-based approach while still distilling down to explicit notation Provides introduction to theory of plates, theory of shells, wave propagation, viscoelasticity and plasticity accessible to advanced undergraduate students Appropriate for courses

following emerging trend of teaching solid mechanics within
undergraduate engineering curricula Presents meaningful examples
with detailed steps and results Includes instructors' solutions manual.
