

1. Record Nr.	UNINA9910457115103321
Autore	Yao Weian
Titolo	Symplectic elasticity [[electronic resource] /] / Weian Yao, Wanxie Zhong, Chee Wah Lim
Pubbl/distr/stampa	Singapore ; ; Hackensack, N.J., : World Scientific Publishing, c2009
ISBN	1-282-44136-1 9786612441363 981-277-872-1
Descrizione fisica	1 online resource (315 p.)
Altri autori (Persone)	LimChee Wah ZhongWanxie
Disciplina	531/.382
Soggetti	Elasticity Symplectic spaces Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Contents; Preface; Preface to the Chinese Edition; Foreword to the Chinese Edition; Nomenclature; 1. Mathematical Preliminaries; 2. Fundamental Equations of Elasticity and Variational Principle; 3. The Timoshenko Beam Theory and Its Extension; 4. Plane Elasticity in Rectangular Coordinates; 5. Plane Anisotropic Elasticity Problems; 6. Saint-Venant Problems for Laminated Composite Plates; 7. Solutions for Plane Elasticity in Polar Coordinates; 8. Hamiltonian System for Bending of Thin Plates; References; About the Authors
Sommario/riassunto	This book explains the new solution methodology by discussing plane isotropic elasticity, multiple layered plate, anisotropic elasticity, sectorial plate and thin plate bending problems in detail. A number of existing problems without analytical solutions within the framework of classical approaches are solved analytically using this symplectic approach. Symplectic methodologies can be applied not only to problems in elasticity, but also to other solid mechanics problems. In addition, it can also be extended to various engineering mechanics and mathematical physics fields, such as vibration, w

