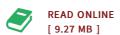




## Symplectic Elasticity

By Weian Yao

World Scientific Publishing Company. Hardcover. Book Condition: New. Hardcover. 316 pages. Dimensions: 9.0in. x 6.1in. x 0.9in.Solid mechanics problems have long been regarded as bottlenecks in the development of elasticity. In contrast to traditional solution methodologies, such as Timoshenko s theory of elasticity for which the main technique is the semi-inverse method, this book presents a new approach based on the Hamiltonian principle and the symplectic duality system where solutions are derived in a rational manner in the symplectic space. Departing from the conventional Euclidean space with one kind of variable, the symplectic space with dual variables thus provides a fundamental breakthrough. 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 some 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, wave propagation, control theory, electromagnetism and quantum mechanics. Contents: Mathematical Preliminaries; Fundamental Equations of...



## Reviews

A top quality publication along with the typeface utilized was intriguing to read through. It is amongst the most awesome pdf i have got read through. Its been developed in an remarkably straightforward way and it is only right after i finished reading this publication in which actually altered me, modify the way i believe.

-- Don Pacocha

A brand new electronic book with a new standpoint. It is writter in basic phrases rather than confusing. Its been designed in an extremely basic way which is merely right after i finished reading through this publication where basically altered me, change the way i believe.

-- Kitty Crooks