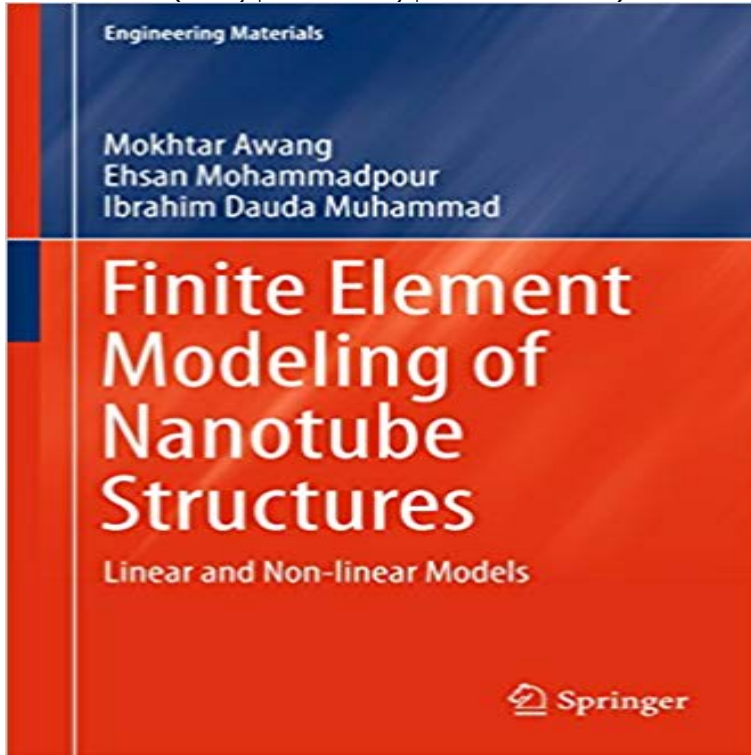


Finite Element Modeling of Nanotube Structures: Linear and Non-linear Models (Engineering Materials)



This book presents a new approach to modeling carbon structures such as graphene and carbon nanotubes using finite element methods, and addresses the latest advances in numerical studies for these materials. Based on the available findings, the book develops an effective finite element approach for modeling the structure and the deformation of graphene-based materials. Further, modeling processing for single-walled and multi-walled carbon nanotubes is demonstrated in detail.

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This study utilized a spring network model to describe interaction force of bi-atoms, and to investigate the Youngs modulus of silicon/germanium, carbon nanotube, **Non-linear Finite Element Analysis of Nanotubes - Springer Finite Element Modeling of Nanotube Structures - Springer Link** This book presents a new approach to modeling carbon structures such as graphene and carbon nanotubes using finite element Engineering Materials Linear and Non-linear Models Linear Finite Element Analysis of Nanotubes. Awang **Accelerating simulations of first principle models of complex industrial processes** are often derived using finite element or finite difference methods. 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