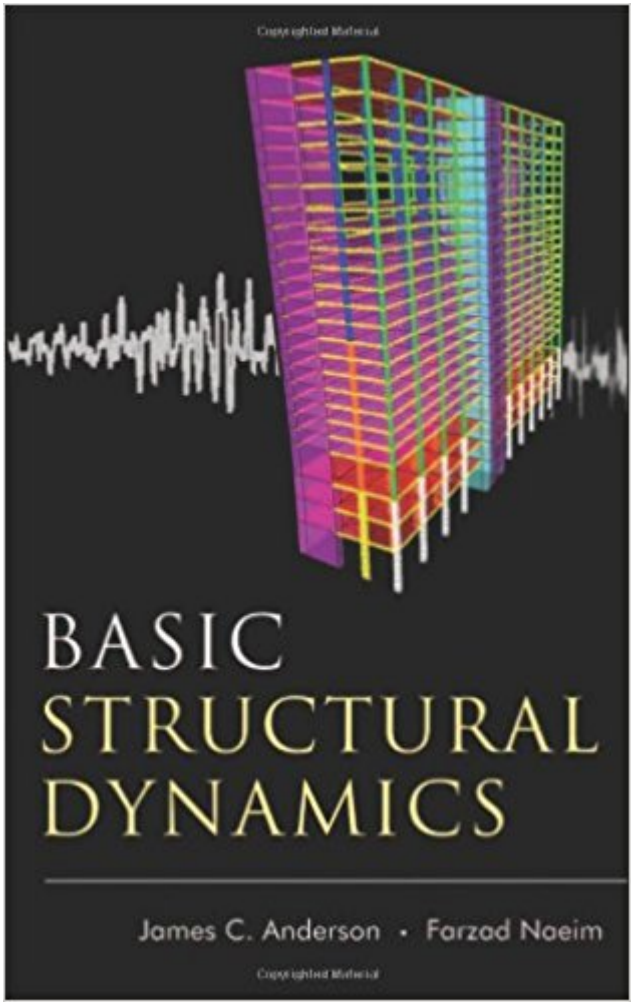
Basic Structural Dynamics



Synopsis

A concise introduction to structural dynamics and earthquake engineering Basic Structural Dynamics serves as a fundamental introduction to the topic of structural dynamics. Covering single and multiple-degree-of-freedom systems while providing an introduction to earthquake engineering, the book keeps the coverage succinct and on topic at a level that is appropriate for undergraduate and graduate students. Through dozens of worked examples based on actual structures, it also introduces readers to MATLAB, a powerful software for solving both simple and complex structural dynamics problems. Conceptually composed of three parts, the book begins with the basic concepts and dynamic response of single-degree-of-freedom systems to various excitations. Next, it covers the linear and nonlinear response of multiple-degree-of-freedom systems to various excitations. Finally, it deals with linear and nonlinear response of structures subjected to earthquake ground motions and structural dynamics-related code provisions for assessing seismic response of structures. Chapter coverage includes: Single-degree-of-freedom systems Free vibration response of SDOF systems Response to harmonic loading Response to impulse loads Response to arbitrary dynamic loading Multiple-degree-of-freedom systems Introduction to nonlinear response of structures Seismic response of structures If you’re an undergraduate or graduate student or a practicing structural or mechanical engineer who requires some background on structural dynamics and the effects of earthquakes on structures, Basic Structural Dynamics will quickly get you up to speed on the subject without sacrificing important information.

Book Information

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Customer Reviews

James C. Anderson is Professor of Civil Engineering at USC and is the author of, and contributor to, numerous book and journal articles. Farzad Naeim is Vice President and General Counsel at John A. Martin & Associates, Inc., a consulting structural engineering firm headquartered in Los Angeles, California. He has received numerous awards for his contributions to earthquake engineering, including the 2007 Fazlur R. Khan Lifetime Achievement Medal by the Council on Tall Buildings and Urban Habitat.

the book is well organized and covers basic structural dynamics with emphasis on earthquake engineering. The book is a excellent introduction to the subject matter and would serve as a good unsergraduate text.

This book is just aimed at making the student able to solve the numericals given after each chapter. Not of real help in the practical sense. Go for anil chopra (from UCal berekley) instead. Great fundamentals.