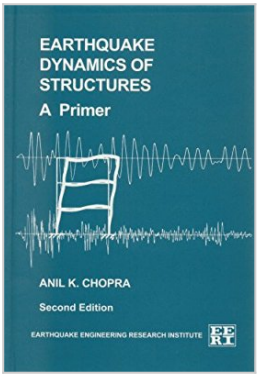

Earthquake Dynamics of Structures, a Primer

By Anil K. Chopra

Earthquake Dynamics of Structures, a Primer By Anil K. Chopra

This monograph is an updated and expanded edition of Chopra s classic primer from 1981, Dynamics of Structures. It provides the nonspecialist in dynamics of structures with the basic concepts and knowledge needed to understand the response of structures to earthquake excitation. It presents structural dynamics concepts and analysis procedures in elastic and inelastic response of structures that in one form or the other are utilized in design codes and seismic evaluations guidelines. Its three parts are composed of (1) Linearly Elastic Systems, (2) Inelastic Systems, and (3) Building Design Codes and Evaluation Guidelines. Part I presents a modern treatment of the dynamics of elastic systems. Part II is devoted to the dynamics of inelastic single-degree-of-freedom systems, response spectra for inelastic systems, inelastic design spectrum and its applications in the design of new structures, and safety evaluation of existing structures. It also is an introduction to the vast subject of inelastic analysis and response of multistory buildings. Part III presents the lateral forces specified in the 2003 International Building Code, together with their relationship to the structural dynamics concepts; pertinent comments on three other building codes are included. Part III also discusses selected aspects of computing seismic demands according to FEMA and ATC guidelines for evaluating existing buildings, in light of structural dynamics theory.

Earthquake Dynamics of Structures, a Primer

By Anil K. Chopra

Earthquake Dynamics of Structures, a Primer By Anil K. Chopra

This monograph is an updated and expanded edition of Chopra s classic primer from 1981, Dynamics of Structures. It provides the nonspecialist in dynamics of structures with the basic concepts and knowledge needed to understand the response of structures to earthquake excitation. It presents structural dynamics concepts and analysis procedures in elastic and inelastic response of structures that in one form or the other are utilized in design codes and seismic evaluations guidelines. Its three parts are composed of (1) Linearly Elastic Systems, (2) Inelastic Systems, and (3) Building Design Codes and Evaluation Guidelines. Part I presents a modern treatment of the dynamics of elastic systems. Part II is devoted to the dynamics of inelastic single-degree-of-freedom systems, response spectra for inelastic systems, inelastic design spectrum and its applications in the design of new structures, and safety evaluation of existing structures. It also is an introduction to the vast subject of inelastic analysis and response of multistory buildings. Part III presents the lateral forces specified in the 2003 International Building Code, together with their relationship to the structural dynamics concepts; pertinent comments on three other building codes are included. Part III also discusses selected aspects of computing seismic demands according to FEMA and ATC guidelines for evaluating existing buildings, in light of structural dynamics theory.

Earthquake Dynamics of Structures, a Primer By Anil K. Chopra Bibliography

- Sales Rank: #1568632 in Books
- Published on: 2005-08-01
- Original language: English
- Number of items: 1
- Dimensions: .50 pounds
- Binding: Hardcover
- 141 pages

Editorial Review

About the Author
Anil K. Chopra is a professor of engineering in the Department of Civil and Environmental Engineering at the University of California, Berkeley. Professor Chopra's research activities have included studies of structural dynamics, various problems in earthquake analysis and design of buildings, dynamic soil-structure interaction, dynamic fluid-structure interaction, and earthquake analysis and design of concrete dams. He has authored more than 300 published papers on this work, including the monograph, Earthquake Dynamics of Structures, A Primer, 1981 and 2005; and a textbook, Earthquake Dynamics of Structures: Theory and Applications to Earthquake Engineering, 1995 and 2001.

Users Review

From reader reviews:

Teresita Donahue:

The book Earthquake Dynamics of Structures, a Primer gives you the sense of being enjoy for your spare time. You can use to make your capable a lot more increase. Book can for being your best friend when you getting strain or having big problem with the subject. If you can make studying a book Earthquake Dynamics of Structures, a Primer for being your habit, you can get considerably more advantages, like add your capable, increase your knowledge about a few or all subjects. You could know everything if you like open and read a reserve Earthquake Dynamics of Structures, a Primer. Kinds of book are a lot of. It means that, science publication or encyclopedia or other people. So , how do you think about this e-book?

Troy Cochran:

This Earthquake Dynamics of Structures, a Primer book is not ordinary book, you have it then the world is in your hands. The benefit you get by reading this book will be information inside this guide incredible fresh, you will get information which is getting deeper you actually read a lot of information you will get. This kind of Earthquake Dynamics of Structures, a Primer without we know teach the one who reading it become critical in imagining and analyzing. Don't possibly be worry Earthquake Dynamics of Structures, a Primer can bring any time you are and not make your carrier space or bookshelves' become full because you can have it within your lovely laptop even mobile phone. This Earthquake Dynamics of Structures, a Primer having very good arrangement in word in addition to layout, so you will not sense uninterested in reading.

Nichol Colby:

You are able to spend your free time you just read this book this e-book. This Earthquake Dynamics of Structures, a Primer is simple to develop you can read it in the park, in the beach, train and soon. If you did not include much space to bring the printed book, you can buy the particular e-book. It is make you easier to read it. You can save the particular book in your smart phone. So there are a lot of benefits that you will get when one buys this book.

Donald Barber:

Do you like reading a publication? Confuse to looking for your chosen book? Or your book seemed to be rare? Why so many issue for the book? But almost any people feel that they enjoy intended for reading. Some people likes reading, not only science book but also novel and Earthquake Dynamics of Structures, a Primer or even others sources were given know-how for you. After you know how the great a book, you feel want to read more and more. Science e-book was created for teacher or perhaps students especially. Those publications are helping them to increase their knowledge. In additional case, beside science publication, any other book likes Earthquake Dynamics of Structures, a Primer to make your spare time a lot more colorful. Many types of book like this one.

Read Earthquake Dynamics of Structures, a Primer By Anil K. Chopra for online ebook

Earthquake Dynamics of Structures, a Primer By Anil K. Chopra Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Earthquake Dynamics of Structures, a Primer By Anil K. Chopra books to read online.

Online Earthquake Dynamics of Structures, a Primer By Anil K. Chopra ebook PDF download

Earthquake Dynamics of Structures, a Primer By Anil K. Chopra Doc

Earthquake Dynamics of Structures, a Primer By Anil K. Chopra Mobipocket

Earthquake Dynamics of Structures, a Primer By Anil K. Chopra EPub