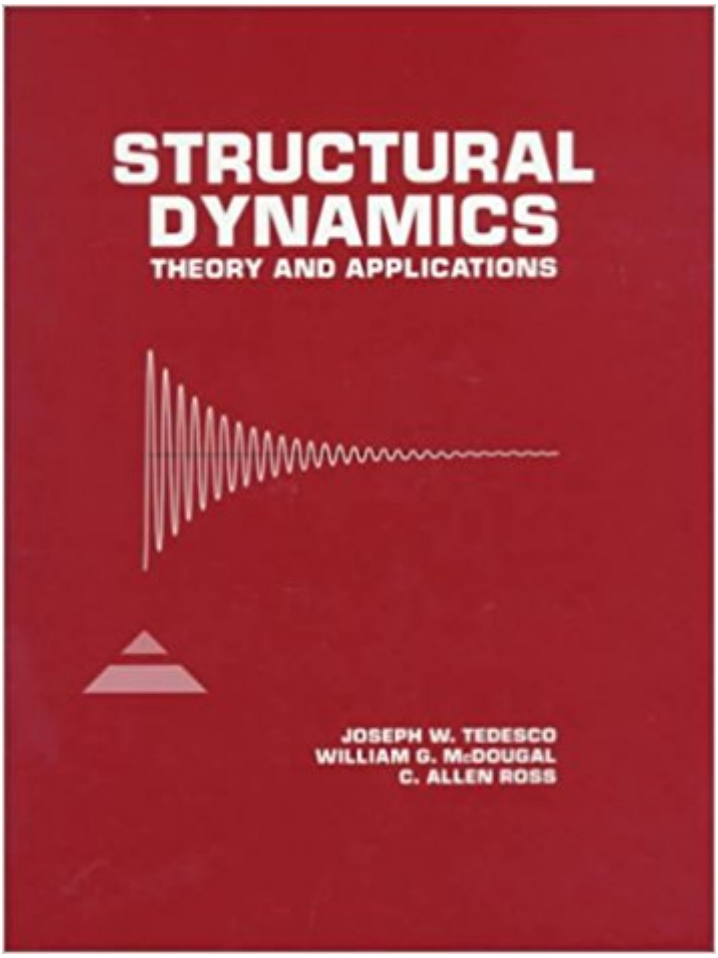
Structural Dynamics: Theory And Applications



Synopsis

Structural Dynamics: Theory and Applications provides readers with an understanding of the dynamic response of structures and the analytical tools to determine such responses. This comprehensive text demonstrates how modern theories and solution techniques can be applied to a large variety of practical, real-world problems. As computers play a more significant role in this field, the authors emphasize discrete methods of analysis and numerical solution techniques throughout the text. Features: covers a wide range of topics with practical applications, provides comprehensive treatment of discrete methods of analysis, emphasizes the mathematical modeling of structures, and includes principles and solution techniques of relevance to engineering mechanics, civil, mechanical and aerospace engineering.

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Customer Reviews

This book provides engineering students with an understanding of the dynamic response of structures and the analytical tools to determine such responses. This comprehensive text demonstrates how modern theories and solution techniques can be applied to a large variety of practical, real-world problems. As computers play a more significant role in this field, the authors emphasize discrete methods of analysis and numerical solution techniques throughout the text. Features Covers a wide range of topics with practical applications Provides comprehensive treatment of discrete methods of analysis Emphasizes the mathematical modeling of structures Includes principles and solution techniques of relevance to engineering mechanics, civil,

mechanical, and aerospace engineering

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This book has always stood out for me in terms of usefulness. Like most books in this category, the familiar/fundamental topics of steady-state response, sudden/shock loading, etc are covered.....but also there are chapters on elastic wave propagation in solids (with practical applications as far as impact goes), blast loads on structures, and structures subjected to water waves. I also found the section on Inelastic Response (in the Earthquake chapter; chapter 18) particularly useful.Also, see the discussion on the selection of the time step for dynamic analysis (p.427-428). If you've ever analyzed a structure subjected to sinusoidal/unbalanced forces, you know that the selection of the time step is pretty important. Another helpful bit of information is a chart presented (on p.423) that suggests damping values based on the stress level of the supporting frame.As other users have pointed out: there are typos in this book. I have the hard cover (original print) from 1999.....so perhaps later versions have cleaned this up.

It's an expensive book, and it's already falling apart. I'm usually very careful with my books and I like to keep them neat and clean. I can't even give review about the content of the book cause I'm afraid to read it...the pages are coming off so easily. I'm trying to find a hard cover version online, because I usually like to keep my engineering books. It's just upsetting how an expensive book like that has such a poor binding. Somebody decided to be cheap...hmmm...

This book is written slightly toward Civil Engineering perspective but can be used for Mechanical Engineering. Application to Civil engineering such as, seismic, wave dynamic is quite good. The writing is compressible but The Imperial unit in the examples is quite annoying.

The cover is in bad condition,doesn't worth this price since the new one onlycost 20 dollors more.Don't save 20 dollars, get a new one

The scope and content of the book is very appropriate for a beginning student in structural dynamics, and the organization is very nice. I think the book strikes a good balance of coverage between civil and mechanical engineering subject matter. However, a serious flaw of the book at least in the first printing (and the only printing as far as I can tell) is the exceptional number of typographical errors it contains. I would give more stars if an edition with the typos fixed were to appear.

For me, this is a good book for students who want to get master degree in Civil Engineering, Building Engineering and Aerospace Engineering. Students can understand of the dynamic response of structures and the analytical tools to determine such responses. Furthermore, it demonstrates modern theories, solution techniques and real-world problems.

This book starts with the basic and provides various examples to make the conception clear.

Harvesting and Sensing Introduction to Structural Dynamics and Aeroelasticity (Cambridge Aerospace Series) Structural Dynamics and Vibration in Practice: An Engineering Handbook Structural Dynamics of Electronic and Photonic Systems Fundamentals of Structural Dynamics