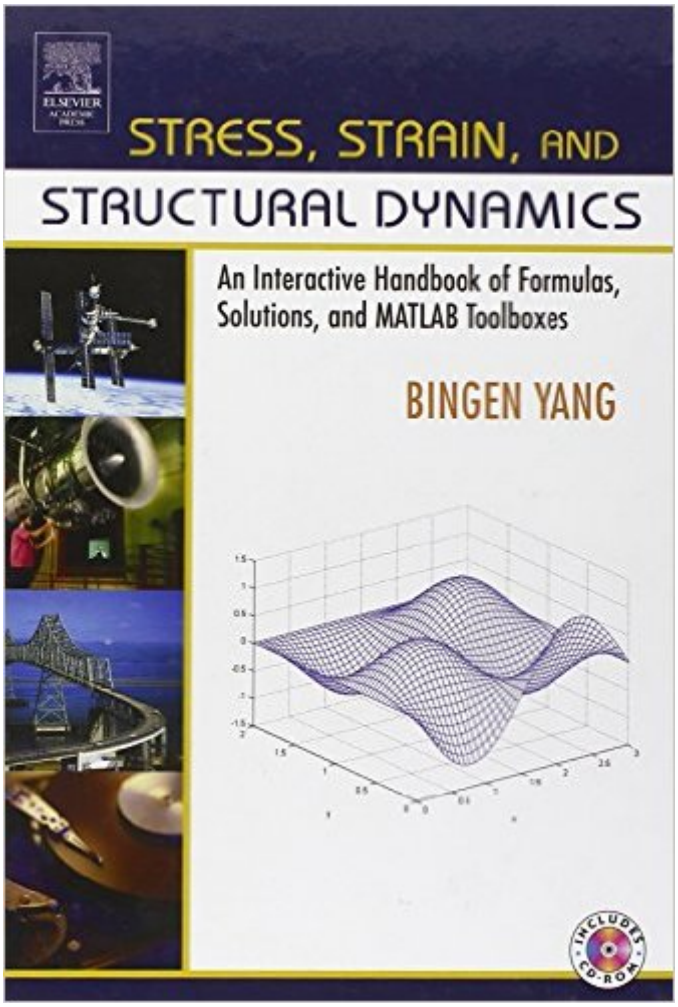
Stress, Strain, And Structural Dynamics: An Interactive Handbook Of Formulas, Solutions, And MATLAB Toolboxes



Synopsis

Stress, Strain, and Structural Dynamics is a comprehensive and definitive reference to statics and dynamics of solids and structures, including mechanics of materials, structural mechanics, elasticity, rigid-body dynamics, vibrations, structural dynamics, and structural controls. This text integrates the development of fundamental theories, formulas and mathematical models with user-friendly interactive computer programs, written in the powerful and popular MATLAB. This unique merger of technical referencing and interactive computing allows instant solution of a variety of engineering problems, and in-depth exploration of the physics of deformation, stress and motion by analysis, simulation, graphics, and animation. This book is ideal for both professionals and students dealing with aerospace, mechanical, and civil engineering, as well as naval architecture, biomechanics, robotics, and mechtronics. For engineers and specialists, the book is a valuable resource and handy design tool in research and development. For engineering students at both undergraduate and graduate levels, the book serves as a useful study guide and powerful learning aid in many courses. And for instructors, the book offers an easy and efficient approach to curriculum development and teaching innovation. * Combines knowledge of solid mechanics--including both statics and dynamics, with relevant mathematical physics and offers a viable solution scheme. * Will help the reader better integrate and understand the physical principles of classical mechanics, the applied mathematics of solid mechanics, and computer methods. * The Matlab programs will allow professional engineers to develop a wider range of complex engineering analytical problems, using closed- solution methods to test against numerical and other open-ended methods. * Allows for solution of higher order problems at earlier engineering level than traditional textbook approaches.

Book Information

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Customer Reviews

Taken by itself, this is a good solid text on its subject matter, both during the learning process and as a later reference for a working engineer (which I am - with 35 years of experience). However, the Matlab "toolbox" is significantly flawed. First, the tools are presented as p-code, not m-scripts, and therefore serve no teaching function whatsoever, and cannot be customized by the user. There is no logical reason for this from a protection standpoint since there is no copy-protection on the disk and thus, at least physically, the files can be just as freely distributed as if they were m-scripts. Even toolboxes purchased from MathWorks generally contain most of their tools as user readable m-scripts. Because they’re not user readable, and therefore not verifiable, the Matlab tools on the CD cannot be used in any quality sensitive "real-world" engineering computation. Another toolbox problem is that it is divided into chapter-related folders and tool names are repeated in different folders - requiring in many cases completely incompatible syntax for the different versions - all with the same name. If the wrong syntax is used, the routines fail cryptically, not gracefully. Finally, no help messages are built into the tools (eg. the standard Matlab syntax "help myfunction" does NOT produce any info about the "myfunction" routine - of which there may be as many incompatible versions as there are chapters). This is definitely not standard practice for Matlab toolboxes and is definitely not user friendly. The author’s website does not appear - at this writing anyway - to have any updates or corrections for the toolbox routines. So if you purchase this book, do so for the book itself, not the toolboxes which seem so promising in concept.Updating this review after a year or so, I would reduce the stars to two (if allowed this) because, due to the flaws in the Matlab tools mentioned above I have not found any real use for the tools in day to day practice.

Unless the author will provide the m files , the book is of very little use. To what avail to see the results if you do not know the solution?I do not recommend the book!!!

This is not a book. It is a manual for the code the author has writen.The code is in .p format, not in .m format. So it doesn not let to learn anything.A very bad book. It is just a software manual

very poorly written!

Stress, Strain, and Structural Dynamics: An Interactive Handbook of Formulas, Solutions, and MATLAB Toolboxes MATLAB - Programming with MATLAB for Beginners - A Practical Introduction to Programming and Problem Solving (Matlab for Engineers, MATLAB for Scientists, Matlab Programming for Dummies) Roark's Formulas for Stress and Strain, 8th Edition Roark's Formulas for Stress and Strain Property, A Contemporary Approach, 2d (Interactive Casebook) (Interactive Casebooks) (Interactive Casebook Series) Rsi: Repetitive Strain Injury : Repetitive Strain Injury, Carpal Tunnel Syndrome and Other Office Numbers (Thorsons Health) Formulas and Calculations for Drilling, Production, and Workover, Fourth Edition: All the Formulas You Need to Solve Drilling and Production Problems Formulas and Calculations for Drilling, Production, and Workover, Third Edition: All the Formulas You Need to Solve Drilling and Production Problems Microsoft Excel 2013 Functions & Formulas Quick Reference Card (4-page Cheat Sheet focusing on examples and context for intermediate-to-advanced functions and formulas- Laminated Guide) Microsoft Excel 2010 Functions & Formulas Quick Reference Guide (4-page Cheat Sheet focusing on examples and context for intermediate-to-advanced functions and formulas- Laminated Guide) Speech Processing and Synthesis Toolboxes Techniques of Modern Structural Geology, Volume 1 Strain Analysis Structural Dynamics and Vibration in Practice: An Engineering Handbook Municipal Shared Services and Consolidation: A Public Solutions Handbook (The Public Solutions Handbook Series) Become the Woman of Your Dreams! (Interactive Gender Transformation Feminization Erotica) (Aurora Sparks Interactive Erotica Book 1) My Child Won't Sleep Through the Night: 5 No-Cry Solutions to Solve Your Child's Sleep Issues (Baby Sleep Solutions, Toddler Sleep Problems, Child Sleep Solutions, No-Cry Sleep Solution) Matrix Analysis of Structural Dynamics: Applications and Earthquake Engineering (Civil and Environmental Engineering) Structural Dynamics: Theory and Applications Introduction to Structural Dynamics and Aeroelasticity (Cambridge Aerospace Series, Vol. 15) Structural Dynamics: Theory and Computation