Covering the whole spectrum of vibration theory and its applications in both civil and mechanical engineering, Mechanical and Structural Vibrations provides the most comprehensive treatment of the subject currently available. Based on the author's many years of experience in both academia and industry, it is designed to function equally well as both a day-to-day working resource for practicing engineers and a superior upper-level undergraduate or graduate-level text.

Features a quick-reference format that, Mechanical and Structural Vibrations gives engineers instant access to the specific theory or application they need. Saves valuable time ordinarily spent wading through unrelated or extraneous material. And, while they are thoroughly integrated throughout the text, applications to both civil and mechanical engineering are organized into sections that permit the reader to reference only the material germane to his or her field.

Students and teachers will appreciate the book's practical, real-world approach to the subject, its emphasis on simplicity and accuracy of analytical techniques, and its straightforward, step-by-step delineation of all numerical methods used in calculating the dynamics and vibrations problems, as well as the numerous examples with which the author illustrates those methods. They will also appreciate the many chapter-end practice problems (solutions appear in appendices) designed to help them rapidly develop mastery of all concepts and methods covered.

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Timely, comprehensive, practical—a superior student text and an indispensable working resource for busy engineers

Mechanical and Structural Vibrations is the first text to cover the entire spectrum of vibration theory and its applications in both civil and mechanical engineering. Written by an author with over a quarter century of experience as a teacher and practicing engineer, it is designed to function equally well as a working professional resource and an upper-level undergraduate or graduate-level text for courses in structural dynamics, dynamic systems, and engineering vibrations. Mechanical and Structural Vibrations:

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* Features a quick-reference format that gives busy professionals instant access to the information needed for the task at hand

* Walks readers, step-by-step, through the numerical methods used in calculating the dynamics and vibration problems

* Introduces many cutting-edge concepts and analytical tools not covered in other texts

* Is packed with real-world examples covering everything from the stresses and strains on buildings during an earthquake to those affecting a space craft during lift-off

* Contains chapter-end problems—and solutions—that help students rapidly develop mastery of all important concepts and methods covered

* Is extremely well-illustrated and includes more than 300 diagrams, tables, charts, illustrations, and more

ABOUT THE AUTHOR

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