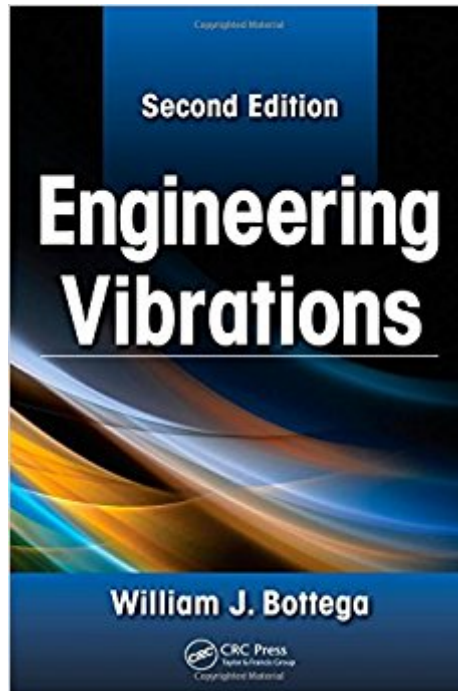




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Engineering Vibrations, Second Edition



Synopsis

A thorough study of the oscillatory and transient motion of mechanical and structural systems, *Engineering Vibrations, Second Edition* presents vibrations from a unified point of view, and builds on the first edition with additional chapters and sections that contain more advanced, graduate-level topics. Using numerous examples and case studies to reinforce concepts, the author reviews basic principles, incorporates advanced abstract concepts from first principles, and weaves together physical interpretation and fundamental principles with applied problem solving. For each class of system, the text explores the fundamental dynamics and studies free and forced vibrations. This revised version combines the physical and mathematical facets of vibration, and emphasizes the connecting ideas, concepts, and techniques.

What's New in the Second Edition:

- Includes a section on the forced response of structurally damped one-dimensional continua
- Adds three new chapters: Dynamics of Two-Dimensional Continua, Free Vibration of Two-Dimensional Continua, and Forced Vibration of Two-Dimensional Continua
- Addresses the linear and geometrically nonlinear characterization of three-dimensional deformation for mathematically two-dimensional structures, and the dynamics and vibration of various types of structures within this class
- Covers deformation, dynamics, and vibration of membranes, of Kirchhoff plates, of von Karman plates, and of Mindlin plates
- Details a full development for the characterization of deformation and motion for mathematically two-dimensional continua
- Discusses the free and forced vibration of two-dimensional continua and the steady state response of two-dimensional continua with structural damping

Engineering Vibrations, Second Edition offers a systematic and unified treatment of mechanical and structural vibrations, and provides you with a complete overview of vibration theory and analysis.

Book Information

Hardcover: 927 pages

Publisher: CRC Press; 2 edition (December 11, 2014)

Language: English

ISBN-10: 1439830355

ISBN-13: 978-1439830352

Product Dimensions: 2.2 x 6.8 x 9.8 inches

Shipping Weight: 3.2 pounds (View shipping rates and policies)

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