



# Fundamentals of Vibrations

By Leonard Meirovitch

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## Fundamentals of Vibrations By Leonard Meirovitch

*Fundamentals of Vibrations* provides a comprehensive coverage of mechanical vibrations theory and applications. Suitable as a textbook for courses ranging from introductory to graduate level, it can also serve as a reference for practicing engineers. Written by a leading authority in the field, this volume features a clear and precise presentation of the material and is supported by an abundance of physical explanations, many worked-out examples, and numerous homework problems.

The modern approach to vibrations emphasizes analytical and computational solutions that are enhanced by the use of MATLAB. The text covers single-degree-of-freedom systems, two-degree-of-freedom systems, elements of analytical dynamics, multi-degree-of-freedom systems, exact methods for distributed-parameter systems, approximate methods for distributed-parameter systems, including the finite element method, nonlinear oscillations, and random vibrations. Three appendices provide pertinent material from Fourier series, Laplace transformation, and linear algebra.

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Appendixes: Fourier Series / Laplace Transformation / Linear Algebra

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## Fundamentals of Vibrations By Leonard Meirovitch Bibliography

- Sales Rank: #618596 in Books
- Brand: Brand: Waveland Pr Inc.
- Published on: 2010-07-01
- Original language: English
- Dimensions: 9.00" h x 6.25" w x 1.25" l, 2.55 pounds
- Binding: Hardcover
- 806 pages

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