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Descrizione fisica	1 online resource (X, 452 p. 213 illus., 17 illus. in color.)
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Soggetti	Hearing Energy systems Noise control Vibration Dynamics Mechanics Mechanics, Applied Acoustics Energy Systems Noise Control Vibration, Dynamical Systems, Control Solid Mechanics
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Nota di contenuto	Hamilton’s Principle and Some Other Variational Methods -- Structural Coupling between Simple Systems -- Waves in Fluids -- Fluid Structure Interaction and Radiation of Sound -- Sound Transmission Loss of Panels -- Waveguides -- Random Excitation of Structures -- Transmission of Sound in Built up Structures.
Sommario/riassunto	This three-volume book gives a thorough and comprehensive presentation of vibration and acoustic theories. Different from traditional textbooks which typically deal with some aspects of either acoustic or vibration problems, it is unique of this book to combine those two correlated subjects together. Moreover, it provides fundamental analysis and mathematical descriptions for several crucial

phenomena of Vibro-Acoustics which are quite useful in noise reduction, including how structures are excited, energy flows from an excitation point to a sound radiating surface, and finally how a structure radiates noise to a surrounding fluid. Many measurement results included in the text make the reading interesting and informative. Problems/questions are listed at the end of each chapter and the solutions are provided. This will help the readers to understand the topics of Vibro-Acoustics more deeply. The book should be of interest to anyone interested in sound and vibration, vehicle acoustics, ship acoustics and interior aircraft noise. This is the second volume, and covers the following topics: Hamilton’s principle and some other variational methods, Structural coupling between simple systems including resilient mountings, Waves in fluids, Fluid structure interaction and radiation of sound to light and heavy fluids, Sound transmission loss of panels and shells, Waveguides and sandwich structures, Random and TBL excitation of plates and shells, Energy flow in built up structures.