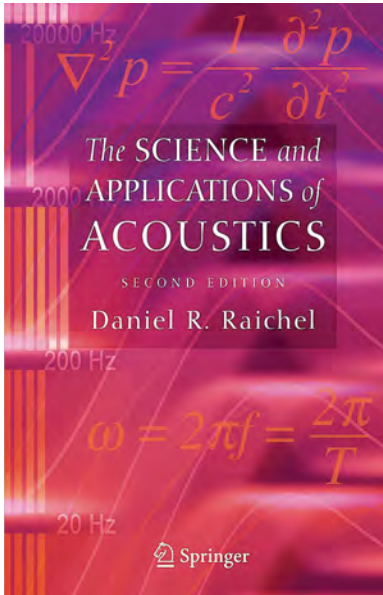


The Library

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Book Title: The Science and Applications of Acoustics
Author: Daniel R. Raichel
Publisher: Springer
Edition: 2nd, 2006
Pages: 660
Figures: 245
Binding: Hardcover
ISBN: 0-387-26062-5
URL: www.springer.com/0-387-26062-5

The Science and Applications of Acoustics, Second Edition treats the full range of modern acoustics from the basics of wave propagation in solids and fluids to applications such as noise control and cancellation, underwater acoustics, music and music synthesis, sonoluminescence, and medical diagnostics with ultrasound.

The discussion begins with a historical overview. It then turns to derivations of the wave equation from the fundamental equations of motion for fluids and solids, with solutions of equations in open air and in bounded media such as strings, bars, membranes, and pipes; sound filters and electric analogs for sound propagation are also discussed. One chapter on measurement techniques provides a comprehensive survey of the means of evaluating sound levels and frequency content of signals, while another chapter on the physiology of hearing and psychoacoustics includes relatively recent findings on how the human ear functions and covers prosthetic devices. The remainder of the book deals with a wide variety of applications, including architectural acoustics; enclosures and barriers; noise codes and regulations and methods of noise control; underwater acoustics; ultrasound; vibration control; and music, musical instruments, and reproduction of music.

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