Physics : Acoustics

Bennett Jr., William Ralph, Morrison, Andrew C. H. (Ed.), Yale University, New Haven, CT, USA

The Science of Musical Sound

Volume 1: Stringed Instruments, Pipe Organs, and the Human Voice

- Provides unique historical anecdotes relevant to the science
- Includes illustrations and photographs depicting key concepts in novel ways
- Designed for the students who fear math as well as the mathematically inclined
- Written by a world-renowned physicist with a passion for the physics of music
- Covers the basics of oscillations, waves and musical instrument analysis

This textbook is a product of William Bennett's work in developing and teaching a course on the physics of music at Yale University to a diverse audience of musicians and science students in the same class. The book is a culmination of over a decade of teaching the course and weaves together historical descriptions of the physical phenomena with the author's clear interpretations of the most important aspects of the science of music and musical instruments. Many of the historical examples are not found in any other textbook available on the market. As the co-inventor of the Helium-Neon laser, Prof. Bennett's knowledge of physics was world-class. As a professor at one of the most prestigious liberal-arts universities in the world, his appreciation for culture and humanities shines through. The book covers the basics of oscillations, waves and the analysis techniques necessary for understanding how musical instruments work. All types of stringed instruments, pipe organs, and the human voice are covered in this volume. A second volume covers the remaining families of musical instruments as well as selected other topics. Readers without a background in acoustics will enjoy learning the physics of the Science of Musical Sound from a preeminent scientist of the 20th century. Those well versed in acoustics will discover wonderful illustrations and photographs depicting familiar concepts in new and enlightening ways.

Printed book
Hardcover

Printed book
Hardcover
ISBN 978-3-319-92794-7
$ 79.99
Available

Discount group
Professional Books (2)

Product category
Undergraduate textbook

Order online at springer.com/booksellers
Springer Nature Customer Service Center LLC
233 Spring Street
New York, NY 10013
USA
T: +1-800-SPRINGER NATURE (777-4643) or 212-460-1500
customerservice@springernature.com

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add $5.00 for shipping one book and $ 1.00 for each additional book. Outside the US and Canada add $ 10.00 for first book, $5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.