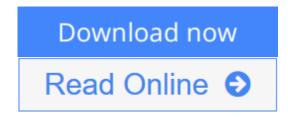


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Acoustics, the science of sound, has developed into a broad interdisciplinary field encompassing the academic disciplines of physics, engineering, psychology, speech, audiology, music, architecture, physiology, neuroscience, and others. The Springer Handbook of Acoustics is an unparalleled modern handbook reflecting this richly interdisciplinary nature edited by one of the acknowledged masters in the field, Thomas Rossing. Researchers and students benefit from the comprehensive contents spanning: animal acoustics including infrasound and ultrasound, environmental noise control, music and human speech and singing, physiological and psychological acoustics, architectural acoustics, physical and engineering acoustics, signal processing, medical acoustics, and ocean acoustics. This handbook reviews the most important areas of acoustics, with emphasis on current research. The authors of the various chapters are all experts in their fields. Each chapter is richly illustrated with figures and tables. The latest research and applications are incorporated throughout, e.g. computer recognition and synthesis of speech, physiological acoustics, psychological acoustics, thermoacoustics, diagnostic imaging and therapeutic applications and acoustical oceanography.

With a Foreword by Manfred R. Schroeder



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Key Topics

- Physical and Engineering Acoustics
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About the Author

Thomas Rossing received a BA from Luther College, and MS and PhD degrees in physics from Iowa State University. After three years as a research physicist with the UNIVAC Division of Sperry Rand, he joined the faculty of St. Olaf College (Minnesota), where he was professor of physics for 14 years and chaired the department for 6 years. Since 1971 he has been a professor of physics at Northern Illinois University. He was named distinguished Research Professor in 1987, and Professor Emeritus in 2002. He is presently a Visiting Professor of Music at Stanford University.

Professor Rossing is a citizen of the World. He has been a visiting professor at Edinburgh University (Scotland), University of New England (Australia), Seoul National University (Korea), and Stanford University. He has been a guest researcher at the Royal Institute of Technology (Sweden), Institute for Perception Research (The Netherlands), Physikalisch-Technische Bundesanstalt (Germany), Clarendon Laboratory (England), Fraunhofer Institut (Germany), Stanford University, Massachusetts Institute of Technology, University of California San Diego, and Argonne National Laboratory.

He is a Fellow of the American Physical Society, the Acoustical Society of America, IEEE, and AAAS. He was awarded the Silver Medal in Musical Acoustics by ASA and the Robert A. Millikan Medal by the American Association of Physics Teachers. He was a Sigma Xi National Lecturer 1984-87 and a Visiting Exchange Scholar in China in 1988. He is the author of more than 350 publications (including 15 books, 9 U.S. and 11 foreign patents), mainly in acoustics, magnetism, environmental noise control, and physics

education. His areas of research have included musical acoustics, psychoacoustics, speech and singing, vibration analysis, magnetic levitation, surface effects in fusion reactors, spin waves in metals, and physics education.

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