The practice of engineering noise control demands a solid understanding of the fundamentals of acoustics, the practical application of current noise control technology and the underlying theoretical concepts. This fully revised and updated fourth edition provides a comprehensive explanation of these key areas clearly, yet without oversimplification. Written by experts in their field, the practical focus echoes advances in the discipline, reflected in the fourth edition’s new material, including: completely updated coverage of sound transmission loss, mufflers, oversimplification.

Noise emissions are an issue in industry, in communities, in buildings, and during leisure activities. As such, the need to address noise is recognized at the highest level by the federal government and at all levels of local government. The practice of noise control is addressed by federal regulatory agencies, in the workplace. The volume comprises content from leading scientists, engineers, and policy makers, discussing the impact these have on health and the environment. The contents of this volume will be of interest to researchers, practitioners, and policy makers alike.

Clearly, exposure to excessive noise can affect our quality of life. As the population of the United States and, indeed, the world increases and developing countries become more industrialized, problems of noise are likely to become more pervasive and lower the quality of life for everyone. Efforts to manage noise exposures, to design quieter buildings, products, equipment, and transportation vehicles, and to provide a regulatory environment that facilitates adequate, cost-effective, sustainable noise controls require our immediate attention. Technology for a Quieter America looks at the most commonly identified sources of noise, how they are characterized, and efforts that have been made to reduce noise emissions and experiences. The book also reviews the standards and regulations that govern noise levels and the federal, state, and local agencies that regulate noise for the benefit, safety, and wellness of society at large. In addition, it presents the cost-benefit trade-offs between efforts to reduce the noise levels to which Americans are exposed and will improve the ability of American industry to compete in world markets paying increasing attention to the noise emissions of products.

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The measurement, isolation, and treatment of noise and vibration problems are based on practical industrial experience. Noise problems can be controlled through design, planning, and maintenance, and the book provides a comprehensive coverage of these solutions. A NOISE IN...
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Chapter 3 provides an in-depth look at the fundamentals of sound (its generation, propagation, and measurement) and introduces the concept of sound intensity as one of the newest and most valuable tools in noise studies. This book provides a comprehensive guide to noise control at the introductory level. Compiling strategies from more than 30 years of experience, this book offers numerous case studies that illustrate the implementation of noise control applications, as well as solutions to common dilemmas encountered in noise reduction processes. It provides methods for predicting the noise generation level of common systems such as fans, motors, and others.

This classic and authoritative student textbook contains information that is not oversimplified and can be used to solve the real-world problems encountered by noise and vibration consultants as well as the more straightforward ones handled by engineers and occupational hygienists in industry. The book covers the fundamentals of acoustics, theoretical concepts, and practical applications of current noise control technology. It aims to be as comprehensive as possible while still covering important concepts in sufficient detail to engender a deep understanding of the foundations upon which noise control technology is built. Topics which are extensively developed or overhauled from the fourth edition include sound propagation outdoors, amplitude modulation, hearing protection, frequency analysis, muffling devices (including 4-pole analysis and self-noise), sound transmission through partitions, finite element analysis, statistical energy analysis, and transportation noise.

For those who are already well versed in the art and science of noise control, the book will provide an extremely useful reference. A wide range of example problems that are linked to noise control practice are available on www.causalsystems.com for free download.

Two of the most acclaimed reference works in the area of acoustics in recent years have been our Encyclopedia of Acoustics, 4 Volume set and the Handbook of Acoustics spin-off. These works, edited by Malcolm Crocker, positioned Wiley as a major player in the acoustics reference market. With our recently published revision of Beranek & Ver′s Noise and Vibration Control Engineering, Wiley is a highly respected name in the acoustics business. Crocker′s new handbook covers an area of great importance to engineers and designers. Noise and vibration control is one of the largest areas of application of the acoustics topics covered in the successful encyclopedia and handbook. It is also an area that has been under-published in recent years. Crocker has positioned this reference to cover the gamut of topics while focusing more on the applications to industrial needs. In this way, the book will become the best single source of need-to-know information for the professional markets.

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More people are spending more time at home making more noise--yet they want quiet environments. This is the only book available that tells designers, planners, architects, and builders how to give homeowners and apartment-dwellers the quiet they crave. Simple enough to be used by the average do-it-yourselfer (it avoids complex mathematics), yet so complete it will satisfy the requirements of knowledgeable building professionals, this authoritative guide gives you one-stop answers on designing, specifying, testing, and retrofitting residences to meet the new environmental standards and satisfy our need for peace and quiet.

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