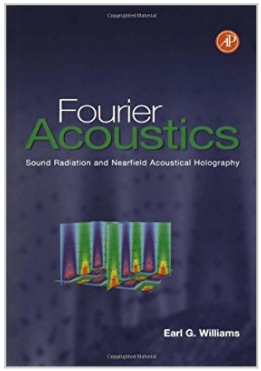

Fourier Acoustics: Sound Radiation and Nearfield Acoustical Holography

By Earl G. Williams

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Intended a both a textbook and a reference, Fourier Acoustics develops the theory of sound radiation uniquely from the viewpoint of Fourier Analysis. This powerful perspective of sound radiation provides the reader with a comprehensive and practical understanding which will enable him or her to diagnose and solve sound and vibration problems in the 21st Century. As a result of this perspective, Fourier Acoustics is able to present thoroughly and simply, for the first time in book form, the theory of nearfield acoustical holography, an important technique which has revolutionised the measurement of sound. Relying little on material outside the book, Fourier Acoustics will be invaluable as a graduate level text as well as a reference for researchers in academia and industry.

- The physics of wave propogation and sound vibration in homogeneous media
- Acoustics, such as radiation of sound, and radiation from vibrating surfaces
- Inverse problems, such as the theory of nearfield acoustical holography
- Mathematics of specialized functions, such as spherical harmonics

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Fourier Acoustics: Sound Radiation and Nearfield Acoustical Holography By Earl G. Williams Bibliography

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- 306 pages

Editorial Review

Review
"Dr. Williams should be commended for clearly communicating his exceptional contributions and understanding of NAH and structural acoustics."--**J. ADIN MANN III, Iowa State University, Journal of the Acoustical Society of America**

"...a nice book...recommended to both students of acoustics and also to institutional libraries."--**Applied Mechanics Reviews, Volume 54 (1), Jan 2001**

From the Back Cover

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- The physics of wave propagation and sound radiation in homogeneous media
- Acoustics, such as radiation of sound, and radiation from vibrating surfaces
- Inverse problems, for example the thorough development of the theory of nearfield acoustical holography
- Mathematics of specialized functions, such as spherical harmonics

The author is an internationally recognized acoustician whose pioneering research in the field of nearfield acoustical holography has impacted acoustics research and development throughout the world. Dr. Williams' research has been formally recognized by NRL as one of its most innovative technologies over the past 75 years. Relying little on material outside the book, Fourier Acoustics will be invaluable as a graduate level text as well as a reference for researchers in academia and industry. The book is unique amongst acoustics texts, it is well illustrated and it includes exercises to enforce the theory.

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