



# FUNDAMENTALS OF ACOUSTICS

*Michel Bruneau, University of Maine, France*

*Thomas Scelo (translator and contributor), University of Auckland, New Zealand*

The central theme of the eleven chapters is acoustic propagation in fluid media, dissipative or non-dissipative, homogeneous or non-homogeneous, infinite or limited; the emphasis being on the theoretical formulation of the problems considered rather than their practical aspects.

## **Contents**

1. Equations of Motion in Non-dissipative Fluid.
2. Equations of Motion in Dissipative Fluid.
3. Problems of Acoustics in Dissipative Fluids.
4. Basic Solutions to the Equations of Linear Propagation in Cartesian Coordinates.
5. Basic Solutions to the Equations of Linear Propagation in Cylindrical and Spherical Coordinates.
6. Integral Formalism in Linear Acoustics.
7. Diffusion, Diffraction and Geometrical Approximation.
8. Introduction to Sound Radiation and Transparency of Walls.
9. Acoustics in Closed Spaces.
10. Introduction to Non-linear Acoustics, Acoustics in Uniform Flow and Aero-acoustics.
11. Methods in Electro-acoustics.