

TECHNOSUP

Les FILIÈRES TECHNOLOGIQUES des ENSEIGNEMENTS SUPÉRIEURS

ACOUSTIQUE

Acoustique générale

Équations différentielles et intégrales,
solutions en milieux fluides et solides,
applications

Catherine POTEL

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La collection TECHNOSUP dirigée par Claude Chêze est une sélection d'ouvrages dans toutes les disciplines, pour les filières technologiques des enseignements supérieurs.

Niveau A **Approche** (éléments, résumés ou travaux dirigés) *IUT - BTS - 1^{er} cycle*

Niveau B **Bases** (cours avec exercices et problèmes résolus) *IUP - Licence*

Niveau C **Compléments** (approfondissement, spécialisation) *Écoles d'ingénieurs, Master*

L'ouvrage : niveaux B (Licence) et C (Master, Ecoles d'ingénieurs)

L'ouvrage fournit avec minutie les bases de l'acoustique classique, tout en présentant régulièrement un ensemble d'applications relevant de la pratique de l'acoustique. Il est construit pour être compréhensible sans avoir recours à d'autres documents. Son contenu est lié à l'acoustique en milieux fluides simples, puis en milieux solides homogènes. Les hypothèses sous-jacentes sont régulièrement précisées et les méthodes exposées conservent le plus souvent un caractère analytique.

Pour couvrir le domaine de l'acoustique fondamentale, l'ouvrage traite successivement : les ondes acoustiques, l'environnement sonore et la perception des sons, les équations générales, les solutions fondamentales dans les systèmes de coordonnées courbes, les problèmes aux limites et leur formulation intégrale, la propagation en milieu solide homogène (avec application au contrôle non destructif par ultrasons). Il s'achève sur des annexes qui apportent des éclairages sur les éléments mathématiques utiles et sur certaines notions délicates (impédance, vitesses de phase et de groupe...).

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Illustration de couverture : Dessin de Léonard de Vinci.



ISBN 2-7298-2805-2

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