Record Nr. UNINA9910449839303321 Lecture notes on the mathematics of acoustics [[electronic resource] /] **Titolo** / edited by M.C.M. Wright Pubbl/distr/stampa London, : Imperial College Press, c2005 **ISBN** 1-281-86666-0 9786611866662 1-86094-655-0 Descrizione fisica 1 online resource (308 p.) Altri autori (Persone) WrightM. C. M (Matthew C. M.) Disciplina 534.0151 Sound - Mathematics Soggetti Sound Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Based on lectures given at a one week summer school held at the Note generali University of Southampton, July 2003. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Preface; Contents; Chapter 1 Vector Calculus; Chapter 2 Functions of a Complex Variable; Chapter 3 Integral Transforms; Chapter 4 Asymptotic Expansion of Integrals; Chapter 5 The Wiener-Hopf Technique; Chapter 6 Waveguides; Chapter 7 Wavefield Decomposition; Chapter 8 Acoustics of Rigid-Porous Materials; Chapter 9 Generalised Functions in Aeroacoustics; Chapter 10 Monopoles, Dipoles, and Quadrupoles: Chapter 11 Corrugated Pipe Flow: Chapter 12 Digital Filters; Chapter 13 Measurement of Linear Time-Invariant Systems; Chapter 14 Numerical Optimisation; Index This book aims to give a thorough grounding in the mathematical tools Sommario/riassunto necessary for research in acoustics. Twelve authors, all highlyrespected researchers in the field of acoustics, provide a comprehensive introduction to mathematical analysis and its applications in acoustics, through material developed for a summer school in mathematics for acoustics researchers funded by the UK Engineering and Physical Sciences Research Council.Mathematical

> Methods, Wave Motion, Aeroacoustics and Signal Processing are covered in fourteen chapters by authors including Keith Attenborough