Record Nr. UNINA9910783045303321 Autore Harris John G. Titolo Linear elastic waves / / John G. Harris [[electronic resource]] Cambridge:,: Cambridge University Press,, 2001 Pubbl/distr/stampa **ISBN** 1-107-11667-8 9786612389047 1-282-38904-1 0-511-64285-7 0-511-04041-5 0-511-15490-9 0-511-55625-X 0-511-75541-4 0-511-05196-4 1 online resource (xv, 162 pages) : digital, PDF file(s) Descrizione fisica Collana Cambridge texts in applied mathematics;; 26 Disciplina 531/.1133 Soggetti Elastic waves Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Title from publisher's bibliographic system (viewed on 05 Oct 2015). Note generali Nota di bibliografia Includes bibliographical references and index. Cover; Half-title; Series-title; Title; Copyright; Dedication; Contents; Nota di contenuto Preface; 1 Simple Wave Solutions; 2 Kinematical Descriptions of Waves; 3 Reflection, Refraction, and Interfacial Waves: 4 Green's Tensor and Integral Representations: 5 Radiation and Diffraction: 6 Guided Waves and Dispersion; Index Sommario/riassunto Wave propagation and scattering are among the most fundamental processes that we use to comprehend the world around us. While these processes are often very complex, one way to begin to understand them is to study wave propagation in the linear approximation. This is a book describing such propagation using, as a context, the equations of elasticity. Two unifying themes are used. The first is that an understanding of plane wave interactions is fundamental to understanding more complex wave interactions. The second is that waves are best understood in an asymptotic approximation where they

are free of the complications of their excitation and are governed

primarily by their propagation environments. The topics covered include reflection, refraction, the propagation of interfacial waves, integral representations, radiation and diffraction, and propagation in closed and open waveguides. Linear Elastic Waves is an advanced level textbook directed at applied mathematicians, seismologists, and engineers.