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Nota di contenuto	1. Introduction -- 2. Governing Equations -- 3. Surface Response of an Elastic Half Space due to a Vertical Harmonic Point Force -- 4. Response of Surface of an Elastic Half Space due to a Horizontal Harmonic Point Force -- 5. Dynamics of a Rigid Foundation on the Surface of an Elastic Half-Space -- 6. Experiments on Elastic Half-Space Medium -- 7. Dynamic Response of a Rigid Foundation Subjected to a Distance Blast -- 8. Identification of vertical exciting force on the surface of an elastic half-space using sensor fusion.-9. Surface

vibration of a multilayered elastic medium due to harmonic concentrated force.-10. Three-Dimensional Wave Propagations in Porous Half-Space Subjected to Multiple Energy Excitations -- Appendixes.

Sommario/riassunto

This unique book covers advanced topics in dynamic modeling of soil-foundation interaction, as well as the response of elastic semi-infinite media from an applications viewpoint. Advanced concepts such as solutions for analysis of elastic semi-infinite mediums, fluid motion in porous media, and nonlinearities in dynamic behavior are explained in great detail. Related theories and numerical analysis for independent vertical, horizontal, and rocking as well as coupled horizontal and rocking vibrations of a rigid rectangular base resting on the surface of a semi-infinite medium are presented. Throughout the book, a strong emphasis is placed on applications. A laboratory model for elastic half-space medium is also described. This book also: · Provides a systematic solution for analysis of elastic semi-infinite mediums when subjected to different loading conditions · Offers a solution for the continuous elastic medium that is also extended to visco-elastic media by considering complex elastic modules · Presents advanced concepts in wave propagation from a practical and application-based standpoint so that readers can use the theories in the field.