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   Nota di contenuto   Preface -- Notation -- Introduction -- Spectral Analysis of Wave Motion
                    -- Longitudinal Waves in Rods -- Flexural Waves in Beams -- Higher
                    Order Waveguide Models -- The Spectral Element Method -- Waves in
                    Plates and Cylinders -- Thin Walled Structures -- Structure/Fluid
                    Interactions -- Discrete and Discretized Structures -- Afterword --
                    Appendix: Bessel Functions -- Index.

   Sommario/riassunto   This third edition builds on the introduction of spectral analysis as a
                    means of investigating wave propagation and transient oscillations in
                    structures. Each chapter of the textbook has been revised, updated and
                    augmented with new material, such as a modified treatment of the
                    curved plate and cylinder problem that yields a relatively simple but
                    accurate spectral analysis. Finite element methods are now integrated
                    into the spectral analyses to gain further insights into the high-
                    frequency problems. In addition, a completely new chapter has been
                    added that deals with waves in periodic and discretized structures.
                    Examples for phononic materials meta-materials as well as genuine
                    atomic systems are given. Systematically develops and then applies the
                    spectral methods to analyzing the dynamic responses; Examines
                    spectral analysis of discrete and discretized structures; Explains
                    spectral analysis as applied to metamaterials and nanostructures;
                    Reinforces reader understanding with a combination of experimental
                    and analytical results related to wave propagation in structures.