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Nota di contenuto	Theoretical basis of the structural modeling method -- A 2D lattice with dense packing of the particles -- A 2D lattice with non-dense packing of the particles -- Application of the 2D models of media with dense and non-dense packing of the particles for solving the parametric identification problems -- Nonlinear models of microstructured media -- Propagation and interaction of nonlinear waves in generalized continua.
Sommario/riassunto	This book discusses the theoretical foundations of the structural modeling method applied to metamaterials. This method takes into account the parameters of the crystal lattice, the size of the medium particles, as well as their shape and constants of force interactions between them. It provides mathematical models of metamaterials that offer insights into the qualitative influence of the local structure on the effective elastic moduli of the considered medium and into performing theoretical estimations of these quantities. This book is useful for researchers working in the fields of solid mechanics, physical acoustics, and condensed matter physics, as well as for graduate and

postgraduate students studying mathematical modeling methods.