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   Nota di contenuto Contents; Preface; CHAPTER I MATHEMATICAL PRELIMINARIES;
                     Introduction; 1. Function spaces, convex analysis, variational
                     convergence; 1.1. Function spaces: LP and Sobolev spaces; 1.1.1.
                     Lebesgue spaces LP; 1.1.2. Sobolev spaces and trace operators; 1.2.
                     Elements of convex analysis and duality, minimization theorems,
                     multivalued mappings; 1.2.1. Convex sets and functions; 1.2.2.
                     Minimization theorems; 1.2.3. Normal integrands, integral functionals
                     and Rockafellar's theorem; 1.2.4. Quasiconvexity and A-
                     quasiconvexity; 1.2.5. Elements of the duality theory; 1.2.6. Set-valued
                     maps
                     1.3. Variational convergence of sequences of operators and
                     functionals1.3.1. G-convergence; 1.3.2. H-convergence and the energy
                     method; 1.3.3. Two-scale convergence; 1.3.4. -convergence; 1.3.5. -
                     convergence of sequence of nonconvex functionals convex in highest-
                     order derivatives: non-uniform homogenization; 1.3.6. -convergence
                     and duality; 1.3.7. Convergence of sets in Kuratowski's sense; 1.4. Two
                     approximation results; 1.5. An augmented Lagrangian method for
                     problems with unilateral constraints; CHAPTER II ELASTIC PLATES;
                     Introduction

2. Three-dimensional analysis and effective models of composite plates2.1. Equilibrium problem of a periodic plate; 2.2. Family of problems (P); 2.3. Asymptotic analysis. Effective moduli and local problems; 2.4. Case of transverse symmetry; 2.5. Centrosymmetry of the periodicity cell; 2.6. On computing effective stiffnesses; 2.7. Case of moderately thick periodicity cells; 2.8. Case of thin periodicity cells. Derivation by imposing Kirchhoff's constraints; 2.9. Case of transversely slender periodicity cells of constant thickness
3. Thin plates in bending and stretching3.1. Kirchhoff type description; 3.2. Asymptotic homogenization. In-plane scaling approach; 3.3. Refined scaling approach; 3.4. Variational formulae for effective stiffnesses; 3.5. Correctors; 3.6. Variational formulae for effective compliances. Dual effective potential; 3.7. Transversely symmetric plates periodic in one direction; 3.8. Ribbed plates. Bending problem; 3.8.1. Formula of Francfort and Murat for stiffnesses; 3.8.2. Ribbed plates of higher rank with the stronger phase taken as an envelope 3.8.3. Formula of Lurie-Cherkaev-Fedorov for stiffnesses

Sommario/riassunto	This book gives a systematic and comprehensive presentation of the results concerning effective behavior of elastic and plastic plates with periodic or quasiperiodic structure. One of the chapters covers the hitherto available results concerning the averaging problems in the linear and nonlinear shell models.A unified approach to the problems studied is based on modern variational and asymptotic methods, including the methods of variational inequalities as well as homogenization techniques. Duality arguments are also exploited. A significant part of the book deals with problems important for e