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Sommario/riassunto	A need for a deeper understanding of the convergence properties of augmented Lagrangian algorithms and of their relationship to operator-splitting methods such as alternating-methods direction and the development of more efficient algorithms prompted the authors to write this book. The volume is oriented to applications in continuum mechanics. This volume deals with the numerical simulation of the behavior of continuous media by augmented Lagrangian and operator-splitting methods (coupled to finite-element approximations). It begins with a description of the mechanical and mathematical frameworks of the considered applications as well as a general analysis of the basic numerical methods additionally used to study them. These ideas are then applied to specific classes of mechanical problems.