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Titolo	Advances in Variational and Hemivariational Inequalities : Theory, Numerical Analysis, and Applications / / edited by Weimin Han, Stanisaw Migórski, Mircea Sofonea
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ISBN	3-319-14490-1
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (389 p.)
Collana	Advances in Mechanics and Mathematics, , 1571-8689 ; ; 33
Disciplina	515.64
Soggetti	Combinatorics Mathematical models Operator theory Mathematical Modeling and Industrial Mathematics Operator Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Bifurcation Phenomena for Parametric Nonlinear Elliptic Hemivariational Inequalities -- Evolutionary Inclusions and Hemivariational Inequalities -- Location Results for Variational-Hemivariational Inequalities -- Nonconvex Variational Inequalities -- Numerical Methods for Evolution Hemivariational Inequalities -- Some Extragradient Algorithms for Variational Inequalities -- Proximal Methods for the Elastography Inverse Problem of Tumor Identification Using an Equation Error Approach -- Discontinuous Galerkin Methods for an Elliptic Variational Inequality of 4th-Order -- Dynamic Gao Beam in Contact with a Reactive or Rigid Foundation -- A Hyperelastic Dynamic Frictional Contact Model with Energy-Consistent Properties -- A Non-clamped Frictional Contact Problem with Normal Compliance -- On Large Time Asymptotics for Two Classes of Contact Problems -- Hemivariational Inequalities for Dynamic Elastic-viscoplastic Contact Problems -- Two History-dependent Contact Problems.
Sommario/riassunto	Highlighting recent advances in variational and hemivariational inequalities with an emphasis on theory, numerical analysis and

applications, this volume serves as an indispensable resource to graduate students and researchers interested in the latest results from recognized scholars in this relatively young and rapidly-growing field. Particularly, readers will find that the volume’s results and analysis present valuable insights into the fields of pure and applied mathematics, as well as civil, aeronautical, and mechanical engineering. Researchers and students will find new results on well posedness to stationary and evolutionary inequalities and their rigorous proofs. In addition to results on modeling and abstract problems, the book contains new results on the numerical methods for variational and hemivariational inequalities. Finally, the applications presented illustrate the use of these results in the study of miscellaneous mathematical models which describe the contact between deformable bodies and a foundation. This includes the modelling, the variational and the numerical analysis of the corresponding contact processes. Furthermore, it can be used as supplementary reading material for advanced specialized courses in mathematical modeling for students with a strong background knowledge on nonlinear analysis, numerical analysis, partial differential equations, and mechanics of continua.