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with P Properties; 9.1 Existence and uniqueness results; 9.2 Solution methods for CP's with P properties; Chapter 10 Applications; 10.1 Walrasian price equilibrium models; 10.2 Oligopolistic equilibrium models; Part III VARIATIONAL INEQUALITIES; Chapter 11 Theory of Variational Inequalities; 11.1 Variational inequalities and related problems; 11.2 Existence and uniqueness results; Chapter 12 Applications; 12.1 Cassel-Wald equilibrium models 12.2 Walrasian equilibrium models and their modifications 12.3 Existence results in Walrasian equilibrium models; 12.4 Imperfect competition models; 12.5 Network and migration equilibrium models; Chapter 13 Projection Type Methods; 13.1 The classical projection method; 13.2 The projection methods with line search; 13.3 Modifications and extensions; Chapter 14 Applications of the Projection Methods; 14.1 Applications to variational inequalities; 14.2 Applications to systems of variational inequalities; Chapter 15 Regularization Methods 15.1 The classical regularization method and its modifications 15.2 The proximal point method; Chapter 16 Direct Iterative Methods for Monotone Variational Inequalities; 16.1 Extrapolation methods; 16.2 The ellipsoid method; Chapter 17 Solutions to Exercises; Bibliography; Index

Sommario/riassunto

The concept of equilibrium plays a central role in various applied sciences, such as physics (especially, mechanics), economics, engineering, transportation, sociology, chemistry, biology and other fields. If one can formulate the equilibrium problem in the form of a mathematical model, solutions of the corresponding problem can be used for forecasting the future behavior of very complex systems and, also, for correcting the the current state of the system under control. This book presents a unifying look on different equilibrium concepts in economics, including several models from r
