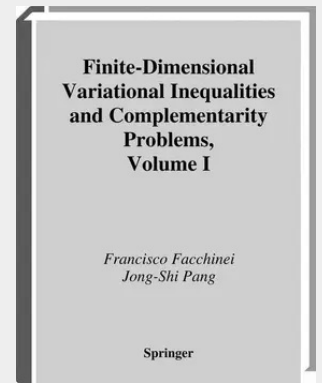


## Finite-Dimensional Variational Inequalities and Complementarity Problems

The finite-dimensional nonlinear complementarity problem (NCP) is a system of finitely many nonlinear inequalities in finitely many nonnegative variables along with a special equation that expresses the complementary relationship between the variables and corresponding inequalities. This complementarity condition is the key feature distinguishing the NCP from a general inequality system, lies at the heart of all constrained optimization problems in finite dimensions, provides a powerful framework for the modeling of equilibria of many kinds, and exhibits a natural link between smooth and nonsmooth mathematics. The finite-dimensional variational inequality (VI), which is a generalization of the NCP, provides a broad unifying setting for the study of optimization and equilibrium problems and serves as the main computational framework for the practical solution of a host of continuum problems in the mathematical sciences. The systematic study of the finite-dimensional NCP and VI began in the mid-1960s; in a span of four decades, the subject has developed into a very fruitful discipline in the field of mathematical programming. The developments include a rich mathematical theory, a host of effective solution algorithms, a multitude of interesting connections to numerous disciplines, and a wide range of important applications in engineering and economics. As a result of their broad associations, the literature of the VI/CP has benefited from contributions made by mathematicians (pure, applied, and computational), computer scientists, engineers of many kinds (civil, chemical, electrical, mechanical, and systems), and economists of diverse expertise (agricultural, computational, energy, financial, and spatial).

This is part one of a two-volume work presenting a definitive and comprehensive treatment of the finite-dimensional variational inequality and complementarity problem. This volume covers the basic theory needed and should appeal to mathematicians, economists, and engineers working in the area.



**117,69 €**

109,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

**Artikelnummer:** 9781441930637

**Medium:** Buch

**ISBN:** 978-1-4419-3063-7

**Verlag:** Springer

**Erscheinungstermin:** 12.12.2011

**Sprache(n):** Englisch

**Auflage:** 1. Auflage 2011

**Serie:** Springer Series in Operations Research and Financial Engineering

**Produktform:** Kartoniert

**Gewicht:** 1083 g

**Seiten:** 693

**Format (B x H):** 155 x 235 mm

