

## Contents

	Page
Preface	
1. Introduction	9
2. Multifunctions and Constraint Sets	19
2.1. Definitions	19
2.2. Parameter Depending Constraint Sets	20
3. Stability of Some Continuous Optimization Problems	28
3.1. Definitions	28
3.2. Stability Properties	29
4. Quasiconvex Polynomial Optimization Problems	40
4.1. Properties of Quasiconvex Polynomial Functions	40
4.2. Multifunctions and Constraint Sets Defined by Quasiconvex Polynomial Functions	46
4.3. Stability Properties for a Fixed Objective Function	61
5. Integer Points in Certain Subsets of the Space $R^n$	64
5.1. Subsets Described as the Sum of a Compact Set and a Convex Cone	64
5.2. Subsets Described by Quasiconvex Polynomial Functions	72
5.3. Polyhedral Subsets	76
6. Stability Properties of Nonlinear Integer Optimization Problems	83
6.1. Introduction	83
6.2. Integer Problems with Quadratic Objective Function	84
6.3. Integer Problems with a Convex Polynomial Objective Function	97
7. The Existence of Optimal Points for Integer Optimization Problems	104
7.1. Concave Objective Functions	104
7.2. Polynomial Objective Functions	106
7.3. Some Special Mixed-Integer Optimization Problems	111
8. Quantitative Stability of (Mixed-) Integer Linear Optimization Problems	115
9. On Relations between Parametric Optimization, Solution Concepts and Subadditive Duality for Integer Optimization	123
9.1. Penalty Functions for (Mixed-) Integer Linear Optimization	123
9.2. Partitioning Procedures	124
9.3. Subadditive Duality	128
Bibliography	133