

CONTENTS

| | |
|---|-----------|
| Introduction | 1 |
| PART 1. CONVEX PROGRAMMING | |
| 1. Characterizing Optimal Solutions | 13 |
| 1. Directions, 13 | |
| 2. Dual Sets and Separation, 25 | |
| 3. Characterizations of Optimality, 27 | |
| 4. A Parametric Approach to Optimality Conditions, 53 | |
| 2. Some Computational Methods | 59 |
| 5. The Method of Feasible Directions, 59 | |
| 6. Modified Direction-Finding Generators, 63 | |
| 7. The Parametric Feasible-Direction Algorithm, 70 | |
| 8. Solving Constrained Line Search Problems, 77 | |
| 3. Selected Applications | 88 |
| 9. Pareto Optimization, 88 | |
| 10. Lexicographic Multicriteria Programs, 91 | |
| 11. Chebyshev Solutions, 94 | |
| PART 2. NONCONVEX PROGRAMMING | |
| 4. General Necessary Conditions | 99 |
| 12. Second-Order Directions, 99 | |
| 13. Dual Elements: Support Functions, 106 | |
| 14. Second-Order Necessary Conditions, 112 | |

| | |
|---|------------|
| 5. Optimality Conditions for Differentiable Programs | 120 |
| 15. Necessary Conditions, 120 | |
| 16. Sufficient Conditions, 129 | |
| References | 135 |
| Glossary of Symbols | 141 |
| Index | 143 |