

CONTENTS

|  |     |
|--|-----|
| 1. Introduction  | 2   |
| Part 1 Mathematical Programming                                      | 15  |
| 2. Linear Programming  | 16  |
| 3. The Theory of Linear Programming                                  | 68  |
| 4. Special Types of Linear Programming Problems                      | 118 |
| 5. The Application of Linear Programming, Including Goal Programming | 170 |
| 6. Network Analysis, Including PERT-CPM                              | 232 |
| 7. Dynamic Programming   | 266 |
| 8. Game Theory   | 300 |
| Part 2 Probabilistic Models  | 323 |
| 9. Probability Theory  | 324 |
| 10. Queuing Theory   | 400 |
| 11. The Application of Queuing Theory                                | 458 |
| 12. Inventory Theory   | 492 |
| 13. Markovian Decision Processes and Applications                    | 548 |
| 14. Reliability  | 594 |
| 15. Decision Analysis  | 612 |
| 16. Simulation   | 642 |
| Part 3 Advanced Topics in Mathematical Programming                   | 681 |
| 17. Algorithms for Linear Programming                                | 682 |
| 18. Integer Programming  | 714 |
| 19. Nonlinear Programming  | 748 |
| 20. Operations Research in Perspective                               | 770 |
| Appendices   | 779 |
| Answers to Selected Problems   | 813 |
| Index  | 821 |