

Contents

Index of symbols	XIII
1. Introduction	1
2. Degeneracy problems in mathematical optimization ..	3
2.1. Convergence problems in the case of degeneracy	4
2.1.1 Cycling in linear complementarity problems	4
2.1.2 Cycling in network problems	5
2.1.3 Cycling in bottleneck linear programming	6
2.1.4 Cycling in integer programming	7
2.2 Efficiency problems in the case of degeneracy	8
2.2.1 Efficiency loss by weak redundancy	8
2.2.2 Efficiency problems from the perspective of the theory of computational complexity	9
2.3 Degeneracy problems within the framework of postoptimal analysis	11
2.4. On the practical meaning of degeneracy	12
Summary of Chapter 2	14
3. Theory of degeneracy graphs	15
3.1. Fundamentals	15

Summary of Chapter 5	162
Appendix	
A. Foundations of linear algebra and the theory of convex polytopes	164
B. Foundations of graph theory	167
C. Problems in the solution of determinant inequality systems	172
References	180