

1. Record Nr.	UNINA9911019292003321
Autore	Luss Hanan
Titolo	Equitable resource allocation : models, algorithms and applications / / Hanan Luss
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, 2012
ISBN	9781118449219 1118449215 9781283644846 1283644843 9781118449189 1118449185 9781118449240 111844924X
Descrizione fisica	1 online resource (371 p.)
Collana	Information and communication technology series
Classificazione	TEC029000
Disciplina	620.0042 658.4/033 658.4033
Soggetti	Operations research Resource allocation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Title page; Copyright page; Contents; Preface; Acknowledgments; 1: Introduction; 1.1 Perspective; 1.2 Equitable Resource Allocation: Lexicographic Minimax (Maximin) Optimization; 1.3 Examples and Applications; 1.3.1 Allocation of High-Tech Components; 1.3.2 Throughput in Communication and Computer Networks; 1.3.3 Point-to-Point Throughput Estimation in Networks; 1.3.4 Bandwidth Allocation for Content Distribution; 1.3.5 Location of Emergency Facilities; 1.3.6 Other Applications; 1.4 Related Fairness Criteria; 1.5 Outline of the Book; 1.5.1 Chapter 2: Nonlinear Resource Allocation 1.5.2 Chapter 3: Equitable Resource Allocation: Lexicographic Minimax and Maximin Optimization1.5.3 Chapter 4: Equitable Resource Allocation with Substitutable Resources; 1.5.4 Chapter 5: Multiperiod

Equitable Resource Allocation; 1.5.5 Chapter 6: Equitable Network Resource Allocation; 1.5.6 Chapter 7: Equitable Resource Allocation with Integer Decisions; 1.6 Concluding Remarks AND LITERATURE REVIEW; 1.6.1 Equitable Allocation of High-Tech Components; 1.6.2 Equitable Throughput in Communication and Computer Networks; 1.6.3 Point-to-Point Throughput Estimation in Networks; 1.6.4 Equitable Bandwidth Allocation for Content Distribution; 1.6.5 Equitable Location of Emergency Facilities; 1.6.6 Other Applications; 2: Nonlinear Resource Allocation; 2.1 Formulation and Optimality Properties; 2.2 Algorithms; 2.2.1 The Activity Deletion Algorithm; 2.2.2 The Activity Addition Algorithm; 2.2.3 The Constraints Evaluation Algorithm; 2.2.4 Lower and Upper Bounds; 2.3 Nonlinear Resource-Usage Constraint; 2.3.1 Formulation and Optimality Properties; 2.3.2 Algorithms; Computational Results; 2.4 Multiple Resource Constraints: A Special Case; 2.5 Concluding Remarks and LITERATURE REVIEW; 3: Equitable Resource Allocation: Lexicographic Minimax and Maximin Optimization; 3.1 Formulation and Optimality Properties; 3.2 Minimax Algorithms; 3.2.1 The Minimax Activity Deletion Algorithm; 3.2.2 The Minimax Activity Addition Algorithm; 3.2.3 The Minimax Constraints Evaluation Algorithm; 3.2.4 Lower and Upper Bounds; 3.3 The Lexicographic Minimax Algorithm; Computational Results; 3.4 Extension to Nonseparable Objective Function; 3.5 Concluding Remarks and LITERATURE REVIEW; 4: Equitable Resource Allocation with Substitutable Resources; 4.1 Representations of Substitutable Resources; 4.1.1 Transitive Substitutable Resources Represented by Trees; 4.1.2 Transitive Substitutable Resources Represented by Acyclic Graphs; 4.1.3 Nontransitive Substitutable Resources Represented by Bipartite Graphs; 4.1.4 Activity-Dependent Substitutable Resources Represented by Bipartite Graphs; 4.1.5 Solution Approach; 4.2 Transitive Substitutable Resources Represented by Trees; 4.2.1 Formulation; 4.2.2 The Minimax Algorithm; 4.2.3 The Lexicographic Minimax Algorithm; Computational Results; 4.2.4 Lower and Upper Bounds; 4.3 Transitive Substitutable Resources Represented by Acyclic Graphs

Sommario/riassunto

"This book focuses primarily on equitable resource allocation and is a valuable reference to those who work to solve diverse optimization problems"--