

Contents

Introduction

Introduction.....	1
<i>R. Caballero, F. Ruiz, R.E. Steuer</i>	

Abraham Charnes Distinguished Lecture

On the Education of a Multi-Criteria Researcher: A Personal View <i>S. I. Gass</i>	5
---------------------------------------------------------------------------------------	---

Part 1: Goal Programming

An Example of Good Modelling Practice in Goal Programming: Means for Overcoming Incommensurability.....	29
<i>M. Tamiz, D. Jones</i>	
Pattern Classification by Linear Goal Programming and its Applications.....	38
<i>H. Nakayama, N. Kagaku</i>	
Goal Programming and Heuristic Search.....	48
<i>L. Mandow, E. Millán</i>	
Goal Programming Model for Evaluating Hospital Service Performance.....	57
<i>M.M. Arenas, E. Lafuente, M.V. Rodríguez Uria</i>	
An Application of Interactive Multiple Goal Programming on the Warsaw Stock Exchange.....	60
<i>C. Dominiak</i>	

Methodology for an Analysis of Decision Criteria: An Application to Irrigated Farms in Southern Spain.....	75
<i>A. Rodríguez-Ocaña, J. Berbel, P. Ruiz-Avilés</i>	
Socioeconomic Impact Evaluation of the Drought in Irrigated Lands in Southern Spain: A Multicriteria Decision Making Approach.....	84
<i>J.A. Gómez-Limón, P. Lara, A. Rodríguez, F.J. Sánchez</i>	
Goal Programming in Distribution System Design.....	93
<i>E. Konarzewska-Gubala, A. Zajackowski</i>	
Distance Games and Goal Programming Models of Voting Behaviour.....	102
<i>F. Turnovec</i>	
Dynamic Goal Programming Models.....	111
<i>T. Trzaskalik</i>	
Estimation Through the Imprecise Goal Programming Model.....	120
<i>B. Aouni, O. Kettani, J.-M. Martel</i>	

Part 2: Multiple Objective Theory

Characteristics of the Efficient Solutions of Bicriteria and Tricriteria Network Flow Problems.....	131
<i>A. Mustafa, M. Goh</i>	
Non-connected Efficiency Graphs in Multiple Criteria Combinatorial Optimization.....	140
<i>M. Ehrgott, K. Klamroth</i>	
An Augmented Lagrangian Scalarization for Multiple Objective Programming.....	151
<i>M.L. TenHuisen, M.M. Wiecek</i>	
Dominance and Efficiency in Multiobjective Stochastic Linear Programming.....	160
<i>F. Ben Abdelaziz, P. Lang, R. Nadeau</i>	
A Multi-Criteria Decision Making Problem Associated to Preference Modelling.....	170
<i>J. González-Pachón, M.I. Rodríguez-Galiano</i>	
On Optimality and Duality in Multiobjective Nonsmooth Programming.....	178
<i>V. Preda, I.M. Stancu-Minasian</i>	

Sensitivity in Multiobjective Programming by Differential Equations Methods. The Case of Homogeneous Functions.....	188
<i>A. Balbás, P. Jiménez Guerra</i>	
On Pseudo-Boolean Multicriteria Optimization Problems with Incomplete Information.....	197
<i>V. Donskoy, A. Perekhod</i>	
Properties of Efficient Points Sets and Related Topics.....	201
<i>V. Postolicã</i>	
Existence Theorems for Cone Saddle Points and Vector-Valued Minimax Theorems.....	210
<i>T. Tanaka</i>	
A New Approach to Second Order Optimality Conditions in Vector Optimization.....	219
<i>A. Cambini, L. Martein, R. Cambini</i>	
Inconvex and Pseudoinconvex Functions in Multiobjective Programming.....	228
<i>R. Osuna Gómez, A. Beato-Moreno, P. Luque Calvo, A. Rufián-Lizana</i>	
Vector-Values Risk in Multicriteria Problems.....	235
<i>M. Salukvadze, A. E. Bardin</i>	
Utopian Efficient Strategies in Multicriteria Matrix Games.....	245
<i>F.R. Fernández, A. Mármol, L. Monroy, J. Puerto</i>	
About the Existence of Nash-Slater Equilibrium for a Non-Cooperative Game under Uncertainty.....	255
<i>M. Larbani</i>	

Part 3: Implementation and Practice of Multiple Objective Programming

An Algorithmic Package for the Resolution of Dynamic Multiobjective Problems.....	265
<i>R. Caballero, T. Gómez, M. González, L. Rey, F. Ruiz</i>	
Closest Solutions in Ideal-Point Methods.....	274
<i>E. Carrizosa, E. Conde, A. Pascual, D. Romero-Morales</i>	
Methods of Multicriteria Decision Support Based on Reference Sets.....	282
<i>A. Skulimowski</i>	

A Tabu Search Procedure to Solve Multiobjective Combinatorial Optimization Problem.....	291
<i>X. Gandibleux, N. Mezdaoui, A. Fréville</i>	
Linking Production Theory and Multiobjective Fractional Programming as a Support Tool for Animal Diet Formulation.....	301
<i>P. Lara</i>	
Multiobjective Energy-Environmental-Economy Model for Israel (ENMIS).....	310
<i>D. Soloveitchik</i>	
BayRes: A System for Stochastic Multiobjective Reservoir Operations.....	319
<i>D. Rios-Insúa, C. Bielza, J. Martín, K. Salewicz</i>	
Timber Harvesting Scheduling Problems: A Compromise Programming Approach.....	328
<i>L. Díaz-Balteiro, C. Romero</i>	
Location of Semiobnoxious Facility: A Biobjective Approach.....	338
<i>E. Carrizosa, E. Conde, D. Romero-Morales</i>	
A Hierarchical Location Model: Biobjective Programming vs FDH.....	347
<i>M. Alminyana, F. Borrás, J.T. Pastor</i>	
Efficient Frontier Derived from Opinions and the Utility Optimization Problem.....	356
<i>E. Ballesteró</i>	
Finding Efficient Points in Multiobjective Quadratic Programming with Strictly Convex Objective Functions.....	365
<i>A. Beato-Moreno, P. Luque-Calvo, R. Osuna-Gómez, A. Rufián-Lizana</i>	
Multiobjective Programming with a Concave Vector Value Function.....	374
<i>A. Mateos, S. Rios-Insúa</i>	
Modelling Best-Practice Frontiers When There Are Multiple Outputs.....	383
<i>C. Tofallis</i>	