

Table of Contents

Preface.....	v
<i>Yacov Y. Haimes, Ralph E. Steuer</i>	
MCDM and Its Worldwide Role in Risk-Based Decision Making: Opening Remarks to the XIVth International Conference on MCDM.....	ix
<i>Yacov Y. Haimes</i>	

Leadoff Papers

The Even-Swap Method for Multiple Objective Decisions.....	1
<i>John S. Hammond, Ralph L. Keeney, Howard Raiffa</i>	
A Methodology for Risk Management of Compound Failure Modes.....	15
<i>Lori R. Johnson-Payton, Yacov Y. Haimes, James H. Lambert</i>	
Forming Win-Win Strategy – A New Way to Study Game Problems.....	45
<i>Po Lung Yu, Jian Ming Li</i>	

Part I: MCDM Theory

Relations among Several Efficiency Concepts in Stochastic Multiple Objective Programming.....	57
<i>Rafael Caballero, Emilio Cerdá Tena, Maria del Mar M. Muñoz, Lourdes Rey</i>	
Hard to Say It's Easy – Four Reasons Why Combinatorial Multiobjective Programmes Are Hard.....	69
<i>Matthias Ehrgott</i>	
Multiattribute Utility Analysis in the IctNeo System.....	81
<i>Manuel Gómez, S. Ríos-Insua, Concepcion Bielza, J.A. Fernández del Pozo</i>	
Maximal Point Theorems in Product Spaces and Applications for Multicriteria Approximation Problems.....	93
<i>Alfred Göpfert, Christiane Tammer</i>	

A Robustness Index of Binary Preferences.....	105
<i>Servio T. Guillén, Mayra S. Trejos, Roberto Canales</i>	
Tangent and Normal Cones in Nonconvex Multiobjective Optimization.....	114
<i>Kaisa Miettinen, Marko M. Mäkelä</i>	
Multiobjective Linear Production Programming Games.....	125
<i>Ichiro Nishizaki, Masatoshi Sakawa</i>	
Multiple Criteria Subset Selection Under Quantitative and Non-Quantitative Criteria.....	137
<i>Siamak Rajabi, Keith W. Hipel, D. Marc Kilgour</i>	
Using Block Norms in Bicriteria Optimization.....	149
<i>Bernd Schandl, Kathrin Klamroth, Margaret M. Wiecek</i>	
Multiple Risk Assessment with Random Utility Models in Probabilistic Group Decision Making.....	161
<i>Fumiko Seo</i>	
On a Behavioral Model of Analytic Hierarchy Process for Modeling the Legitimacy of Rank Reversal.....	173
<i>Hiroyuki Tamura, Satoru Takahashi, Itsuo Hatono, Motohide Umamo</i>	
Resolution of Variational Inequality Problems by Multiobjective Programming.....	185
<i>Hsiao-Fan Wang</i>	
An Outer Approximation Method for Optimization over the Efficient Set.....	196
<i>Syuuji Yamada, Tetsuzo Tanino, Masahiro Inuiguchi</i>	
On Efficiency of Data Envelopment Analysis.....	208
<i>Ye Boon Yun, Hirotaka Nakayama, Tetsuzo Tanino</i>	
Rough Approximation of a Preference Relation by a Multi-Attribute Stochastic Dominance for a Reduced Number of Attributes.....	218
<i>Kazimierz Zaras</i>	

Part II: MCDM Methodologies

An Evaluation of Multicriteria Decision-Making Methods in Integrated Assessment of Climate Policy.....	228
<i>Michelle L. Bell, Benjamin F. Hobbs, Emily M. Elliott, Hugh Ellis, Zachary Robinson</i>	
A Revised Minimum Spanning Table Method for Optimal Expansion of Competence Sets.....	238
<i>C.I. Chiang, Jian Ming Li, Gwo-Hshiung Tzeng, Po Lung Yu</i>	
Constructing and Implementing a DSS to Help Evaluate Perceived Risk of Accounts Receivable.....	248
<i>Leonardo Ensslin, Gilberto Montibeller Neto, Marcus Vinicius A. de Lima</i>	
Improving Weighting Information in Interactive Decision Procedures: A Visual Guide.....	260
<i>Francisco R. Fernández, Amparo Mármol, Justo Puerto</i>	
A Multicriteria Framework for Risk Analysis.....	272
<i>Winfried Hallerbach, Jaap Spronk</i>	
Intelligent User Support in Multicriteria Decision Support.....	284
<i>Julie Hodgkin, Valerie Belton, Iain Buchanan</i>	
Data Envelopment Analysis with Fuzzy Input-Output Data.....	296
<i>Masahiro Inuiguchi, Tetsuzo Tanino</i>	
Target Mix Approach for Measuring Efficiency in Data Envelopment Analysis.....	308
<i>Tarja Joro</i>	
The TEAM Model for Evaluating Alternative Adaptation Strategies.....	319
<i>Susan Herrod Julius, Joel D. Scheraga</i>	
Fuzzy Multi-Criteria DSS: Their Applicability and Their Practical Value.....	331
<i>Anastasia Koulouri, Valerie Belton</i>	

Problems of Measurement in Decision Analysis..... 343
Oleg I. Larichev

Multicriteria Decision Aid Techniques: Some Experimental Conclusions.... 357
David L. Olson, Alexander I. Mechitov, Helen M. Moshkovich

Cone Decomposition for the Solution of Efficient Extreme Points in
 Parallel..... 369
Ralph E. Steuer, Craig Piercy

Part III: MCDM in Applications

Scheduling to Minimize Maximum Earliness and Number of Tardy Jobs
 Where Machine Idle Time is Allowed..... 381
Meral Azizoglu, Murat Köksalan, Suna Kondakci

Using Compromise Programming in a Stock Market Pricing Model..... 388
Enrique Ballesterio

Redistribution of Funds for Teaching and Research among Universities.... 400
Günter Fandel, Tomas Gal

Multicriteria Optimization Accounting for Uncertainty in Dynamic
 Problem of Power Generation Expansion Planning..... 409
Vladimir I. Kalika, Shimon Frant

Time-Dependent Capital Budgeting with Multiple Criteria..... 421
Kathrin Klamroth, Margaret M. Wiecek

Sustainability Indicators for Multiple Criteria Decision Making in Water
 Resources: An Evaluation of Soil Tillage Practices Using Web-HIPRE.... 433
Jason K. Levy, Kieth W. Hipel, D. Marc Kilgour

Soft-OR and Multi-Criteria Decision Analysis for Group Decision Support:
 A Case Study in Fisheries Management..... 445
Brett E. Malyon, Theodor J. Stewart

Problem Structuring and Evaluation Integration: A Case Study in Transportation Planning.....	458
<i>Sule Onsel, Füsün Ülengin, Y. Ilker Topcu</i>	
Management of Surgical Waiting Lists in Public Hospitals.....	473
<i>Maria Victoria Rodríguez Uría, Mar Arenas Parra, A. Bilbao Terol, Emilio Cerdá Tena</i>	
On Designing Health Care Plans and Systems from the Multiple Criteria Decision Making (MCDM) Perspective.....	483
<i>Charles H. Smith, H. Roland Weistroffer</i>	
Case Studies on the Application of Adaptive Risk Analysis to USDA's Resource Conservation Programs.....	492
<i>Mark A. Tumeo, David A. Mauriello, Ali M. Sadeghi, Ronald Meekhof</i>	
Fuzzy Multi-Objective Reconstruction Plan for Post-Earthquake Road- Network by Genetic Algorithm.....	510
<i>Gwo-Hshiung Tzeng, Yuh-Wen Chen, Chien-Yuan Lin</i>	
Fair Allocations Using Multicriteria Power Indices.....	530
<i>Robin C. van den Honert</i>	
The College Selection Process from a Multi-Criteria Decision Analysis Perspective.....	542
<i>H. Roland Weistroffer, Charles H. Smith</i>	
Index of Authors	551