CONTENTS

INTRODUCTORY CHAPTER

Carlos A. Bana e Costa and Philippe Vincke
MULTIPLE CRITERIA DECISION AID: AN OVERVIEW 3

CHAPTER I
MODELLING DECISION SITUATIONS

Bernard Roy
DECISION-AID AND DECISION-MAKING 17

Anna Ostanello
ACTION EVALUATION AND ACTION STRUCTURING: DIFFERENT DECISION AID SITUATIONS REVIEWED THROUGH TWO ACTUAL CASES 36

Denis Bouyssou
BUILDING CRITERIA: A PREREQUISITE FOR MCDA 58

Jean-Claude Vansnick
MEASUREMENT THEORY AND DECISION AID 81

Philippe Vincke
BASIC CONCEPTS OF PREFERENCE MODELLING 101

Hans-Jürgen Zimmermann
DECISION MAKING IN ILL-STRUCTURED ENVIRONMENTS AND WITH MULTIPLE CRITERIA 119
CHAPTER II
THE OUTRANKING APPROACH

Bernard Roy
THE OUTRANKING APPROACH AND THE FOUNDATIONS OF ELECTRE METHODS

Daniel Vanderpooten
THE CONSTRUCTION OF PRESCRIPTIONS IN OUTRANKING METHODS

Jean Pierre Brans and Bertrand Mareschal
THE PROMETHEE METHODS FOR MCDM; THE PROMCALC, GAIA AND BANKADVISER SOFTWARE

Benedetto Matarazzo
A PAIRWISE CRITERION COMPARISON APPROACH: THE MAPPAC AND PRAGMA METHODS

CHAPTER III
VALUE AND UTILITY THEORY APPROACH

Rakesh K. Sarin
CONJOINT MEASUREMENT: THEORY AND METHODS

Ernest H. Forman
MULTI CRITERIA DECISION MAKING AND THE ANALYTIC HIERARCHY PROCESS

Valerie Belton and Stephen Vickers
USE OF A SIMPLE MULTI-ATTRIBUTE VALUE FUNCTION INCORPORATING VISUAL INTERACTIVE SENSITIVITY ANALYSIS FOR MULTIPLE CRITERIA DECISION MAKING
Eric Jacquet-Lagrèze
INTERACTIVE ASSESSMENT OF PREFERENCES USING HOLISTIC JUDGMENTS: THE PREFCALC SYSTEM 335

Carlos A. Bana e Costa
AN ADDITIVE VALUE FUNCTION TECHNIQUE WITH A FUZZY OUTRANKING RELATION FOR DEALING WITH POOR INTERCRIERIA PREFERENCE INFORMATION 351

Ron Janssen, Peter Nijkamp, and Piet Rietvelt
QUALITATIVE MULTICRITERIA METHODS IN THE NETHERLANDS 383

CHAPTER IV
INTERACTIVE MULTIPLE OBJECTIVE PROGRAMMING

Ralph E. Steuer and Lorraine R. Gardiner
INTERACTIVE MULTIPLE OBJECTIVE PROGRAMMING: CONCEPTS, CURRENT STATUS, AND FUTURE DIRECTIONS 413

João N. Climaco and Carlos H. Antunes
A COMPARISON OF MICROCOMPUTER IMPLEMENTED INTERACTIVE MOLP METHODS BASED ON A CASE STUDY 445

Pekka Korhonen
THE MULTIOBJECTIVE LINEAR PROGRAMMING DECISION SUPPORT SYSTEM VIG AND ITS APPLICATIONS 471

J. Teghem Jr., P. Kunsch, C. Delhaye, and F. Bourgeois
A PERSONAL COMPUTER VERSION OF THE MCDA APPROACH STRANGE 492

Jaap Spronk
INTERACTIVE MULTIFACTORIAL PLANNING: STATE OF THE ART 512
CHAPTER V
GROUP DECISION AND NEGOTIATION

Tawfik Jelassi, Gregory Kersten, and Stanley Zionts
AN INTRODUCTION TO GROUP DECISION AND NEGOTIATION SUPPORT 537

Günter Fandel
GROUP DECISION MAKING: METHODOLOGY AND APPLICATIONS 569

Gregory E. Kersten and Wojtek Michalowski
SUPPORTING DECISION PROCESSES: AN APPROACH AND TWO EXAMPLES 606

CHAPTER VI
THE SCHOOL CASE-STUDY

Carlos A. Bana e Costa and José Cervaens Rodrigues
PRESENTATION OF THE SCHOOL CASE-STUDY: EVALUATION OF PERSONNEL - HOW TO RANK OFFICERS FOR PROMOTION? 639

Marc Pirlot
A REPORT ON THE STUDY OF THE PORTUGUESE NAVY CASE 648