

Preface

This book is the post conference proceedings of MCDM 2009, the Twentieth International Conference on Multiple Criteria Decision Making has been held at Chengdu, China, June 21–26, 2009. The conference has emerged as the global forum dedicated to the sharing of original research results and practical development experiences among researchers and application developers from different multiple criteria decision making related areas. The theme for MCDM 2009 was “New State of MCDM in 21st Century”, which is also used as the title of this book. The conference has received more than 350 submissions, out of which 121 were accepted. This included 72 regular papers and 49 short papers. There were more than 250 participants from 31 countries and regions attended the conference.

After a post conference’s peer-reviewing process, we selected 17 papers contributed by 35 authors and co-authors from ten countries: Belgium, China, Czech Republic, Denmark, Finland, France, Latvia, Lithuania, Poland and USA to formulate this book. The contents of this book consist of three parts: MCDM Foundation and Theory, MCDM Methodology, and MCDM Applications.

There were four papers in MCDM Foundation and Theory. The first paper “MCDM: In Search of New Paradigms...” is contributed by Milan Zeleny. The second paper “Harmonizing the Omnipresence of MCDM in Technology, Society, and Policy” is written by Yacov Y. Haimmes. The third paper “Decision Making on Pareto Front Approximations with Inherent Nondominance”, is contributed by Markus Hartikainen, Kaisa Miettinen, and Margaret M. Wiecek, while the forth paper “A New Consistency Index for Comparison Matrices in The ANP” is from Daji Ergu, Gang Kou, Yi Peng and Yong Shi.

MCDM Methodology has four papers. The first paper “Estimating the Robustness of Composite CBA & MCA Assessments by Variation of Criteria Importance Order” is contributed by Anders Vestergaard Jensen, Michael Bruhn Barfod, and Steen Leleur. The second paper “Compromise Based Evolutionary Multiobjective Optimization Algorithm for Multidisciplinary Optimization” is from Benoit Guedas, Xavier Gandibleux, and Philippe Depince. The third paper “A Lower Bound of the Choquet Integral Integrated within Martins’ Algorithm” is written by Hugo Fouchal, Xavier Gandibleux, and Fabien Lehuède. The forth paper “Penalty Rules in Multicriteria Genetic Search” is from Grzegorz Koloch and Tomasz Szapiro.

There are nine papers related to various MCDM Applications. The first paper “The Bi-Criteria Approach to Project Cost and Schedule Buffers Sizing” is done by Paweł Błaszczyk, Tomasz Błaszczyk, and Maria B. Kania. The second paper “The Multi-objective Alternative assets Investment Optimization Model on Sovereign Wealth Funds Based on Risk Control” is contributed by Jing Yu, Bin Xu and Yong Shi. The third paper “A New Tool for Feature Extraction and Its Application to Credit Risk Analysis” is written by Paweł Błaszczyk. The forth paper “Algorithm for MCDM in Intelligent Braking Diagnostics System of Railway Transport” is from Anatoly Levchenkov, Mikhail Gorobetz, Leonids Ribickis, and Peteris Balckars. The fifth paper “The Online Advertising Types of Choices Based on DEA Method” is provided by Xianglan Jiang, Yingjin Lu and Wenbo Yang. The sixth paper “Examination of Decision Support Systems for Composite CBA & MCDA Assessments of Transport Infrastructure Projects” is from Michael Bruhn Barfod, Anders Vestergaard Jensen, and Steen Leleur. The seventh paper “An Entropy-weighted Clustering Method for Environmental Pollution Assessment in China” is presented by Gang Kou, Qiaoli Sun, and Yi Peng. The eighth paper “Unconstrained Two-objective Land-use Planning Based-on NSGA-II for Chemical Industry Park” is contributed by Ming Xu and Zongzhi Wu. The last paper “Robustness in Economic Development Studies: The case of Tanzania” is done by Willem Karel M. Brauers and Edmundas Kazimieras Zavadskas.

We wish this book will serve as a useful source for the readers who have interests in the progress of MCDM research and practice.

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