International Society on Multiple Criteria Decision Making

MCDM

E-News ● 2020 ● Issue 2 (September)

Contents

Letter from the President

Dear Members of the International Society on MCDM,

when I wrote my letter for the January newsletter, I had no idea that this one would be completely different. I was looking forward to a range of activities of the society including the MCDM stream at IFORS 2020 and the summer school in July. Well, like the Tokyo Olympic Games and the European football championship, these events have not happened and have been postponed to 2021. A tiny little virus has changed many of our lives radically. Since March, I have been at home supervising students via video conference and not travelling to any conferences, which has not happened for many years before. Many of you will have had to switch to online teaching without much notice and without having any experience in this. So things are very different now and we will eventually learn what the "new normal" will be. Certainly, uncertainty seems to be a much bigger part of that new normal. And I imagine that multiple criteria will become more relevant in decision making processes than before, considering that public health concerns are now on the top of the agenda in many cases. So there will be opportunities for us to shape the new normal. This issue of the newsletter is quite sparse, not surprisingly, given that we all had to adjust to living with a pandemic, but maybe in an issue of next year we could report on efforts to deal with Covid-19 issues that involve MCDM? I would love to hear from you about this, and so will Johannes.

For now, let's hope that in 2021 the pandemic will be under enough control to allow our main events, the 26th International Conference, 27 June to 2 July, and the summer school, 19 to 30 July, to take place in person. The personal interaction with colleagues and young researchers is absolutely essential to the success of our community and the society. The most immediate upcoming event, the workshop on recent advances in multi-objective optimization, organized by Sophie Parragh on 17 September, https://konferenzen.jku.at/ramoo2020/, will be held online for the first time. For now, I wish you all to stay in good health and hope that we can meet again in person soon.

Matthias Ehrgott

President of the International Society on MCDM
30 August 2020
Lancaster, UK

President of the International Society on MCDM
President (at) mcdmsociety.org

Note: Please remember that you can reach the officers of the Society at the following addresses:

president (at) mcdmsociety.org
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phdaward (at) mcdmsociety.org
newsletter (at) mcdmsociety.org

1 Society News

1.1 *CfP: 26th International conference on Multiple Criteria Decision Making*

"MCDM for a sustainable and secure future"
June 27 – July 2, 2021

We are very pleased to announce that 26th International Conference on Multiple Criteria Decision Making will be held at University of Portsmouth between the 27th June – 2nd July 2021.

Important Dates

***Event dates*: June 27th – July 2nd, 2021**
Call for invited session proposals: October 1st, 2020
Submission deadline for invited session proposals: November 30th, 2020
Call for abstracts: December 2nd, 2020
Submission deadline for abstracts: March 1st, 2021
Notification of acceptance: April 30th, 2021
Early bird registration deadline: May 30th, 2021

Organizing Committee

Professor Alessio Ishizaka (Chair)
Dr Banu Lokman (Co-chair)
Professor Dylan Jones
Professor Ashraf Labib
Professor Salvatore Greco
Dr Maria Barbati

Dr Salem Chakhar
Dr Alan Tait

Venue
The conference will be hosted on the city-centre campus of the University of Portsmouth. The main venue is the Portsmouth Business School at the modern, purpose-built Richmond Building.

1.2   2021 EURO PhD Summer School on MCDA/MCDM

Due to the pandemic, 2020 EURO PhD Summer School on MCDA/MCDM had been postponed to 2021. It is going to take place in Ankara, Turkey, on July 19-30, 2021. PhD students interested in getting an in-depth understanding of the theoretical and applied aspects of MCDA/MCDM, interacting with some of the top scholars in the area, and conducting hands-on exercises/cases are welcome to apply. Although the priority is for PhD students, a limited number of Master's students may also be admitted. A total of approximately 50 students will be admitted to the summer school. Those who had been admitted and opted to apply their registration fees towards the postponed summer school need not apply again. All others, including those admitted and had not paid or had been refunded, will have to apply again. We have room for new applications as well.

There will be lectures on state-of-the-art multiple criteria methods, applications, and software. Teams of students will be formed to work on several case studies and will present their work at the end of the summer school. The new venue is Bilkent University, a neighbor of the original venue. The students will be staying in a dormitory of Bilkent University and will have the opportunity to interact with each other, as well as with the lecturers throughout the summer school. This is a great opportunity for PhD students to network among themselves and with the lecturers, and initiate collaborations and friendships that may continue for many years. Many of the current well-known scholars in the area have attended past summer schools.

In addition to the unique academic program, the summer schools are lots of fun. There are social activities throughout and the students enjoy spending time together. Many long-lasting friendships have been formed in past summer schools.

The lectures will be held at the Bilkent University campus. All meals will be provided and the activities of the social program will also be covered. Thanks to the financial support from the Association of European Operational Research Societies (EURO) and the International Society on MCDM, we are able to keep the registration costs low. There will also be an opportunity to apply for partial support for the registration cost for those who have limited funds, especially from developing countries.

The original organizers, Gülşah Karakaya of Middle East Technical University, and Banu Lokman of Portsmouth University, could not continue to be involved in the organization, due to other

commitments. They worked diligently and documented everything so well. We are in their debt for all their efforts that make our job easier.

Bilkent is located on a beautiful campus in the west side of Ankara (https://w3.bilkent.edu.tr/). Ankara, located in central Anatolia, is the capital of Turkey. It connects east and west parts of the country, and is the second largest city of Turkey. The city has great museums including Museum of Anatolian Civilizations, which was elected as The Museum of the Year in Europe in 1997. Please check the following link for more information about Ankara:

https://www.goturkeytourism.com/destinations-turkey/ankara-city-in-turkey.html.

Important dates

- Deadline for Application: February 1, 2021

- Notification of Acceptance: February 15, 2021

- Early registration deadline: March 15, 2021

- Late registration deadline: April 15, 2021

- Beginning of the summer school: July 19, 2021

Tentative List of Lecturers (in alphabetical order)

1. Adiel T. de Almeida, Federal University of Pernambuco, Brazil
   Multi-attribute Utility and Value Theory (MAUT/MAVT), Multi-criteria Group Decision Making (MCGDM)
2. Matthias Ehrgott, Lancaster University, UK

       MCDA/M Community, Multiobjective Combinatorial Optimization
3. Jose Rui Figueira, Technical University of Lisbon, Portugal
       Outranking Methods
4. Carlos Fonseca, University of Coimbra, Portugal
       Evolutionary Multiobjective Optimization
5. Salvatore Greco, University of Catania, Italy
       Robust Ordinal Regression
6. Milosz Kadzinski, Poznan University of Technology, Poland
       Decision Deck
7. Özlem Karsu, Bilkent University, Turkey
       Case Work
8. Ralph L. Keeney, Duke University, USA
       Problem Structuring, Value-Focused Thinking
9. Murat Köksalan, Middle East Technical University, Turkey and University of Michigan, Ann Arbor, USA Behavioral Aspects of Decision Making, Interactive Methods of Multiobjective Optimization I
10. Serpil Sayın, Koç University, Turkey
       Multiobjective Optimization Theory
11. Roman Slowinski, Poznan University of Technology, Poland
       Decision Rule Approach, "Meet the editor"
12. Jyrki Wallenius, Aalto University, Finland
       Interactive Methods of Multiobjective Optimization II, History and Traditions of MCDM
13. Constantin Zopounidis, Technical University of Crete, Greece
       MCDM Applications in Finance

The most up-to-date information regarding the application process and all other developments about the summer will be available at https://www.ie.bilkent.edu.tr/mcdm/. Please check frequently. The finalized summer school program will be published in January 2021.

We look forward to an exciting summer school in Ankara!

Contact address: mcdmss21@bilkent.edu.tr

Organizers:

      Özlem Karsu   Murat Köksalan

      Industrial Engineering Department   Ross School of Business

      Bilkent University   University of Michigan, Ann Arbor

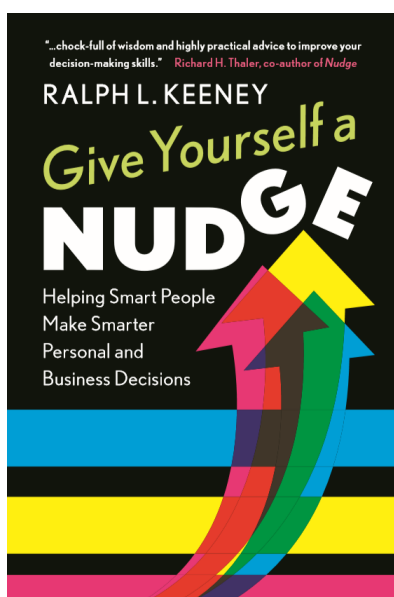# 2   Upcoming Events, Call for Papers, and other News

2.1   Book Announcement: "Give Yourself a Nudge" by Ralph Keeney

Book Announcement

Give Yourself a Nudge

Helping Smart People Make Smarter Personal and Business Decisions

by Ralph L. Keeney

The best way to improve your quality of life is through the decisions you make. This book illustrates several fundamental decision-making skills, provides numerous applications and examples, and ultimately nudges you toward smarter decisions. These nudges frame more generating superior alternatives to those initially considered. All of the nudges are based on psychology and behavioral economics research and are accessible to all readers. The new concept of a decision opportunity is introduced, which involves creating a decision that you desire to face. Solving a decision opportunity improves your life, whereas resolving a decision problem only restores the quality of your life to that before the decision problem occurred. We all can improve our decision-making and enjoy the better quality of life that results. This book shows you how.

Endorsements

"Even though people make hundreds of choices each day, they rarely consider how to improve their decision-making skills. A good place to start is to read Ralph Keeney's new book, which is chock-full of wisdom, stories, and highly practical advice. By the time you finish it, you will have the author whispering in your ear the next time you face a big decision."

> **Richard H Thaler**, *Professor of Economics and Behavioral Science, University of Chicago, co-author of Nudge, and winner of the 2017 Nobel Prize in Economic Sciences*

"Please 'give yourself a nudge' to read this book. If you are not yet sure how, you soon will be. Decision-making really is a learnable skill and Ralph Keeney is a master teacher with compelling examples, exercises, concepts, and steps to share."

> **Daniel Goroff**, *Vice President and Program Director, Alfred P. Sloan Foundation*

"Read ths book to build your wealth or bolster your health. Using practical advice wrapped in accessible language, distinguished decision-making expert Ralph Keeney explains how to identify and analyze critical decisions in your life, how to enrich your set of alternative choices, and how

to value possible outcomes. It is precisely the primer you need to foster better choices in your professional or personal life."

Richard Zeckhauser, *Frank P. Ramsey Professor of Political Economy, Harvard University*

"Ralph Keeney introduces an innovative perspective: don't try to select the best option when facing a choice, but create better choices. Be your own choice architect! The book provides plenty of evidence and convincing arguments for this claim and is a must-read for anyone who wants to improve their decision-making skills."

Ortwin Renn, *Scientific Director, Institute for Advanced Sustainability Studies, Potsdam, Germany*

"This book details innovative, yet practical, gems to nudge you toward making better choices that will undoubtedly enhance the quality of your life. Without grasping such life-enhancing opportunities, you will be at the mercy of life 'as it happens'."

James M. Tien, *Distinguished Professor and Dean Emeritus of the College of Engineering, University of Miami, and International Secretary, National Academy of Engineering*

About the Author

Ralph Keeney is Professor Emeritus at the Fuqua School of Business of Duke University and at the Viterbi School of Engineering at the University of Southern California. Throughout his career, he has been a professor and consultant on making important decisions for policy-makers, businesses, and individuals. He received his PhD from the Massachusetts Institute of Technology, is a member of the US National Academy of Engineering, and has authored or co-authored several books, including Smart Choices, Value-Focused Thinking, and Decisions with Multiple Objectives.

3   Past Conferences, Workshops, and other News

3.1   *Report on the Seventh Dagstuhl Seminar on "Multiobjective Optimization"*

Organizers: Carlos M. Fonseca (University of Coimbra, PT)
Kathrin Klamroth (Universität Wuppertal, DE)
Günter Rudolph (TU Dortmund, DE),
Margaret M. Wiecek (Clemson University, USA)

The Dagstuhl Seminar 20031 on Scalability in Multiobjective Optimization that took place at Schloss Dagstuhl from January 12 -17, 2020, carried on a series of six previous Dagstuhl Seminars that were focused on Multiobjective Optimization. The continuing goal of this series is to strengthen the links between the Evolutionary Multiobjective Optimization (EMO) and the Multiple Criteria Decision Making (MCDM) communities.

The focus of this edition of the seminar series was on three main aspects of scalability in multiobjective optimization (MO) and their interplay, namely (1) MO with many objective functions, (2) MO with many decision makers, and (3) MO with many variables and large amounts of data. The seminar attracted 42 participants from 13 different countries. Financial and organizational support by Schloss Dagstuhl and by the Leibniz-Zentrum für Informatik is gratefully acknowledged.

Nine topical presentations were complemented by discussions in eight working groups that evolved from the three main research questions mentioned above. Specific topics included the characterization and structure of problems with many objectives, questions related to the computational complexity of such problems, the development of test instances, performance indicators, visualization aspects, supporting problem solving with many decision makers, and modelling aspects w.r.t. the interpretation of objectives versus constraints and w.r.t. the potential for objective space reductions. Several working groups plan to submit extended versions of their reports to the special issue on "Modern Trends in Multiobjective Optimization" of the *Journal Computers and Operations Research*, edited by Carlos Fonseca, Kathrin Klamroth and Margaret Wiecek. The submission deadline is October 30, 2020.

A major innovation in this seminar was the Offers & Needs Market open for the entire week. The participants could write their research offers and needs regarding MO on notepads in different colors and post on pin boards to attract or find a possible collaborator. The idea was well received and the participants desired its repetition in future events.

Further notable events during the week included: (i) an invitation to the opening of the art exhibition with paintings of the artist Lola Sprenger, (ii) a hike during the time period with the best (!) weather conditions in the entire week, (iii) a presentation session allowing the participants to share details of upcoming events in the research community, and (iv) a wine and cheese party made possible by a donation of Fraunhofer-Institut für Techno- und Wirtschaftsmathematik Kaiserslautern (ITWM) represented by Karl-Heinz Küfer. Thanks to several excellent musicians among the seminar participants, the event was accompanied by live music and singing, including the already traditional MCDM song that was composed during one of the earlier editions of the seminar series.

For further information, see the seminar website.

4 New Books/Publications

This section presents a list of books and papers recently published. This list is by no means exhaustive. If you want your recent publications to appear in the next newsletter, please send an email with the complete citation of your work to lucie.galand@dauphine.fr.

4.1 Books

S. Ben Amor, A. de Almeida, J. de Miranda, E. Aktas (Eds.), **Advanced Studies in Multi-Criteria Decision Making**, *Chapman and Hall/CRC*, 2019.

Y.İ. Topcu, Y.İ. Özaydın, Ö. Kabak, Ş. Önsel Ekici (Eds.), **Multiple Criteria Decision Making - Beyond the Information Age**, *Contributions to Management Science Series*, 2020.

4.2 Book chapter, Papers in Collections

A. Colorni, A. Tsoukiàs, **What is a Decision Problem? Designing Alternatives**, in N. Matsatsinis, E. Grigoroudis (eds.), Preference Disaggregation in Multiple Criteria Decision Analysis, 1-15, 2018.

R. Giordano, I. Pluchinotta, D. Zikos, T. Krueger, A. Tsoukiàs, **How to use Ambiguity in Problem Framing for Enabling Divergent Thinking: Integrating Problem Structuring Methods and Concept-Knowledge Theory**, in Behavioral Operational Research: a capabilities approach, 93-117, 2020.

P. He, P. Herthogs, M. Cinelli, L. Tomarchio, B. Tunçer, **A Multi-Criteria Decision Analysis Based Framework to Evaluate Public Space Quality**, in Smart and Sustainable Cities and Buildings, R. Roggema, A. Roggema (eds), 273-285, 2020.

4.3 Journal Papers

P. Amenta, A. Ishizaka, A. Lucadamo, G. Marcarelli, V. Vyas, **Computing a common preference vector in a complex multi-actor and multi-group decision system in Analytic Hierarchy Process context**, *Annals of Operations Research*, 284(1):33–62, 2020.

R. Ananthanarayanan, J. Sharma, N. Jehanno, D. R. Seenivasagam, **Study of barriers to the advancement of CNC machining in view of Fiji manufacturing industry using hybrid MCDA approach**, *Journal of MultiCriteria Decision Analysis*, 27(3-4):224-235, 2020.

S. Bank, D. Arslantürk Çöllü, H.I. Bulut, **Traditional or behavioural? A combined decision making trial and evaluation laboratory and analytic network process approach for capital structure determinants of Turkish companies**, *Journal of Multi-Criteria Decision Analysis*, 27(3-4):159-172, 2020.

S. Chakhar, A. Ishizaka, A. Thorpe, J. Cox, T. Nguyen, L. Ford, **Calculating the Relative Importance of Condition Attributes Based on the Characteristics of Decision Rules and**

Attribute Reducts: Application to Crowdfunding, *European Journal of Operational Research*, 286(2):689-712, 2020.

M. Cinelli, M. Kadziński, M. Gonzalez, R. Słowiński, **How to Support the Application of Multiple Criteria Decision Analysis? Let Us Start with a Comprehensive Taxonomy**, *Omega*, 96, 2020.

M. Cinelli, M. Spada, Y. Zhang, W. Kim, P. Burgherr, **MCDA Index Tool: An interactive software to develop indices and rankings**, *Environment Systems and Decisions*, 2020.

A. Colorni, A. Tsoukiàs, **Designing alternatives in decision problems**, *Journal of Multi-Criteria Decision Analysis*, 27(3-4):150-158, 2020.

A.B.G. Couto, L.F.A.M. Gomes, **A multicriteria forecast of the default probability in credit risk assessment**, *International Journal of Business and Systems Research*, 14(3):281-297, 2020.

A.B.G. Couto, L.F.A.M. Gomes, **Sovereign Rating Analysis through the Dominance-Based Rough Set Approach**, *Foundations of Computing and Decision Sciences*, 45:3-16, 2020.

L. Cricelli, F.M. Famulari, M. Greco, M. Grimaldi, **Searching for the one: Customer relationship management software selection**, *Journal of Multi-Criteria Decision Analysis*, 27(3-4):173-188, 2020.

E. Dasdemir, M. Köksalan, D. Tezcaner Öztürk, **A flexible reference point-based multi-objective evolutionary algorithm: An application to the UAV route planning problem**, *Computers & Operations Research*, 114, 2020.

P. De Nardo, E. Gentilotti, F. Mazzaferri, E. Cremoninia, P. Hansen, H. Goossens, E. Tacconelli, the members of the COVID-19 MCDA Group, **Multi-Criteria Decision Analysis to prioritize hospital admission of patients affected by COVID-19 in low-resource settings with hospital-bed shortage**, *International Journal of Infectious Diseases*, 98:494-500, 2020.

G. Fancello, T. Conju, A. Tsoukiàs, **Mapping Walkability: a subjective value theory approach**, *Socio-Economic Planning Sciences*, to appear.

P. Gasser, J. Suter, M. Cinelli, M. Spada, P. Burgherr, S. Hirschberg, M. Kadziński, B. Stojadinović, **Comprehensive resilience assessment of electricity supply security for 140 countries**, *Ecological Indicators*, 110, 2020.

P. Gasser, M. Cinelli, A. Labijak, M. Spada, P. Burgherr, M. Kadziński, B. Stojadinović, **Quantifying Electricity Supply Resilience of Countries with Robust Efficiency Analysis**, *Energies*, 13(7), 2020.

S. Greco, A. Ishizaka, G. Resce, G. Torrisi, **Measuring well-being by a multidimensional spatial model in OECD Better Life Index framework**, *Socio-Economic Planning Sciences*, 70, 2020.

A.K. Grover, S. Chopra, C.C. Krejci, **A multi-criteria decision analysis for the public distribution system of food grains in Indian Punjab: Towards decentralized food policies in developing countries**, *Journal of Multi-Criteria Decision Analysis*, 27(3-4):236-251, 2020.

S. Gül, Ö. Kabak, Y.İ. Topcu, **Coordinating the ISM Code and OHSAS procedures to improve the occupational health and safety at sea**, *Journal of Multi-Criteria Decision Analysis*, 2020.

D. Gwynne-Jones, R. Wilson, C. McEwan, **National Referral Prioritization tool for first specialist assessment: Results of a pilot study in orthopaedic surgery**, *ANZ Journal of Surgery*, early online version, 2020.

J. Hakanen, K. Miettinen, K. Matkovic, **Task-based Visual Analytics for Interactive Multiobjective Optimization**, *Journal of the Operational Research Society*, to appear, 2020.

C.O. Henriques, M. Inuiguchi, M. Luque, J.R. Figueira, **New conditions for testing necessarily/possibly efficiency of non-degenerate basic solutions based on the tolerance approach**, *European Journal of Operational Research*, 283(1):341-355, 2020.

C.O. Henriques, L.A. Lopez-Agudo, O.D. Marcenaro-Gutierrez, M. Luque, **Reaching Compromises in Workers' Life Satisfaction: A Multiobjective Interval Programming Approach**, *Journal of Happiness Studies*, in press, 2020.

A. Ishizaka, M. Tasiou, L. Martinez, **Analytic Hierarchy Process-Fuzzy Sorting: an Analytic Hierarchy Process based method for fuzzy classification in sorting problems**, *Journal of Operational Research Society*, 71(6):928-947, 2020.

P.L. Jayasekara, N. Adelgren, M.M. Wiecek, **On convex multiobjective programs with application to portfolio optimization**, *Journal of MultiCriteria Decision Analysis*, 27(3-4):189-202, 2020.

D. Jiang, M.M. Hasan, T.I. Faiz, M. Noor-E-Alam, **A possibility distribution-based multicriteria decision algorithm for resilient supplier selection problems**, *Journal of Multi-Criteria Decision Analysis*, 27(3-4):203-223, 2020.

M. Kadziński, K. Martyn, M. Cinelli, R. Słowiński, S. Corrente, S. Greco, **Preference disaggregation for multiple criteria sorting with partial monotonicity constraints: Application to exposure management of nanomaterials**, *International Journal of Approximate Reasoning*, 117:60-80, 2020.

K. Kułakowski, J. Mazurek, J. Ramík, M. Soltys, **When is the condition of order preservation met?**, *European Journal of Operational Research*, 277(1):248-254, 2019.

K. Kułakowski, J. Szybowski, A. Prusak, **Towards quantification of incompleteness in the pairwise comparisons methods**, *International Journal of Approximate Reasoning*, 115:221-234, 2019.

K. Kułakowski, D. Talaga, **Inconsistency indices for incomplete pairwise comparisons matrices**, *International Journal of General Systems*, 49(2):174-200, 2020.

Y.-L. Lai, A. Ishizaka, **The application of multi-criteria decision analysis methods into talent identification process: A social psychological perspective**, *Journal of Business Research*, 109:637-647, 2020.

J. Li, K. Guo, E.H. Viedma, H. Lee, J. Liu, N. Zhong, L.F.A.M. Gomes, F.G. Filip, S.-C. Fang, M.S. Özdemir, X. Liu, G. Lu, Y. Shi, **Culture vs Policy: More Global Collaboration to Effectively Combat COVID-19**, *The Innovation*, in press, 2020.

A.V. Lotov, A.I. Ryabikov, A.L. Buber, **A Multi-Criteria Decision-Making Procedure with an Inherited Set of Starting Points of Local Optimization of the Scalarizing Functions**, *Scientific and Technical Information Processing*, 46(5):328-336, 2019.

A. Lovison, K. Miettinen, **On the Extension of the DIRECT Algorithm to Multiple Objectives**, *Journal of Global Optimization*, to appear, 2020.

M. Luque, S. Gonzalez-Gallardo, R. Saborido, A.B. Ruiz, **Adaptive Global WASF-GA to Handle Many-objective Optimization Problems**, *Swarm and Evolutionary Computation*, 54, 2020.

M. Luque, O.D. Marcenaro-Gutierrez, A.B. Ruiz, **Evaluating the Global Efficiency of Teachers through a Multi-criteria Approach**, *Socio-Economic Planning Sciences*, 70, 2020.

V. Lvovschi, M. Maignan, K. Tazarourte, M.L. Diallo, C. Hadjadj-Baillot, N. Pons-Kerjean, F. Lapostolle, C. Dussart, **Multiple criteria decision analysis approach to consider therapeutic innovations in the emergency department: The methoxyflurane organizational impact in acute trauma pain**, *PLoS One*, 15(4), 2020.

O.D. Marcenaro-Gutierrez, S. Gonzalez-Gallardo, M. Luque, **Evaluating the potential trade-off between students' satisfaction and school performance using evolutionary multiobjective optimization**, *RAIRO - Operations Research*, in press, 2020.

C. Mazri, K.A. Daniell, A. Tsoukiàs, **Decision Support in Participative Contexts: the Organisational Design Dimension**, *International Journal of Decision Support Systems Technology*, 11(3):47-80, 2019.

Y. Meinard, A. Tsoukiàs, **On the rationality of decision aiding processes**, *European Journal of Operational Research*, 273:1074-1084, 2019.

J.J. Moreno, J. Miroforidis, E. Filatovas, I. Kaliszewski, E.M. Garzón, **Parallel radiation dose computations with GENOCOP III on GPUs**, *Journal of Supercomputing*, 2020.

J. Mustajoki, H. Saarikoski, V. Belton, T. Hjerppe, M. Marttunen, **Utilizing ecosystem service classifications in multi-criteria decision analysis - Experiences of peat extraction case in Finland**, *Ecosystem Services*, 41, 2020.

I. Pluchinotta, R. Giordano, D. Zikos, T. Krüger, A. Tsoukiàs, **Integrating Problem Structuring Methods and Concept-Knowledge Theory for Advanced Policy Design: lessons from a case study in Cyprus**, *Journal of Comparative Policy Analysis*, in press, 2020.

I. Pluchinotta, A.O. Kazakci, R. Giordano, A. Tsoukiàs, **Design Theory for generating alternatives in Public Decision Making Processes**, *Group Decision and Negotiation*, 28:341-374, 2019.

O. Raboun, E. Chojnacki, C. Duffa, D. Rios-Insua, A. Tsoukiàs, **Spatial risk assessment in case of multiple nuclear release scenarios**, *Socio-Economic Planning Sciences*, 70, in press, 2020.

R. Roma, G. Ottomano Palmisano, A. De Boni, **Insects as Novel Food: A Consumer Attitude Analysis through the Dominance-Based Rough Set Approach**, *Foods*, 9(4), 387, 2020.

A.B. Ruiz, R. Saborido, J.D. Bermúdez, M. Luque, E. Vercher, **Preference-based evolutionary multi-objective optimization for portfolio selection: a new credibilistic model under investor preferences**, *Journal of Global Optimization*, 76:295–315, 2020.

F.S.V. Sallum, L.F.A.M. Gomes, M.A.S. Machado, L.S.V. Sallum, **A hybrid approach to apply DEMATEL in a multi-criteria setting**, *Independent Journal of Management & Production*, 11:194-207, 2020.

A.S. Sudha, L.F.A.M. Gomes, K. Vijayalakshmi, **Assessment of MCDM problems by TODIM using aggregated weights**, *Neutrosophic Sets and Systems*, 37:78-98, 2020.

T. Sullivan, J. Smith, F. Ombler, H. Brayley-Morris, **Prioritising the investigation of organised crime**, *Policing and Society*, 30:327-48, 2020.

Y.İ. Topcu, F. Ulengin, Ö. Kabak, Ş.Ö. Ekici, B. Unver, **A decision support methodology for increasing the efficiency of the largest border crossing between Europe and Turkey**, *Research in Transportation Economics*, 80, 2020.

B. Unver, Ö. Kabak, Y.İ. Topcu, A. Altınışık, Ö. Çavuşoğlu, **A decision support system for proactive failure prevention: A case in a leading automotive company**, *Journal of Enterprise Information Management*, in press, 2020.

S.T. Viegas Filho, J.T. Souza Jr, L.F.A.M. Gomes, **Watch or Not to Watch: Choosing the best TV News using a multi-criteria support**, *Technology and Culture Review*, 35:6-13, 2020.

Y. Xu, C.-H. Yeh, C. Liu, S. Ramzan, L. Zhang, **Evaluating and managing interactive barriers for sustainable e-waste management in China**, *Journal of the Operational Research Society*, 2020.

Y. Xu, C.-H. Yeh, S. Yang, B. Gupta, **Risk-based performance evaluation of improvement strategies for sustainable e-waste management**, *Resources, Conservation & Recycling*, 155, 2020.

F.-Z. Younsi, S. Chakhar, A. Ishizaka, D. Hamdadou, O. Boussaid, **A dominance-based rough set approach for an enhanced assessment of seasonal influenza risk**, *Risk Analysis*, 40(7):1323-1341, 2020.

L. Zhang, L. Zhang, Y. Xu, P. Zhou, C.-H. Yeh, **Evaluating urban land use efficiency with interacting criteria: an empirical study of cities in Jiangsu China**, *Land Use Policy*, 90, 2020.

4.4 Conference Proceedings

K. Dächert, K. Klamroth, K. Miettinen, R.E. Steuer, **KaKaRaKe - User-Friendly Visualization for Multiobjective Optimization with High-Dimensional Objective Vectors**, in *"Scalability in Multiobjective Optimization", Report from Dagstuhl Seminar 20031, C.M. Fonseca, K. Klamroth, G. Rudolph, M.M. Wiecek (eds)*, 97-103, 2020.

A. Mazumdar, T. Chugh, J. Hakanen, K. Miettinen, **An Interactive Framework for Offline Data-Driven Multiobjective Optimization**, in *Proceedings of the 9th International Conference Bioinspired Optimization Methods and their Applications (BIOMA 2020)*, to appear, 2020.

O. Raboun, E. Chojnacki, A. Tsoukiàs, **Dynamic-R: a new convincing multiple criteria method for rating problem statements**, in Proceedings of the 2019 International Conference on Decision Support System Technology (ICDSST 2019), 136-149, 2019.

B. Saini, J. Hakanen, K. Miettinen, **A New Paradigm in Interactive Evolutionary Multiobjective Optimization**, in *Proceedings of the 16th International Conference on Parallel Problem Solving from Nature (PPSN 2020)*, to appear, 2020.

5 Imprints

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We are working on publishing the newsletter of the International Society on Multiple Criteria Decision Making two times a year. Usually, the deadline for the January issue is January 10th and the issue is intended to be published "around January 20th". The deadline for the September issue is usually August 20th and the issue is intended to be published "at the beginning of September". Contributions can be sent at any time to the editor (please see the address provided above).