



Groupe de Travail Européen "Aide Multicritère à la Décision"
Série 4, n° 7, Automne 2023.

European Working Group "Multiple Criteria Decision Aiding"
Series 4, n° 7, Fall 2023.

Dear Friends,

We regret to inform you of the passing of our esteemed member, Professor Anna Ostanello from Turin who passed away on October 8, 2023, due to respiratory failure, although she retained a clear mind until the very end.

She was born in 1938, obtained a degree in Mathematics at the University of Turin in 1960, and started to deal with Operations Research (OR) in 1961, first as a junior researcher at the CETIS group of EURATOM in Ispra and later on, when it was aggregated with the Operations Research Centre of the University of California, Berkeley, from 1966 to 1968.

Anna Ostanello introduced Operations Research to the Politecnico di Torino in 1975 (one of Italy's first courses on this topic). She proposed Multicriteria analysis and Decision Aiding for the first time in the OR course in 1976 and then in different courses until 1997 when she retired.

Anna was a dedicated contributor to the EURO Working Group on Multiple Criteria Decision Aiding (EWG-MCDA) and was part of the generation of its founders. Since Bernard Roy founded EWG-MCDA, she actively participated in the meetings and presented her works on the decision aid methodology, complex decision problems in organizational and territorial contexts, and the behavior of decision process actors. She was a Professor in the first international summer school on "Multiple criteria decision making methods, applications, and software" (1983, Costa Ionica, Sicily, Italy) and organized two EWG-MCDA meetings in Turin.

As an active member of the Italian Association of Operation Research and the coordinator of the Turin Territorial Section in the late eighties, she documented and disseminated a decision-aid vision in the OR context and the powerful and operational message of the ELECTRE methods in workshops and seminars throughout Italy, and in national and international conferences.

Her scientific contributions were significant until 1999 when health problems obliged her to start a new and different but still active life in the Langhe hills, where she welcomed friends to her warm and cheery home until this October.

Maria Franca Norese
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Dear Friends,

We are pleased to share with you the joy and satisfaction of a very prestigious award for our coordinator Roman Słowiński. He has been awarded the Fellow grade of the International Federation of Operational Research Societies (IFORS). The decoration took place at the 23rd Conference of IFORS held in Santiago, Chile, July 10-14, 2023. The laudation of the Fellow award reads: "For the role of coordinating Editor-in-Chief of the European Journal of Operational Research, the

flagship journal of EURO, and for his outstanding contributions to multicriteria decision making".

IFORS is a 60-year old organization which is currently composed of over 50 national Operations Research societies. The Fellow grade has been awarded to 33 people so far.

We congratulate Roman in the name of the whole EURO Working Group on Multiple Criteria Decision Aiding.



Opinion Makers Section

**About the 96th Meeting of the
EWG on MCDA in Paris, France**

On September 21-23, 2023, at ESSCA School of Management, Paris, France, the 96th Meeting of the Euro Working Group on Multicriteria Decision Aiding was a great success in terms of organization and participation. The main theme of the 96th meeting of the EURO working group on Multiple Criteria Decision Aiding (EWG-MCDA 95) aimed at studying the application of multiple criteria decision aiding methods in climate, technology and finance.

More than 60 papers of high-quality submitted to the conference, with co-authors from 22 countries. Also, 80 scientists of very high academic background participated in MCDA-96. During the conference, Jean CHARROIN, ESSCA Dean & CEO, offered an honorary plaque award to Prof. Roman SŁOWINSKI, for his long-term contribution in the field of MCDA.



Opening ceremony of the 96th EWG-MCDA meeting, with the award to Prof. Roman SLOWINSKI, by Jean CHARROIN, ESSCA Dean & CEO

At the beginning of the conference, the Bernard Roy award was given to Prof. Lefteris SISKOS, for his contributions to MCDA, as a young scientist below 40 years old.

Also, the conference hosted 2 keynote speeches. The first speech was delivered by Prof. Ralph Steuer, the Sanford Family Distinguished Chair of Business in the Department of Finance of the Terry College of Business at the University of Georgia. The title of his speech was: "On the Differences between Tri-Criterion & Bi-Criterion Portfolio Selection in Graphs".



Lefteris SISKOS, the recipient of the Bernard ROY Award and Panos XIDONAS, on behalf of the Organizing Committee

The second speech was delivered by Prof. Evangelos Triantaphyllou, Full Professor at Louisiana State University, School of Electrical Engineering & Computer Science and Adjunct Associate Professor at Tulane University, School of Medicine. The title of his speech

was: "Towards an intelligent MCDA approach for dealing with today's complex problems".

During the meeting were introduced various contributions on both the theoretical and practical foundations of MCDA, decision support tools, MCDA applications in climate, technology and finance etc.



Group Picture 96th EWG-MCDA meeting

Finally, a Special Issue in the Annals of Operations Research of Springer will accommodate selected papers presented in the conference.

CONFERENCE PROGRAMME

Thursday 21st September 2023

12:00-12:30 Registration

12:30-13:00 Opening

- Welcome from the Organizers: *Jean Charroin, Béatrice Collin, Guillaume Schier and Panos Xidonas.*
- Honorary plaque to Prof. *Roman Slowinski* by *Jean Charroin*, Dean of ESSCA.

13:00-13:45 Session I | Chair: *Roman Slowinski*

- The session is devoted to the *Bernard Roy Award*, where the laureate presents a 45-mins lecture.

13:45-14:15 Coffee break

14:15-15:45 Session II | Chair: *Panos Xidonas*

- Keynote Speech by Prof. *Ralph Steuer*:
On the differences between tri-criterion and bi-criterion portfolio selection in graphs
- Keynote Speech by Prof. *Evangelos Triantaphyllou*:
Towards an intelligent MCDA approach for dealing with today's complex problems

15:45-16:15 Coffee break

16:15-18:15 Session III | Chair: *Salvatore Corrente*

Regular papers:

Using qualitative information elicited from a panel to obtain robust conclusions

Luis Dias, Pedro Marques, Rita Garcia, Fausto Freire, Rita Tentúgal, Tiago Natal da Luz, Álvaro Sousa, José Paulo Sousa

Rigorous and efficient ways of eliciting the parameters of the Non-Compensatory Sorting model

Marc Pirlot, Eda Ersek Uyanik

An MCDA approach for robust strategic decision making regarding digital government development

Nikos Tsotsolas, Athanasios Spyridakos

Utilising the hierarchical SMAA-PROMETHEE framework to assess hydrochars produced from hydrothermal carbonization of growaste

Panagiotis Isigonis, Salvatore Corrente, Stergios Vakalis

Discussion papers:

Assessing risk of disruption of supply chains of perishable products due to COVID-19 with VIKOR-GAIA

Jehangir Khan, Alessio Ishizaka, Siamak Kheybari

A novel technique to improve the data visualization in multi-criteria decision-making

He Huang, Sajid Siraj

Teaching multiple criteria decision analysis at Leiden University College

Marco Cinelli

Assessing criteria weights through prioritisation in collaborative decision-making situations

Athanasios Spyridakos, Nikolaos Tsotsolas, Isaak Vryzidis

20:00 Gala dinner at the *River Café* restaurant.

Friday 22nd September 2023

08:30-10:30 Session IV | Chair: *Milosz Kadzinski*

Regular papers:

Decision rules for drug discovery

Adam Mielniczuk, Grzegorz Miebs, Rafał Bachorz, Milosz Kadziński

Sorting radiology departments in a disaster management assessment with G-ARASort

Arash Moheimani, Alessio Ishizaka, Seyed Mohammad Hassan Hosseini, Sachin Kumar Mangla

Multi-criteria analysis as a tool to cope with asymmetric information: An application to the hospitality sector

Klaas De Brucker, He Huang

Quantifying the street-level quality of life using GIS, ELECTRE-TRI and human experts

Sajid Siraj, Zeynep Mertan

Discussion papers:

Influential criteria definition for digital projects prioritization using HFLTS: an application to the automotive sector in CUPRA

Pietro Fronte, Núria Agell, Marc Torrens, Diana Mesa

Considering interactions between criteria and projects in portfolio decision analysis

Salvatore Corrente, Matteo Brunelli

Choosing an aggregation method for the Prison Life Index

Lola Martin Moro, Meltem Öztürk Escoffier

An approach to investigate fairness using dominance-based rough sets analysis

Edward Abel, Sajid Siraj

Integrating multiple ESG investors' Islamic preferences using fuzzy multicriteria methodological approach

George Alexopoulos, Christos Lemonakis

Decision making in insurance systems for the compensation of losses and damages caused by climate change effects

Hella Ben Brahim Neji

Multi-criteria analysis of the performance and resilience of traditional and ESG ETFs in high inflation environments

Firas Batnini, Hassen Raïs

10:30-10:50 Coffee break

10:50-12:50 Session V | Chair: *Constantin Zopounidis*

Regular papers:

An extended version of the Sigma-Mu efficiency analysis on a sample of banks from the EU-wide stress test of EBA

Silvia Angilella, Michalis Doumpos, Maria Rosaria Pappalardo, Constantin Zopounidis

A ESG rating model for SMEs using multi-criteria decision aiding

Gianni Filograsso, Diana Barro, Marco Corazza

Financial distress prediction using a fuzzy MCDM approach with criteria interactions and TOPSIS sorting

Jean-Michel Sahut, Petr Hajek

Multicriteria portfolio analysis for cryptocurrencies

Hassen Raïs, Assen Slim, Firas Batnini

Discussion papers:

On a portfolio optimization problem arising in proof-of-stake blockchains

Jonas Gehrlein, Grzegorz Miebs, Miłosz Kadziński, Matteo Brunelli

An application of MCDA procedure to the location of radioactive waste deposit according to Legislative Decree

Antonino Scarelli, Silvio Giove

A new multi-method decision framework for anchor selection and tenant mix allocation optimisation in shopping malls

David Boix-Cots, Alessio Ishizaka, Arash Moheimani, Francesc Pardo-Bosch, Pablo Pujadas

An interactive preference-guided multi-policy deep reinforcement learning approach

José Rui Figueira, Yannik Zeiträg, António A.C. Vieira

Application of entropy weight and TOPSIS method in the selection of sustainable financial institutions in Europe

Konstantina Ragazou, Alexandros Garefalakis, Emiliós Galariotis, Constantin Zopounidis, Ioannis Passas

Reexamining the oil price & Islamic finance relationship: A multicriteria time series analysis

Fredj Jawadi, Abdoukarim Idi Cheffou, Nabila Jawadi

On multicriteria ESG sovereign risk assessment

Panos Xidonas, Ilias Lekkos, Christos Staikouras

12:50-13:50 Lunch

13:50-14:20 Group activities

14:20-16:20 Session VI | Chair: *José Rui Figueira*

Regular papers:

An exact method to compute the optimistic solution to linear bilevel problems with multiple objectives at the lower level

Maria João Alves, Carlos Henggeler Antunes

Are negative interactions really exist in MCDA?

Brice Mayag

A simple adaptation of the Dunn index to assess multicriteria partitions

Yves De Smet, Jean Rosenfeld, Christine Decaestecker

Some notes on the joint improvement of inconsistency and incompatibility in a local AHP-GDM context

José María Moreno-Jimenénez, Juan Aguarón, María Teresa Escobar

Discussion papers:

Hierarchical DRSA-approach for the multiple channel retailing

Mladen Stamenković, Aleksa Dokić

A multicriteria approach for the definition of priorities of intervention for roadway bridges and viaducts

Silvia Manarin, Chiara D'Alpaos, Mariano Angelo Zanini, Flora Faleschini, Carlo Pellegrino

An ESG assessment of companies based on ordinal proximity measures and extended best worst method

Raquel González del Pozo, Mar Arenas-Parra, Raquel Quiroga-García, Amelia Bilbao-Terol

A multiple criteria approach for a sustainable urban logistics policies problem

Franco Corti, Chiara D'Alpaos, José Rui Figueira

ELECTRE TRI-nC method for evaluating socioeconomic and environmental performance of agroforestry in southwestern France

Francis Macary, Odile Phelpin, Valentine Jung

Introducing non-uniform qualitative scale into a group extended best-worst method

Mar Arenas-Parra, Raquel Quiroga-García, Amelia Bilbao-Terol, Raquel González del Pozo

16:20-16:40 Coffee break

16:40-18:40 Session VII | Chair: *Luis Dias*

Regular papers:

Multi-criteria decision aiding for built heritage value evaluation: Model and application in Québec City, Canada

Irène Abi-Zeid, Jérôme Cerutti

A multicriteria approach for building sustainability composite indicators

António Xavier, Maria de Belém Costa Freitas, Rui Manuel de Sousa Fragoso

Stakeholders integration for MCDA sustainability assessment of energy technologies: A use case in energy storage

Laura Sofia Mesa Estrada, Martina Haase, Manuel Baumann, Tim Müller, Hüseyin Ersoy, Christina Wulf

Measuring artificial intelligence development: A new approach based on MCDA methods exploiting temporal information

Leonardo Tomazeli Duarte, Betania Silva Carneiro Campello, Renata Pelissari, Guilherme Dean Pelegrina, Ricardo Suyama

Discussion papers:

A multi-criteria GDM model for consensual decision-making in sustainable finance

Bapi Dutta, Diego García-Zamora, Álvaro Labella, Luis Martínez

A multiobjective approach to collaborative facility and fleet sharing in horizontal supply chain collaboration

Mirna Abou Mjahed, Fouad Ben Abdelaziz, Hussein Tarhini

MCDA as a decision-making tool in the built environment: Challenges and potential

Isaak Vryzidis, Athina Mela, George Varelidis, Eleni Theofili

Multiple criteria assessment for holiday parks

Maria Barbati, Alessio Ishizaka

Goal programming framework optimization for circular economy and sustainable development goals

Noushin Bagheri

My contribution is more important than yours

Konrad Kulakowski

18:40 End of activities

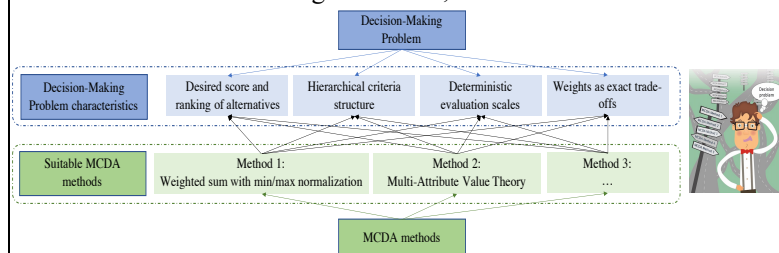
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Summary of the online workshop on the MCDA Methods Selection Software (MCDA-MSS)

The workshop on the **Multiple Criteria Decision Analysis Methods Selection Software (MCDA-MSS)** was held virtually on 6 October 2023, under the auspices of the [INFORMS MCDM Section](#), the EURO working group on MCDA ([EWG-MCDA](#)) and the [International Society on Multiple Criteria Decision Making \(MCDM\)](#). It was organized and presented by Dr. [Marco Cinelli](#), Assistant Professor at Leiden University College (LUC) in the Hague, the Netherlands.

The MCDA-MSS is nowadays the most comprehensive software for recommending MCDA methods. This software contributes tackling the meta-decision-making problem caused by the very large number of MCDA methods available at this time, being the decision of which MCDA method(s) to use for a certain decision-making problem. This challenge is summarized in the figure below, and the MCDA-MSS



provides systematic guidance to an analyst facing it.

"Which is the most suitable MCDA method (or subset of methods) that should be used for a given decision-making problem?"

The MCDA-MSS includes 205 MCDA methods, each one assessed with 156 objective features. The latter make the complexities of decision-making more transparent and manageable, as well as provide an extensive basis for a long-lasting and traceable development of MCDA methods.

The workshop on the MCDA-MSS was attended by many attendees ($N = 76$), who came from several countries, including the Netherlands, Luxemburg, Italy, Spain, the USA, the UK, Finland, Germany, Sweden, Chile, Mexico, Switzerland and Serbia.

The agenda of the workshop included firstly an introduction to the intelligible and sequential questioning strategy implemented in the software. This was followed by an introduction to the methodological background of the MCDA-

MSS with its four sections:

1. *Problem typology*: Defines the type and structure of the decision-making problem;
2. *Preference model*: Defines the type of model that the user would like to apply;
3. *Elicitation of preferences*: Defines the type, modality and frequency of model preferences;
4. *Exploitation of the preference relation induced by the preference model*: Defines the strategy used to derive and enrich the decision recommendation.

Lastly, attendees asked clarification questions about the software and the instructor summarized the next steps for the future of the MCDA-MSS, including:

1. Test of the MCDA-MSS in several application areas;
2. Possibly update the description of the MCDA methods, if relevant input is provided by the researchers that propose the update;
3. Gathering recommendations of MCDA methods to be added to the database of the software.

The MCDA-MSS is available free of charge at the following link: <http://mcdamss.com>.

Those interested in the recording of the online workshop can access it [here](#).

The MCDA-MSS team

Assist. Prof. Marco Cinelli	Leiden University College (NL)
• Assoc. Prof. Miłosz Kadziński • M.Sc. Grzegorz Miebs • Prof. Roman Słowiński	Poznań University of Technology (PL)
Dr. Michael Gonzalez	U.S. EPA (USA)
Dr. Peter Burgherr	Paul Scherrer Institute (CH)

This project has received funding from Leiden University College, the European Union's Horizon 2020 research and innovation programme under grant agreement No 743553, the Swiss National Science Foundation under grant agreement No IZSEZ0_193662, the Polish Ministry of Science and Higher Education under the Diamond Grant project (Grant No. DI2018 004348), and the Polish National Science Center under the SONATA BIS project (Grant No. DEC-2019/34/E/HS4/00045).

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MCDA Research Groups



Centre for Decision Research (CDR)

Centre for Decision Research (CDR) is an interdisciplinary research centre located in the University of Leeds, Leeds, United Kingdom. Decision research focuses on the way individuals, groups and organisations make decisions. The research in CDR involves descriptive, normative, and prescriptive perspectives. It involves questions like why and how decisions are made the way they are, or how decisions should be made in some ideal sense. Considering these two types of questions, it also then investigates how decision making be made more effective. It is concerned with how people make judgments and take decisions, particularly in situations involving risk and uncertainty. The research has provided important insights into how and why people do what they do, why they make mistakes that can lead to poor outcomes for themselves and their organisations, and how we can use this knowledge to help them do it better.

CDR members analyse decision-making using a number of approaches drawn from psychology and modelling and apply their research across a number of real-world domains. CDR has developed a strong research profile, with publications in a broad range of international journals. Its research strategy reflects the strengths of group members, contemporary developments in the decision research agenda and relevant policy needs. Some of the recent ongoing projects are listed below.

Theories and findings from decision research have been applied extensively in such areas as political science, finance, marketing, health, medicine, management and the law. These applications have provided important insights into how decisions are taken in these areas, some of the errors and mistakes made by people, including experts, and how to improve these decisions.

Recent activities

CDR organises research seminars almost every week during term time in Leeds University Business School. CDR is also actively involved in various projects related to analytics, machine learning, risk perception and decision sciences. Some of the recent projects are mentioned below.

- A new Knowledge Transfer Partnership (KTP) has been awarded to a company Katchr and our academic team, Richard Hodgett, Nabi Omidvar, and Xingjie Wei. Katchr is a leader in software-based technology within the legal sector, has developed software that has significantly optimised data analytical capabilities.
- Edika Quispe-Torreblanca & colleagues have a paper accepted in Personality and Social Psychology Bulletin that investigates what environmental factors are associated with

individual differences in political ideology, and whether such associations change over time.

- Aritad Choicharoon, Richard Hodgett, Barbara Summers, and Sajid Siraj has published their work on developing a decision support system framework for signing new musical talent. This work came out of a three-year long knowledge-transfer partnership with an industrial partner from music industry.
- Andrea Taylor, Sarah Jenkins and Barbara Summers have been awarded £435K by the Lloyd's Register Foundation for a 3 year research project to develop and test risk communication and reduction strategies for severe weather events using an analysis based on the Lloyds World Risk Poll data on risk perception and preparedness around the world.
- Romain Crastes dit Sourd has published a paper looking at citizens' preferences for reducing the use of glyphosate (a controversial herbicide) by the means of taxation and /or regulation instruments in PLoS One.
- Sarah Jenkins has been awarded funding to work with the Risk Unit at the Office for Product Safety and Standards (OPSS). She will primarily be working on the monitoring, development and evaluation of PRISM – the new product risk assessment tool for supporting product safety practitioners.
- Romain Crastes dit Sourd published his work on a new statistical distribution for avoiding extreme willingness-to-pay estimates derived from discrete choice models in the American Journal of Agricultural Economics.
- Panagiotis Stamolampros has systematically examined the relationship between servitization and individual employee satisfaction. It shows that back-end employees in manufacturing firms are considerably affected by an increasing emphasis on services, while past literature has almost exclusively been concerned with front-end staff.

Members: Nicola Bown, John Maule, Richard Hodgett, Gulbanu Kaptan, Dinos Hadjichristidis, Sajid Siraj, Xingjie Wei, Panagiotis Stamolampros, Romain Crastes dit Sourd, Andrea Taylor, Louise Hogg, Aritad Choicharoon, Alan Pearman, Joshua Weller, Rob Ranyard, Peter Ayton, David Palma Araneda, Edika Quispe-Torrealanca, Sarah Jenkins, Kemal Enes, Peizhi Shi.

Find out more at: <https://cdr.leeds.ac.uk>

Some of CDR's recent publications:

- Choicharoon, A., Hodgett, R., Summers, B., and Siraj, S. (2023). Hit or miss: a decision support system framework for signing new musical talent. *European Journal of Operational Research*.
- Crastes dit Sourd, R. (2023). A new empirical approach for mitigating exploding implicit prices in mixed multinomial logit models. *American Journal of Agricultural Economics*.

- Karatzas A., Papadopoulos G., Stamolampros P., Jawwad R, and Korfiatis N (2023). Front- and back-end employee satisfaction during service transition.
- Arora, N., Crastes dit Sourd, R., Quaife, M., Vassall, A., Ferrari, G., Alangea, D. O., ... & Rueda, S. T. (2023). The stated preferences of community-based volunteers for roles in the prevention of violence against women and girls in Ghana: A discrete choice analysis. *Social Science & Medicine*, 324, 115870.
- Göber, M., Christel, I., Hoffmann, D., Mooney, C. J., Rodriguez, L., Becker, N., Taylor, A. & Williams, H. (2023). Enhancing the Value of Weather and Climate Services in Society: Identified Gaps and Needs as Outcomes of the First WMO WWRP/SERA Weather and Society Conference. *Bulletin of the American Meteorological Society*, 104(3), E645-E651.
- Bretter C, Unsworth KL, Kaptan G, Russell SV. (2023). It is just wrong: Moral foundations and food waste. *Journal of Environmental Psychology*.
- Collas, L., Crastes dit Sourd, R., Finch, T., Green, R., Hanley, N., & Balmford, A. (2023). The costs of delivering environmental outcomes with land sharing and land sparing. *People and Nature*, 5(1), 228-240.
- Cantillo, T., Notaro, S., Bonini, N., and Hadjichristidis, C. (2023). Household's preferences for waste sorting systems: The role of values, socioeconomic characteristics, and contexts, *Waste Management*.
- Winifred Huang, Silvio Vismara, Xingjie Wei (2022), Confidence and capital raising, *Journal of Corporate Finance*, 77, 101900.
- Okeke-Ogbuafor, N., Taylor, A., Dougill, A., Stead, S., & Gray, T. (2022). Alleviating impacts of climate change on fishing communities using weather information to improve fishers' resilience. *Frontiers in Environmental Science*, 2051.
- Bretter C, Unsworth KL, Russell SV, Quedstedt TE, Doriza A, Kaptan G. 2022. Don't Put All Your Eggs in One Basket: Testing An Integrative Model of Household Food Waste. *Resources, Conservation and Recycling*, 18.
- Weller, J., Klein, W., & Vineyard, J. (2022). Self-affirming other-directed values increases tolerance towards ambiguity. *Journal of Applied Social Psychology*.
- De Moor, E.L., Sijtsema, J.J., Weller, J.A., & Klimstra, T. (2022). Longitudinal Links between identity and substance use in adolescence and young adulthood. *Self & Identity*, 21, 113-13.
- Palma, D. and Hodgett R. (2022) goalp: Weighted and Lexicographic Goal Programming Interface. R package version 0.3.1. <https://cran.r-project.org/package=goalp>.
- Elaine Doyle, Barbara Summers, Jane Frecknall Hughes (in press 2021). Ethical reasoning in tax practice: Law or is there more? *Journal of International Accounting, Auditing and Taxation*.

- Nikita Arora, Romain Crastes dit Sourd, Kara Hanson, Dorka Woldesenbet, Abiy Seifu, Matthew Quaife (2022). Linking health worker motivation with their stated job preferences: A hybrid choice analysis in Ethiopia, *Social Science and Medicine*.
- Panagiotis Stamolampros, Efthymia Symitsi (2022). Employee treatment, financial leverage, and bankruptcy risk: Evidence from high contact services. *International Journal of Hospitality Management*.
- Weller, J. A., Vineyard, J., & Klein, W. M. (2022). Self-affirmation reduces uncertainty aversion for potential gains. *Journal of Applied Social Psychology*.
- Bearth A, Kaptan G, Kessler SH. (2022). Genome-edited versus genetically-modified tomatoes: An experiment on people's perceptions and acceptance of food biotechnology in the UK and Switzerland. *Agriculture and Human Values*.
- David Palma, Stephane Hess (2022). Extending the Multiple Discrete Continuous (MDC) modelling framework to consider complementarity, substitution, and an unobserved budget. *Transportation Research Part B: Methodological*.

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Software

ValueDecisions app for complex MCDA under uncertainty

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<https://www.leibniz-zmt.de/en/marine-tropics-research/organisation/scientific-departments/integrated-modelling.html>

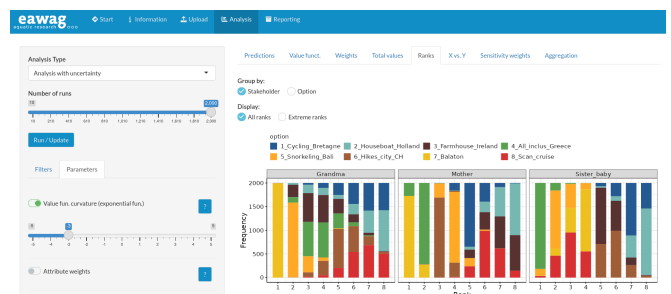
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<https://www.eawag.ch/en/departement/ess/main-focus/decision-analysis-da/>

Multi-criteria decision analysis (MCDA) practices and processes often benefit from software that allows for interactive model exploration and visualization. ValueDecisions is an open-source web app and R package to support MCDA based on multi-attribute value theory (MAVT). Developed for both practical and academic settings, ValueDecisions offers features to navigate decisions with multiple objectives, multiple stakeholders, and uncertainties.

The aim of ValueDecisions is to strike a balance between analytical depth and user accessibility. It provides advanced analysis and visualization capabilities in an easy-to-use graphical user interface with no programming expected from users. Are you an analyst, facilitator, or consultant with a basic understanding of MCDA based on MAVT? Do you want to go beyond the limited capabilities of spreadsheet software? Then you are a target user! ValueDecisions can be used in the backroom or interactively in a group workshop setting.

ValueDecisions is a web app that runs in a browser and has the familiar layout of a website. The primary focus is on the MCDA modeling stage. The methodic background is described in detail in [1] and the references therein. The app will calculate results and provide visualizations along steps of the analysis, including predictions for different decision options, performance on different objectives, and expected values and rankings of options for different stakeholders. It includes standard presentations of results, without and with uncertainty, as well as special ones such as cost-benefit visualizations. All you need to provide are two spreadsheets (e.g., from Excel) with input data. One with the predictions of consequences of decision options and their uncertainty estimates, if available. The other with stakeholder preference data, if available, namely the stakeholders' names, objectives, their weights, single-attribute value functions, and the aggregation model.



After determining initial results, ValueDecisions emphasizes sensitivity and robustness analyses. Users can easily analyze the sensitivity to preference parameters, including shapes of lowest-level value functions, non-additive aggregation models, and local sensitivity analyses of weights. The uncertainty of predictions will be propagated through the analysis with Monte Carlo simulation; various probability distributions can be specified to represent that uncertainty.

You can download all intermediate and final results as individual graphs and tables or compiled in a report.

While the interaction with the app is easy, it is quite flexible, particularly regarding preference models for multiple stakeholders. Each stakeholder can have a different hierarchy of objectives, marginal value functions can have linear, piecewise linear, exponential, or sigmoid shapes, and the aggregation model can be the simple additive model but also other aggregation forms to represent dependent objectives. Thus, users can represent many types of non-linear preferences with fewer restrictions than in many other software products.

ValueDecisions has already supported several decision cases and users profited from the quick and easy model exploration. This includes published cases, namely, a population survey for choosing sustainable wastewater management in the Paris region [1], a case on co-developing a flood forecasting system in western Africa [2], and a study on citizen perceptions of sustainable wastewater management in Switzerland [3]. ValueDecisions is currently being used in academic settings to support different types of real-world decision problems, e.g., dealing with pesticides in Swiss agriculture with a policy analysis focus, choice of sustainable flat roofs under

uncertainty with an engineering focus, optimal birth care with a medical focus, or replacement of commonly used chemicals due to their environmental toxicity. Publications to these cases are being prepared. ValueDecisions is also used in an annual MCDA lecture targeting master students of environmental sciences at ETH Zürich, Switzerland since the Spring semester 2020 [4].

Besides its web version, ValueDecisions can be installed and run locally as an R package. It is an open source development with the possibility for community-driven enhancements. So, if you are familiar with the R language, small adjustments (e.g., customizing the color scheme of plots) are easy, and larger changes (e.g., introducing a new uncertainty distribution) are possible.

In summary, ValueDecisions offers a thoughtful approach to supporting MCDA, balancing analytical capabilities with user-friendliness. We invite you to try ValueDecisions yourself and are happy about any feedback!

To access the app, use this code (Tab Upload), valid until 28.02.2024: 24538062. The code can be renewed anytime free of charge.

Free access to the app, and further information:
<https://www.valuedecisions.ch> or
<https://www.eawag.ch/en/department/ess/main-focus/decision-analysis-da/tools/valuedecisions-app/> or
<https://eawag.shinyapps.io/ValueDecisions/>

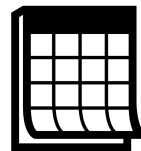
References:

[1] Haag, F., Aubert, A.H., Lienert, J., 2022. ValueDecisions, a web app to support decisions with conflicting objectives, multiple stakeholders, and uncertainty. *Environmental Modelling & Software* 150, 105361. <https://doi.org/10.1016/j.envsoft.2022.105361>

[2] Lienert, J., Andersson, J.C.M., Hofmann, D., Silva Pinto, F., Kuller, M., 2022. The role of multi-criteria decision analysis in a transdisciplinary process: co-developing a flood forecasting system in western Africa. *Hydrology and Earth System Sciences* 26, 2899–2922. <https://doi.org/10.5194/hess-26-2899-2022>

[3] Aubert, A.H., Schmid, S., Beutler, P., Lienert, J., 2022. Innovative online survey about sustainable wastewater management: What young Swiss citizens know and value. *Environmental Science & Policy* 137, 323–335. <https://doi.org/10.1016/j.envsci.2022.08.018>

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Forthcoming meetings

(This section is prepared by Carlos Hengeler Antunes ch@deec-uc-pt)

1-4/11/2023

META'2023 International Conference on Metaheuristics and Nature Inspired Computing
Marrakech, Morocco
<http://meta2023.sciencesconf.org/>

14-16/11/2023

The Second Australian Conference on Industrial Engineering and Operations Management
Melbourne, Australia
<https://ieomsociety.org/melbourne2023/>

16-17/11/2023

ODSIE 2023 International Conference on Optimization and Data Science in Industrial Engineering
Virtual via Istinye University, Istanbul, Turkey
<https://odsie2023.refconf.com/>

6-8/12/2023

68th Euro Working Group for Commodity and Financial Modelling (EWGCFM) Conference
Abu Dhabi, UAE
<https://www.ctl.ae/adrio1-ewgcfm68>

11-15/12/2023
WOMBAT/WICO 2023 (joint Optimisation and Computational Mathematics Workshops)
Sydney, Australia
<https://wombat.mocao.org/>

18-20/12/2023
Joint Event: 56th Annual Convention of ORSI (2023- ORSI) and 10th International Conference on Business Analytics and Intelligence (2023- ICBAI)
Bangalore, India
<https://mgmt.iisc.ac.in/orsi-ka/>

18-20/12/2023
6th International Conference of the Tunisian Operational Research Society TORS'23
Hammamet, Tunisia
<https://torsconference.wixsite.com/tors23>

8-11/1/2024
ICBAP2024: the International Conference on Business Analytics in Practice
University of Sharjah (UAE)
<https://academyba.com/icbap2024/>

22-26/1/2024
IWOBIP 2024 - International Workshop on Bilevel Optimization
Rancagua, Chile
<https://dmatheorynet.blogspot.com/2023/03/dmanet-save-date-iwobip-2024.html>

5-9/2/2024
10th Winter School on Network Optimization
Estoril Portugal
<https://netopt2024.campus.ciencias.ulisboa.pt/>

11-13/3/2024
INOC 2024, the International Network Optimization Conference
University College Dublin, Ireland
<https://inoc2024.sciencesconf.org/>

13-14/3/2024
Heureka '24 - Optimization in Transport & Traffic (in German)
Stuttgart, Germany
<https://easychair.org/cfp/heureka2024>

3-5/4/2024
EvoStar 2024
Aberystwyth, Wales
<http://www.evostar.org/2024/>

Spring 2024
97th Meeting of EURO Working Group on MCDA
Athens, Greece
<http://www.cs.put.poznan.pl/ewgmcda/>

13-15/5/2024

OLA'2024 - International Conference on Optimization and Learning
Dubrovnik, Croatia
<https://ola2024.sciencesconf.org/>

28-31/5/2024
The 21st International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR 2024)
Uppsala, Sweden
<https://sites.google.com/view/cpaior2024/>

2-7/6/2024
27th International Conference on Multiple Criteria Decision Making (MCDM2024)
Hammamet, Tunisia
<https://mcdm2024.org/>

3-5/6/2024
CORS 2024 - Canadian Operational Research Society
London, Ontario, Canada
<http://CORS2024London.ca>

4-7/6/2024
MIC 2024 - 15th Metaheuristics International Conference
Lorient, France
<https://mic2024.fr/>

6-8/6/2024
ECCO XXXVII - 2024 The 37th annual conference of the European Chapter on Combinatorial Optimization of EURO KU Leuven-Gent, Ghent, Belgium

26-28/6/2024
The 3rd International Conference on Applied Mathematics in Engineering (ICAME'24)
Hybrid/Balikesir, Turkey
<https://icame.balikesir.edu.tr/>

30/6-3/7/2024
EURO 2024
Copenhagen, Denmark
<https://euro2024cph.dk/>

3-5/7/2024
IPCO 2024 (25th Conference on Integer Programming and Combinatorial Optimization)
Wrocław, Poland
<https://ipco2024.ii.uni.wroc.pl/>

10-12/7/2024
2024 INFORMS Advances in Decision Analysis Conference (ADA 2024)
Aalto University, Espoo, Finland
<http://ada2024.aalto.fi>

28-30/8/2024
18th IFAC Symposium on Information Control Problems in Manufacturing (INCOM 2024)
Vienna, Austria

<https://www.incom2024.org/>

25-27/9/2024

20th conference on Operational Research KOI2024

Brela, Croatia

Autumn 2024

98th Meeting of EURO Working Group on MCDA

Catania, Italy

<http://www.cs.put.poznan.pl/ewgmcda/>



Books

Mazurek, Jiri, *Advances in Pairwise Comparisons - Detection, Evaluation and Reduction of Inconsistency*, Springer, March 2023.

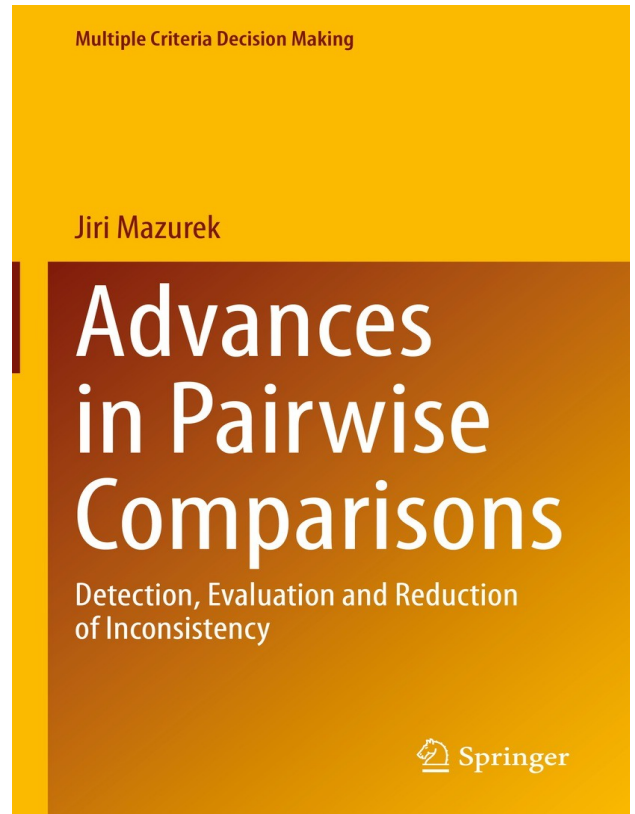
Abstract:

To make more informed, appropriate, and precise decisions less susceptible to various biases inherent in human thinking, one important research direction aims toward the investigation of methods' properties and, in particular, to the problem of inconsistency in human judgments. Inconsistency in decision making, and in particular in comparisons of different objects, is a ubiquitous feature that cannot be neglected and certainly requires thorough investigation. This book tackles issues associated with inconsistency in pairwise comparisons from both theoretical and practical perspectives. Human judgments are seldom absolutely consistent, or absolutely precise, therefore problems of measuring and handling inconsistency belong among hot topics of the current research, especially in the theoretical framework of multiple criteria decision aiding (MCDA). The book presents and discusses the state-of-the-art of this field including both cardinal and ordinal inconsistency, the problems of different scales for comparisons and inconsistency reduction, and the alternative approaches to inconsistency detection and measurement. The presented book is a unique one-stop guide for readers who are interested in inconsistency in pairwise comparisons. Researchers and practitioners in the area of multiple-criteria decision-making (MCDM) and the analytic hierarchy process (AHP) will find this informative book particularly valuable.

Contents:

1. Introduction
2. Multiplicative pairwise comparisons
3. Inconsistency indices and their properties
4. Inconsistency reduction
5. Alternative approaches to the evaluation of inconsistency in pairwise comparisons
6. Inconsistency of incomplete pairwise comparisons
7. Ordinal inconsistency
8. Conclusions

URL: <https://link.springer.com/book/10.1007/978-3-031-23884-0>



Announcements and Call for Papers

**Call for the "Bernard Roy Award 2024"
of the EURO Working Group on Multiple Criteria
Decision Aiding**

Policy

-The Bernard Roy Award of EWG MCDA (<http://www.cs.put.poznan.pl/ewgmcda/>) is a recognition conferred to a researcher under 40 years old for an outstanding contribution to the methodology and/or applications of Multiple Criteria Decision Aiding (MCDA).

-The award will be officially bestowed at the opening session of the EWG MCDA Autumn meeting (in 2024 organized in Catania) if there is a suitable candidate. In this case, following a presentation of the competition by the chair of the Jury, the laureate will be invited to give a talk.

Award

The laureate then will receive the financial award (1000 EUR) and the diploma.

Eligibility

-The Bernard Roy Award of EWG MCDA shall be awarded for a body of work in MCDA, preferably published over the last decade. Although recent work will not be excluded, care shall be taken to allow the contribution to stand the test of time.

-The potential award recipient shall have a recognized stature in the MCDA community. Significance, innovation, depth, and scientific excellence shall be emphasized.

Nominations

- Candidates can be nominated by any three members of the EWG MCDA. Becoming a member is free (Please, send an email to [Milosz Kadziński](mailto:Milosz.Kadziński)).

- A candidature for the Bernard Roy Award of EWG MCDA is composed of the nomination letter along with a recent and detailed CV, up to 5 best publications, as well as a self-description of the achievements up to 3 page long in a standard manuscript format. The nominations must be sent to the Jury chair by the due date of May 20, 2024.

Selection process

-Only one award may be assigned on each occasion.

-One person may receive the award at most once in her/his lifetime.

-The jury evaluates the nominees essentially on the basis of their scientific activities (papers in top journals, editorials, relevance of methodological proposals and/or applications, ...).

Jury

-The jury for the current edition is composed of Professors Maria Franca Norese (chair), Salvatore Greco, Constantin Zopounidis, Yves De Smet, Luis Martinez.

Timing

-Deadline for nominations: May 20, 2024.

-The Jury chair informs the EWG coordinators who invite the laureate to the meeting: July 31, 2024.

-Preparation of the diploma by the EWG coordinators.

Presentation of the laureate and her/his talk during the EWG MCDA 98th EWG MCDA meeting, September 2024, University of Catania, Department of Economics and Business, Catania, Italy. An electronic copy of the laureate's presentation handed over to the EWG coordinators will be made available on the EWG on MCDA Web Site.

Applications should be sent to Professor Maria Franca Norese at: maria.norese@polito.it.

BR award: winners

- 2023: Eleftherios Siskos, Technical University of Crete
- 2022: Banu Lokman, University of Portsmouth
- 2021: Matteo Brunelli, University of Trento
- 2020: Salvatore Corrente, University of Catania
- 2019: Milosz Kadziński, Poznan University of Technology

Special Issues

Annals of Operations Research

Special Issue on "Advances in Applied Probability and Data Science Dedicated to the 70th Birthday of Professor Michael N. Katehakis"

Submission deadline: December 31, 2023

Special Issue Editors:

Eugene A. Feinberg, Stony Brook University, USA

Odysseas Kanavetas, Leiden University, The Netherlands

Sheldon M. Ross, University of Southern California, USA

Flora Spieksma, Leiden University, The Netherlands

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Advances in Statistical Modelling for Social Science"

Submission deadline: May 31, 2024

Special Issue Editors:

Andrea Nigri, Department of Economics, Management and Territory, University of Foggia, Italy

Susanna Levantesi, Department of Statistics, Sapienza University of Rome, Italy

Leonardo Salvatore Alaimo, Department of Social Sciences and Economics of University of Rome La Sapienza, Italy

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Advances in Stochastic Models Dedicated to the 80th Birthday of Professor Isaac Sonin"

Submission deadline: December 31, 2023

Special Issue Editors:

Eugene A. Feinberg, Stony Brook University, USA

Odysseas Kanavetas, Leiden University, The Netherlands

Michael N. Katehakis, Rutgers University, USA

Sheldon M. Ross, University of Southern California, USA

Flora Spieksma, Leiden University, The Netherlands

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Credit Risk Modeling Innovations in a Changing World"

Submission deadline: January 31, 2024

Special Issue Editors:

Galina Andreeva, University of Edinburgh Business School, UK

Jonathan Crook, University of Edinburgh Business School, UK

Christophe Mues, University of Southampton, UK

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Ensemble AI-Driven Metaheuristic Optimization in OR: Newest Contributions in Theory, Methods, and Applications"

Submission deadline: June 30, 2024

Special Issue Editors:

Mohammad Shokouhifar, Shahid Beheshti University, Iran

Alireza Goli, University of Isfahan, Iran

Zaoli Yang, Beijing University of Technology, China

Gerhard-Wilhelm Weber, Poznan University of Technology, Poland

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Ensemble Learning for Operations Research and Business Analytics"

Submission deadline: January 15, 2024

Special Issue Editors:

Matthias Bogaert, Ghent University, Belgium

Koen W. De Bock, Audencia Business School, France

Philippe Du Jardin, EDHEC Business School, France

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Game Theoretical Models and Applications (SING 18)"

Submission deadline: June 20, 2024

Special Issue Editors:

Encarnación Algaba, University of Sevilla, Spain

René van den Brink, Vrije Universiteit, The Netherlands

Giuseppe Caristi, University of Messina, Italy

Massimiliano Ferrara, University Mediterranea of Reggio Calabria, Italy

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "In Memoriam of Professor Rajiv Banker on the New Developments in Data Envelopment Analysis and Its Applications"

Submission deadline: December 31, 2023

Special Issue Editors:

Ali Emrouznejad, University of Surrey, United Kingdom

Victor Podinovski, Loughborough University, United Kingdom

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Special Issue: Integrating Data Science and Decision Analytics"

Submission deadline: December 31, 2024

Special Issue Editors:

Victorial Chen, The University of Texas at Arlington, USA

Seoung Bum Kim, Korea University, Korea

Chen Kan, The University of Texas at Arlington, USA

Salih Tutun, Salih Tutun, Washington University in St. Louis, USA

Mike Mingcheng Wei, University at Buffalo, USA

Yuan Zhou, The University of Texas at Arlington, USA

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "MCDA in Climate, Technology, and Finance"

Submission deadline: December 31, 2023

Special Issue Editors:

Panos Xidonas, ESSCA School of Management, France
Guillaume Schier, ESSCA School of Management, France
Béatrice Collin, ESSCA School of Management, France

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Multiple Objective Programming and Goal Programming: Sustainability and Beyond"

Submission deadline: May 15, 2025

Special Issue Editors:

Ayhan Özgür Toy, Yaşar University, Türkiye
Levent Kandıllı, Yaşar University, Türkiye
Hatem Masri, University of Bahrain, Kingdom of Bahrain

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "OR Applications for Resource Efficient and Climate Change Driven Issues in Digital Sustainable and Circular Supply Chains"

Submission deadline: December 31, 2023

Special Issue Editors:

Malin Song, Anhui University of Finance and Economics (AUFE), China
Sachin Kumar Mangla, Jindal Global Business School, O P Jindal Global University, Haryana, India
Alessio Ishizaka, NEOMA Business School, France
Konstantinos P. Tsagarakis, School of Production Engineering and Management, Technical University of Crete, Greece

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "OR Driven Technology Innovation for Efficient Decarbonized Supply Chains in a Digital Economy"

Submission deadline: October 30, 2023

Special Issue Editors:

Suresh K. Jakhar, Indian Institute of Management Lucknow, India
Guo Li, Beijing Institute of Technology, China
Sachin Kumar Mangla, University of Plymouth, UK
Suresh Sethi, University of Texas at Dallas, USA
Malin Song, Anhui University of Finance and Economics, China

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Prescriptive Analytics Using Machine Learning and Mathematical Programming for Sustainable Operations Research"

Submission deadline: December 30, 2023

Special Issue Editors:

Abbas Mardani, University of South Florida, USA
Reza Farzipoor Saen, Sohar University, Oman
Charbel Jose Chiapetta Jabbour, University of Lincoln, UK

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Recent Trends in Operations Research and Game Theoretic Approach in Decision Making"

Submission deadline: June 30, 2024

Special Issue Editors:

S. K. Neogy, Indian Statistical Institute, India
R. B. Bapat, Indian Statistical Institute, India
K. Manjunatha Prasad, Manipal Academy of Higher Education, India

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Reliability Evaluation and Optimization of Supply Chain Resilience"

Submission deadline: June 30, 2024

Special Issue Editors:

Cheng-Ta Yeh, Fu Jen Catholic University, Taiwan

Ding-Hsiang Huang, Tunghai University, Taiwan

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Risk Management and Modeling in Financial Economics"

Submission deadline: December 30, 2023

Special Issue Editors:

Jean-Luc Prigent, University of Cergy-Pontoise, France

Ephraim Clark, Middlesex University, UK

Giovanni Barone-Adesi, University of Lugano, Switzerland

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Smart and Resilient Operations in the Age of Digitization"

Submission deadline: December 31, 2024

Special Issue Editors:

Jun Pei, Hefei University of Technology, China

Panos M. Pardalos, University of Florida, USA

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Smart and Sustainable Production, Logistics, and Supply Chain: Trends, Challenges, Methods, and Best Practices"

Submission deadline: November 30, 2023

Special Issue Editors:

Paulina Golinska-Dawson, Poznan University of Technology, Poland

Beata Mrugalska, Poznan University of Technology, Poland

Youngchul Shin, Ajou University, Korea

Gerhard-Wilhelm Weber, Poznan University of Technology, Poland

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Uncertainty in Data and Decision Analytics – IUKM 2023"

Submission deadline: December 18, 2023

Special Issue Editors:

Van-Nam Huynh, Japan Advanced Institute of Science and Technology, Japan

Katsuhiro Honda, Osaka Metropolitan University, Japan

Bac H. Le, University of Science, Vietnam National University (VNU)-Ho Chi Minh City, Vietnam

Masahiro Inuiguchi, Osaka University, Japan

More details can be found [here!](#)

Annals of Operations Research

Special Issue on "Understanding the Complexity of Financial and Economic Systems' Dynamics: Evidence from Artificial Intelligence Techniques, Big Data, and Technology"

Submission deadline: October 31, 2023

Special Issue Editors:

Bertrand Maillet, Emlyon Business School, France

Hachmi Ben Ameer, INSEEC School of Business Economics, France

Roberto Casarin, Ca' Foscari University of Venice, Italy

Zied Ftiti, EDC Paris Business School, France

Massimiliano Caporin, University of Padova, Italy

More details can be found [here!](#)

Group Decision and Negotiation

Special Issue on "New Trends in Intelligent Group Decision Making and Consensus Modelling"

Submission deadline: July 31, 2023

Special Issue Editors:

Francisco Chiclana, Institute of Artificial Intelligence, School of Computer Science and Informatics, De Montfort University, Leicester, UK

Yucheng Dong, Business School of Sichuan University, China

Enrique Herrera-Viedma, Andalusian Research Institute on Data Science and Computational Intelligence (DaSCI), Department of Computer Science and AI, University of Granada, Granada, Spain

Cong-Cong Li, School of Economics and Management, Southwest Jiaotong University, Chengdu, China

Zhen Zhang, Institute of Systems Engineering, School of Economics and Management, Dalian University of Technology, China

More details can be found [here!](#)

International Journal of Production Economics

Special Issue on "Data-driven Digital Transformation in Operations and Supply Chain Management"

Submission deadline: January 20, 2024

Special Issue Editors:

Konstantina Spanaki (kspanaki@audencia.com), Audencia Business School, Nantes France

Denis Dennehy (denis.dennehy@swansea.ac.uk), Swansea University, Wales UK

Thanos Papadopoulos (a.papadopoulos@kent.ac.uk), Kent Business School, University of Kent, UK

Rameshwar Dubey (r.dubey@montpellier-bs.com, r.dubey@ljmu.ac.uk), Montpellier Business School, France and Liverpool Business School, Liverpool John Moores University, UK

More details can be found [here!](#)

International Journal of Production Economics

Special Issue on "AI Platforms for Digital Servitization and Solution Delivery"

Submission deadline: December 31, 2023

Special Issue Editors:

Yancy Vaillant (y.vaillant@tbs-education.es), Dept. of Strategy, Entrepreneurship & Innovation, TBS Education, Barcelona, Spain

Samuel Fosso Wamba (s.fosso-wamba@tbs-education.fr), Dept. of Information, Operations and Management Sciences, TBS Education, Toulouse, France

Rodrigo Rabetino (rodrigo.rabetino@uwasa.fi), School of Management, University of Vaasa, Vaasa, Finland

More details can be found [here!](#)

International Journal of Production Economics

Special Issue on "Smart Product Platforming in the Industry 4.0 Era"

Submission deadline: January 31, 2024

Special Issue Editors:

George Huang (gqhuang@hku.hk), University of Hong Kong, Hong Kong

Roger Jiao (roger.jiao@me.gatech.edu), Georgia Institute of Technology, USA

Bart MacCarthy (Bart.MacCarthy@nottingham.ac.uk), University of Nottingham, UK

Linda Zhang (l.zhang@ieseg.fr), IESEG School of Management, France

More details can be found [here!](#)

International Transactions in Operational Research

Special Issue on "Artificial Intelligence-Driven Decision Making in Health and Medicine"

Submission deadline: December 31, 2023

Special Issue Editors:

Davide La Torre (davide.latorre@skema.edu), SKEMA Business School and Université Côte d'Azur, France

Leopoldo Bertossi, SKEMA Business School and Carleton University, Canada

Herb Kunze, University of Guelph, Canada

Marc Poulin, Abu Dhabi School of Management, UAE

More details can be found [here!](#)

International Transactions in Operational Research

Special Issue on "Decision Support Systems in an uncertain world"

Submission deadline: November 30, 2023

Special Issue Editors:

Ana Paula Cabral Seixas Costa (apcabral@cdsid.org.br), Federal University of Pernambuco, Brazil

Daouda Kamissoko (daouda.kamissoko@mines-albi.fr), IMT Mines Albi, University of Toulouse, France

José Maria Moreno-Jiménez (moreno@unizar.es), Zaragoza University, Spain

More details can be found [here!](#)

International Transactions in Operational Research

Special Issue on "Efficiency and Productivity Analysis of Public Services in Practice"

Submission deadline: December 31, 2023

Special Issue Editors:

Tommaso Agasisti (tommaso.agasisti@uam.es), Politecnico di Milano, School of Management, Italy

Eva M. De La Torre (eva.torre@uam.es), Universidad Autónoma de Madrid, Spain

Kristof De Witte (kristof.dewitte@kuleuven.be), Katholieke Universiteit Leuven, Belgium

Gabriela Sicilia (gsicilia@ull.es), Universidad de La Laguna, Spain

More details can be found [here!](#)

International Transactions in Operational Research

Special Issue on "Sustainable and Responsive Transportation and Logistics"

Submission deadline: December 31, 2023

Special Issue Editors:

Rosa G. Gonzalez-Ramirez, Universidad de los Andes, Chile

Janny Leung, University of Macau, China

Alena Orro, University of Passau, Germany

Erwin Pesch, University of Siegen, Germany

More details can be found [here!](#)

OMEGA

Special Issue on "Production and Service Operations Management in Digital Economy"

Submission deadline: December 31, 2023

Special Issue Editors:

Zhong-Zhong Jiang (zzjiang@mail.neu.edu.cn), Northeastern University, Shenyang, China

Liming Yao (lmiao@scu.edu.cn), Sichuan University, Chengdu, China

Xiaoyang Zhou (zhouxiaoyang@xjtu.edu.cn), Xian Jiaotong University, Xian, China

More details can be found [here!](#)



Recent contributions in brief

Albano, A., García-Lapresta, J. L., Plaia, A., Sciandra, M. (2023). Clustering alternatives in preference-approvals via novel pseudometrics. *Statistical Methods and Applications*. DOI: 10.1007/s10260-023-00718-w.

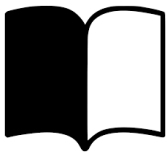
The motivation behind this research is to address the challenges posed by preference-approval structures in decision-making. Preference-approval structures involve both ranking alternatives and declaring which of them are approved of.

The main goal is to simplify the complexity of the preference-approval space, facilitating the interpretability, and applying it to real-world decision scenarios. This article proposes a family of novel pseudometrics for clustering alternatives in preference-approval structures. To obtain clusters, we employ a known order-invariant partitioning algorithm, called Ranked K-medoids (RKM), utilizing the proposed pseudometrics between pairs of alternatives as its input. Finally, clusters are represented in 2-dimensional space using non-metric multidimensional scaling.

Decision-makers can easily grasp the concept of clusters, which represent groups of alternatives with similar approval patterns. This clear interpretation is crucial for an effective

decision-making process. The article demonstrates its practical applications through real-world case studies, such as analyzing European citizens' preferences toward social values. This shows how clusters can be used to tailor political communication campaigns and reveal differences among member countries.

This research's features and contributions revolve around simplifying and enhancing the application of MCDA issues, in scenarios involving preference-approval structures. Its innovative clustering approach and practical applications offer valuable insights for both theory and practice in MCDA.



Articles Harvest

(This section is prepared by He Huang
he.huang@psi.ch)

Abbas, A.E., Hupman, A.C., 2023. Scale dependence in weight and rate multicriteria decision methods. *European Journal of Operational Research* 309, 225–235.

Abbate, S., Centobelli, P., Cerchione, R., 2023. From fast to slow: An exploratory analysis of circular business models in the Italian apparel industry. *International Journal of Production Economics* 260.

Abd El-Mageed, A.A., Abohany, A.A., Elashry, A., 2023. Effective feature selection strategy for supervised classification based on an improved binary aquila optimization algorithm. *Computers and Industrial Engineering* 181.

Abdel-Basset, M., Mohamed, R., Azeem, S.A.A., Jameel, M., Abouhawwash, M., 2023. Kepler optimization algorithm: A new metaheuristic algorithm inspired by Kepler's laws of planetary motion. *Knowledge-Based Systems* 268.

Abolpour, K., 2023. A new characterization of congruences and the discrete Sugeno integral on I_b -valued general fuzzy automata. *Fuzzy Sets and Systems* 460, 186–199.

Abourraja, M.N., Rouky, N., Kornevs, M., Meijer, S., Kringos, N., 2023. A simulation-based decision support framework devoted to ro-ro terminals: Design, implementation and evaluation. *Computers and Industrial Engineering* 180.

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