



THE ASSOCIATION OF
EUROPEAN OPERATIONAL
RESEARCH SOCIETIES

EW
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MCDA
MULTIPLE CRITERIA
DECISION AIDING



MCDA-96

96th Meeting of the EWG-MCDA
September 21-23, 2023 | Paris, France
ESSCA School of Management

Conference Programme

Organizing Committee:

Béatrice COLLIN | Guillaume SCHIER | Panos XIDONAS

Paris, September 2023

URL: <https://mcda96.sciencesconf.org>

Programme at a Glance

Thursday 21 September (Amphitheatre Louis Le Duff)

12:00-12:30 Registration

12:30-13:00 Opening

13:00-13:45 Session I

13:45-14:15 Coffee break

14:15-15:45 Session II

15:45-16:15 Coffee break

16:15-18:15 Session III

20:00 Gala dinner

Friday 22 September (Amphitheatre Louis Le Duff)

08:30-10:30 Session IV

10:30-10:50 Coffee break

10:50-12:50 Session V

12:50-13:50 Lunch

13:50-14:20 Group activities

14:20-16:20 Session VI

16:20-16:40 Coffee break

16:40-18:40 Session VII

18:40 End of activities

Saturday 23 September

11:00-12:00 Sightseeing cruise

Detailed Programme

Thursday 21 September (Amphitheatre Louis Le Duff)

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 agrowaste

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

Developing EBPO framework for assessing circular procurement practices in building and construction industry

Vidyasagar Gembali, Aalok Kumar, PRS Sarma

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

Friday 22 September (Amphitheatre Louis Le Duff)

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

Regular papers:

Decision rules for drug discovery

Adam Mielniczuk, Grzegorz Miebs, Rafał Bachorz, Miłosz 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-Jiménez, 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

Saturday 23 September

11:00-12:00 Sightseeing cruise on the Seine by *Bateaux-Mouches Paris*.