

# International Society on Multiple Criteria Decision Making



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## Letter from the President

Dear Members of the International Society on MCDM,

I wish you all a happy, healthy, and successful new year. May all your criteria be fully satisfied in 2016!

Let me bring you up to date since the last newsletter. We have been discussing migrating our electronic resources to a cloud-based hosting system for a while. We accomplished this for most part in 2015. We rented a hosting space and migrated our membership database and website there. At the time of migration, we designed a new, easier-to-maintain website (<http://www.mcdmsociety.org/>). We welcome any comments and suggestions. The migration of the membership database required creating new accounts for all members. If you have not already done so, please reset your passwords at <http://www.mcdmsociety.org/user/password>. It is important that you keep your membership information up to date since this is how we can be sure to reach you. If your e-mail address in our database is not current, you will need to contact us (at secretary (at) mcdmsociety.org) directly to update it. We are still working on migrating the discussion list. I would like to thank the University of Jyväskylä for hosting our electronic resources for so many years.



While electronic discussion lists have been very useful in the past, we realize that we can enhance communication between our members by utilizing additional mediums in social media. We intend to create Facebook and Twitter accounts for our Society and establish a LinkedIn group. I am hoping that these additional mediums will further encourage our members to contribute to our Society. The more participation we get, the more successful our Society will be. We will keep you posted about the developments in these directions. Meanwhile, we welcome any suggestions.

We had a great meeting in Hamburg in August 2015. The sad part of completing a meeting of our Society is the fact that we have to wait two long years before the next one. The next meeting will be in Ottawa, Canada July 9-14, 2017, and will be organized by Sarah Ben Amor and her colleagues. You can find the announcement of that meeting in this newsletter. Although our next Society meeting is quite far ahead, there are other opportunities for us to have strong MCDM presence. You can find quite a few meeting announcements scheduled for 2016 in Section 2 of this newsletter. All these events have strong MCDM emphasis and I hope to see many of you at these meetings.

The 12<sup>th</sup> MCDA/M Summer School is organized by Danielle Morais, Luciana Hazin and their colleagues in Recife, Brazil, during July 18-29, 2016. Many applicants from all over the world have already been admitted and the registration process is under way. This is a great opportunity for young researchers and I expect many of the participants to be active in our Society in the coming years. You can find further information about the summer school in this newsletter.

The elections for a number of positions of our Society were conducted electronically in the Fall of 2015. About a third of our members voted, which is quite high for electronic voting. Matthias Ehr Gott became the President elect, Birsen Karpak was re-elected as vice president of finance, and Adiel Teixeira de Almeida, Jyrki Wallenius, Margaret Wiecek, and Constantin Zopounidis were

elected to the Executive Committee for four-year terms. Congratulations to Matthias, Birsen, Adiel, Jyrki, Margaret, and Constantin. We have already begun to work together and I look forward to a productive collaboration over the next four years.

After the great job Jyrki Wallenius did as the Chair of the Doctoral Dissertation Awards Committee, together with the committee members, the Executive Committee asked Jyrki to serve for another term. I am delighted to announce that Jyrki accepted and will coordinate the dissertation award process for the award to be given at the Ottawa conference in July 2017. Jyrki will make the necessary preparations and announcements in due time. I suggest the PhD candidates in MCDM to consider participating in the next dissertation award competition.

I would like to thank Johannes Siebert and his editorial team for doing such a superb job in putting together all the relevant information and publishing this Newsletter twice a year.

*Murat Köksalan*

President of the International Society on MCDM  
president (at) mcdmsociety.org  
Jan 31, 2015  
Ankara

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

president (at) mcdmsociety.org  
president-elect (at)mcdmsociety.org  
secretary (at) mcdmsociety.org  
mcdm-award (at) mcdmsociety.org  
phdaward (at) mcdmsociety.org  
newsletter (at) mcdmsociety.org

## 1 Society News

### 1.1 24th International Conference on Multiple Criteria Decision Making (MCDM 2017)

#### Second Announcement

Dear friends and colleagues,

I would like to take this opportunity to renew my invitation to the 24<sup>th</sup> International Conference on Multiple Criteria Decision Making, to be held from **July 9<sup>th</sup> to the 14<sup>th</sup>, 2017** at the Telfer School of Management, University of Ottawa, in Ottawa, Canada (with a get-together on **July 8<sup>th</sup>, 2017**). Since my first letter, several colleagues at the University of Ottawa and in the Ottawa region have teamed up and formed a local organizing committee.



**Calls for session proposals and calls for papers/abstracts** will be opened **this spring**, before the next issue of the newsletter. We count on your involvement and contributions for the success of our conference.

Looking forward to welcome you next year in vibrant Ottawa.

Sincerely,

*Sarah Ben Amor*

## 1.2 MCDA/M SUMMER SCHOOL 2016

The application for the MCDA/M Summer School 2016 is now over. More than 80 applications were received from different parts of the world. It is expected to put together 50 graduate students/young researchers from Europe, Asia, Middle East, Africa and the Americas. The early registration deadline is March 15<sup>th</sup>, 2016. Registration with accommodation is highly recommended, and also includes attendance to the summer school, documents, lunches, dinners and a social activity.

The program includes the following topics:

- Introduction to MCDA/MCDM;
- Applications in real world problems;
- Value-Focused Thinking and Problem Structuring;
- Preference Modelling;
- Outranking Methods ;
- MAVT/MAUT (Multi-Attribute Value/Utility Theory);
- Robust Ordinal Regression;
- Decision Rule Approach;
- MCDM Group Decision ;
- Interactive Methods of Multiobjective Optimization (IMMO);
- Multiobjective Combinatorial Optimization (MOCO);
- Evolutionary Multiobjective Optimization (EMO);
- Fuzzy Modeling in MCDM Problems;
- Decision Deck;
- Scientific writing and publication strategy;
- MCDM community and History.

Following lecturers have already confirmed their participation: Adiel T. de Almeida; Matthias Ehrgott; Petr Ekel; José Rui Figueira; Carlos M. Fonseca; Martin J. Geiger; Salvatore Greco; Milosz Kadzinski; Ralph L. Keeney; Murat Köksalan; Danielle C. Morais; Roman Słowiński.

The participants will attend lectures and work on case studies. The program includes 21 hours of work on practical cases, in order to promote a deeper understanding of the investigated concept, helping the students to apply the methods to different problems.

Considering the importance of these practical cases, a book of case studies is being elaborated with the aim to present the problem, the methods and its realization. This book will enrich traditional lecture material.

The MCDA/M Summer School 2016 is a two-week event, taking place July 18<sup>th</sup> through 29<sup>th</sup>, 2016 in Recife/Brazil. Details about the program and the venue are available at <http://cdsid.org.br/mc-summer-school2016/>

*Danielle Morais*

## 2 Upcoming Events and Call for Papers

### 2.1 *INFORMS ANNUAL MEETING 2016, Call for Participation*

The INFORMS 2016 Annual Meeting will take place in Nashville, Tennessee, November 13-16. As the President of the MCDM Section of INFORMS I will have a pleasure to be in charge of composing the MCDM cluster and would like to maintain the strong presence of MCDM that has been visible in the recent INFORMS annual meetings.

I invite and encourage all members of the MCDM Society to actively participate in the conference and present their work. Please contact me if you would like to serve as session organizers or act as presenters at the conference. The conference website is coming soon at <http://meetings2.informs.org/wordpress/nashville2016/>.

Nashville is the capital of the [U.S. state](#) of [Tennessee](#). The city is the home of the [Grand Ole Opry](#), the Country Music Hall of Fame, and is known as a center of the [music industry](#), earning it the nickname "Music City." The city has also been called Athens of the US South being a home to more than twenty post-secondary educational institutions, a full-scale [replica of the Athenian Parthenon](#), and many examples of classical and neoclassical architecture.

Looking forward to hearing from many of you soon,

*Margaret Wiecek*

President MCDM Section

INFORMS

## **2.2 Call for Chapter Proposals for the Book “Cases based on Multiple Criteria Decision Making/Aiding methods: Building and Solving Decision Models with Computer Implementations”**

An edited volume by:

**Sandra Huber**

Helmut-Schmidt-University, Hamburg, Germany

**Martin Josef Geiger**

Helmut-Schmidt-University, Hamburg, Germany

**Adiel T. de Almeida**

Universidade Dederal de Pernambuco, Brazil

Submissions/ inquiries should be submitted electronically to:

[sandra-huber@hsu-hh.de](mailto:sandra-huber@hsu-hh.de)

### **Scope of the book**

Many practical problems comprise multiple criteria. Lucky enough, the scientific community has proposed numerous approaches for their solution or for a decision support/ aiding. The main objective of this book is to collect case studies for (PhD) students working on multicriteria decision aiding (MCDA) and multiple criteria decision making (MCDM), combining the introduction of a problem (case) with a method, and a (the description/ explanation) of a computer implementation. In this sense, each chapter is based on four pillars: the problem, the model building, the methods, and its realization.

We believe that case studies are an effective teaching tool, enriching traditional lecture material. Based on our experience with the 11th MCDA/M Summer School 2013 we can report that the majority of the participants stated that the investigated case studies were helpful (100 % of the answers on the 11th MCDA/M Summer School 2013 questionnaire) and interesting to them (95 % of the responses). In this context, it is expected that MCDA/M methods linked to case studies and computer implementations promote a deeper understanding of the investigated concept and help students to apply these methods to other problem areas.

Suggested case study topics include, but are not limited to the following:

- Robust Ordinal Regression
- Outranking
- MAVT/ MAUT
- Decision Rule Approach
- Interactive methods
- Fuzzy Multiple Criteria Decision Making
- Decision Deck
- Problem structuring
- Preference Modelling
- Group Decision Making, Negotiations
- AHP/ ANP
- Goal programming

- Data Envelopment Analysis
- Behavioral Issues in Decision Making

### **Target audience**

The audience is composed by PhD- and BSc/MSc students who are interested in gaining an understanding of MCDA/MCDM methods and whose goals include the solving of problems with multiple conflicting objectives. Moreover, the book is suitable for university teachers who can use the book for their lectures and/or BSc/MSc seminars.

### **Proposals**

- The proposal should provide an overview of the chapter in its entirety.
- A brief description of the case study and the used methods should be given. Please also mention implementation details/ how the methods are applied to the case study.
- The length of the proposal should not exceed 3 pages.
- Proposals must include the author's name, affiliation, mailing address and e-mail address. In case of multiple authors, all names etc., must be given and a single individual must be identified as primary point of contact.
- The target publisher is Springer (to be confirmed).
- All proposals should be submitted via mail to [sandra-huber@hsu-hh.de](mailto:sandra-huber@hsu-hh.de)

### **Submissions**

If accepted, the contributions should meet the following criteria:

- The submission should not exceed 30 pages.
- The chapters should include three elements: (i) A description of the case, (ii) an introduction/ clear explanation of the methodological approach, and (iii) details on how to apply/ implement the technique to the given case.
- If necessary, and we expect this to be relevant for many contributions, supplementary material should be sent too. This could be additional data/ files, source code, implementations, etc.
- A template will be provided and should be used for the submission.

### **Important deadlines and dates**

Submission of chapter proposals to editors: **March 31, 2016**

Notification of chapter proposal acceptance: **April 30, 2016**

Chapter submission to editors: **September 30, 2016**

### **2.3 Euro Mini conference on: From Multiple Criteria Decision Aid to Preference Learning (DA2PL'2016), November 7<sup>th</sup>-8<sup>th</sup> 2016 in Paderborn, Germany**

The DA2PL workshop has been launched with the goal of bringing together researchers from operations research and the decision sciences with scholars from machine learning. It aims at providing a forum for discussing recent advances and identifying new research challenges in the intersection of both fields, which is marked by the growing field of preference learning, thereby supporting a cross-fertilisation of these disciplines.

Following the two previous editions of this workshop, which took place in Mons in 2012 and Paris in 2014, DA2PL'2016 will be held at the University of Paderborn, Germany. Supported by the Association of European Operational Research Societies, it will this time be organized in the form of a EURO Mini Conference.

DA2PL'2016 solicits contributions to the usage of theoretically supported preference models and formalisms in preference learning as well as communications devoted to innovative preference learning methods in decision analysis and multicriteria decision aiding. Specific topics of interest include, but are not limited to

- quantitative and qualitative approaches to modelling preferences, user feedback and training data
- preference representation in terms of graphical models, logical formalisms, and soft constraints
- dealing with incomplete and uncertain preferences
- preference aggregation and disaggregation
- learning utility functions using regression-based approaches
- preference elicitation and active learning
- preference learning in combinatorial domains
- learning relational preference models and related regression problems
- classification problems, such as ordinal and hierarchical classification
- inducing monotonic decision models for preference representation
- comparison of different preference learning paradigms (e.g., monolithic vs. decomposition)
- ranking problems, such as object ranking, instance ranking and label ranking
- complementarity of preference models and hybrid methods
- explanation of recommendations
- applications of preference learning, such as web search, information retrieval, electronic commerce, games, personalization, recommender systems

General information is available here: <https://homepages.uni-paderborn.de/kiudee/>

## **Submissions:**

Submissions must be written in English and formatted according to the electronic template that is available on the conference website. The page limit is 6 for full papers, although extended abstracts (two pages as the maximum) are welcome, too. Submissions are managed through [www.easychair.org](http://www.easychair.org). Each paper submitted to DA2PL will be reviewed by two referees.

This year we provide an opportunity for doctoral students to explore and develop their research interests. A special session at the conference will be devoted for PhD students to present and discuss their ongoing research work. Therefore, we encourage young researchers to submit their work also via submission site.

## **Important dates:**

- Submission site opens: April 1, 2016
- Paper submission deadline: August 22, 2016
- Author notification: September 30, 2016
- Camera-ready version: October 21, 2016

## **Organization and Contact:**

- Conference Chair: Eyke Hüllermeier, Paderborn University (eyke@upb.de)
- Program Chairs: Robert Busa-Fekete, Paderborn University (busarobi@upb.de)
- Vincent Mousseau, CentraleSupélec, Paris (vincent.mousseau@centralesupelec.fr)
- Local Chair: Karlson Pfannschmidt, Paderborn University (kiudee@mail.upb.de)

## **2.4 The 28<sup>th</sup> European Conference on Operational Research (EURO XXVIII), July 3<sup>rd</sup>-6<sup>th</sup> 2016 in Poznan, Poland, Poznan University of Technology**

### **Second announcement and Call for Papers**

We have the great pleasure of inviting you to take part in the 28th EURO Conference to be held in Poznan, Poland on 3-6 July, 2016.

The Program and Organizing Committees (<http://www.euro2016.poznan.pl/committees/>), chaired by Daniele Vigo and Joanna Józefowska, are preparing a high quality scientific program and an exciting social program for the Conference.

We are convinced that the EURO XXVIII Conference will be an excellent opportunity for the OR community to get together again in a pleasant atmosphere, and, thus, we are looking forward to meeting you in Poznan, the first capital of Poland, in 2016!

### **Plenary, Keynote & Tutorial Speakers**

- Plenary Speakers announced:
- Robert Aumann (Hebrew University of Jerusalem) Dimitris Bertsimas
- (MIT) Rolf Möhring (TU Berlin)

In addition, several outstanding Keynote & Tutorial Speakers will present the state-of-the-art in Operations Research and outline pathways of its future developments. More information on their presentations will be announced soon. Please follow up further information at the EURO XXVIII Conference webpage (<http://www.euro2016.poznan.pl/speakers/>).

### **Call for Papers and Sessions**

Researchers, academics, practitioners, and students interested in any branch of Operational Research, mathematical modelling or economic analysis are invited to submit abstracts or organize sessions.

Invited and contributed papers will be organized in parallel sessions.

In general, sessions will be a part of the Conference streams, and streams are grouped in 25 areas. The list of areas and streams can be followed at: <http://www.euro2016.poznan.pl/areas/>

No participant can present more than one paper at the Conference.

Abstract submission system is available online, via the Conference web page (<http://www.euro2016.poznan.pl/abstract-submission/> or <https://www.euro-online.org/conf/euro28/>).

Abstracts: max. 1500 characters; submission deadline: March 1, 2016.

Researchers who wish to organize a stream or an invited session or contribute with a paper within an invited session should contact a PC member of the corresponding area.

## **Making an Impact**

Following the path successfully initiated in EURO 2015, we plan to continue the effort in bridging the gap between academics and practitioners in the OR/MS field by organizing several presentation streams and other activities within the "Making an Impact" initiative.

## **Important Dates**

- Abstract submission start: Wednesday, October 1, 2015
- Abstract submission deadline: Tuesday, March 1, 2016

## **Registration**

- Registration and accommodation booking start: Monday, November 2, 2015
- Early registration deadline: Friday, April 1, 2016
- Author registration deadline: Friday, April 15, 2016

## **Registration Fees**

- Regular: 375 EUR (early); 500 EUR (late),
- Student: 200 EUR (early); 300 EUR (late), Accompanying persons: 130 EUR
- Early registration ends April 1, 2016
- The regular/student registration fee includes:

Participation in all sessions, and access to the exhibition area, Conference materials (Final Program, Book of Abstracts in appropriate format), Participation in the Welcome Reception, July 3, Coffee breaks and lunches, July 4-6, 3-day city public transportation card (with badges)

- The registration fee for accompanying persons includes:

Participation in the Welcome Reception, Lunches, July 4-6, Poznan City tour, 3-day city public transportation card (with badges)

- The Gala dinner is charged separately, at 70 Euros per person
- Registration system will be available online from November 2, 2015 via the Conference web page  
([www.euro2016.poznan.pl/registration/](http://www.euro2016.poznan.pl/registration/))

## **Further Information**

For detailed information about Poznan, please, visit the Conference webpage [www.euro2016.poznan.pl/](http://www.euro2016.poznan.pl/)<<http://www.euro2016.poznan.pl/>>

Further proposals for Book or Software Exhibitions are welcome.

We look forward to welcoming you to our very exciting conference in Poznan!

***Prof. Dr. Joanna Józefowska*** and ***Prof. Dr. Daniele Vigo***

*For any further information please contact:*

### **Conference Secretariat:**

Międzynarodowe Targi Poznańskie sp. z o.o. / Poznan International Fair Ltd.

ul. Głogowska 14

60-734 Poznan, Polska / Poland

ph. + 48 61 869 29 38

email: [euro2016@mtp.pl](mailto:euro2016@mtp.pl)<<mailto:euro2016@mtp.pl>>

web: [www.euro2016.poznan.pl/](http://www.euro2016.poznan.pl/)<<http://www.euro2016.poznan.pl/>>

## **2.5 Call for Applications to the Behavioural OR Summer School, May 15<sup>th</sup>-22<sup>nd</sup> 2016 in Finland**

*Please note that the application deadline is February 20th, 2016*

We invite applications from doctoral students and advanced master students as well as post docs interested in this new and exciting field within OR. We also welcome people from other non-OR backgrounds such as behavioural, social, computational and organizational sciences. Knowledge of OR is not a prerequisite - interdisciplinarity is key in BOR work.

### **What is Behavioural Operational Research**

Behavioural operational research (BOR) is a new very rapidly developing area in operational research. It is interested in the behavioural aspects related to model-supported problem solving and decision making, as well as in using models to describe human behaviour in problem solving and complex settings.

### **BOR Summer School**

This international summer school is the first in this new area. Our distinguished lecturers are pioneering professors in the field including Alberto Franco, Paul Goodwin, Konstantinos Katsikopoulos, Jeffrey Keisler, Gilberto Montibeller, Stewart Robinson, Esa Saarinen, Ahti Salo and Jyrki Wallenius. This will be a unique opportunity to get an early start in this emerging new field in OR. The presentations will cover different areas of operational research including problem structuring multicriteria decision making, heuristics and biases, simulation, systems thinking and forecasting. There will also be talks by brain researchers and demonstrations of new measurement techniques, including brain imaging, which are used in studying human emotions and behaviour. Students attending the summer school will have the possibility to describe their research projects and present posters. Students will also have the opportunity to discuss their research ideas and collaborate with our distinguished speakers.

The summer school is organized by the Systems Analysis Laboratory in Aalto University and the BOR community.

It will take place on the Otaniemi campus of the Aalto University near Helsinki.

- General info: <http://bor.aalto.fi/summerschool.html>
- How to apply: <http://bor.aalto.fi/applications.html>
- BOR web site: <http://bor.aalto.fi>

***Welcome to the BOR Summer School in Finland!***

## 2.6 83<sup>rd</sup> meeting of the European group on multicriteria decision aiding (EWG-MCDA)



We invite you to participate in the 83rd EURO Working Group on Multi-criteria Decision Aiding (EWG-MCDA), which will take place at Sant Cugat-Barcelona Campus of ESADE Business School, Ramon Llull University from the 31st of March to the 2nd of April, 2015.

The main goal of this conference is to foster discussion around the last works in Multi-criteria Decision Aiding, as well as gathering community members. We invite you to submit contributions reflecting both finished work as well as work in progress, containing original and promising ideas. Under the theme of “MCDA Applications to Business and Management”, the meeting will cover research issues in the area of multicriteria decision aiding, involving new theoretical research and applications to business and management.

### Venue

ESADE Business School - Universitat Ramon Llull  
 Campus Barcelona - Sant Cugat  
 Avda. Torre Blanca, 59  
 08172 Sant Cugat del Vallès (Barcelona)

### Submission instructions

- Please send your abstract, 1 page maximum length, to: [ewgmcda83@esade.edu](mailto:ewgmcda83@esade.edu)
- The template for preparing the Abstract can be found in: <https://www.dropbox.com/s/7vilh0pwxtxeo7d/Extended%20Abstract%20Template.docx?dl=0&preview=Extended+Abstract+Template.docx>
- The conference official languages are English and French, abstracts will be published in the Book of Abstracts of the Workshop.

### Important dates

- February 1st: Abstract submission deadline (please send your abstract to: [ewgmcda83@esade.edu](mailto:ewgmcda83@esade.edu))
- February 8th: Authors will be informed of the decision
- February 15th: Registration to the workshop deadline
- February 22th: The final revised abstract must be submitted

### Organization and Contact

Prof. Núria Agell, ESADE Business School (Ramon Llull University); e-mail: [ewgmcda83@esade.edu](mailto:ewgmcda83@esade.edu)

## **2.7 Group Decision and Negotiation Conference (GDN 2016)**

***A reminder that the new deadline for submission of full papers to be published in Springer LNBIP is February 7th, 2016. The Springer volume will be published after the conference.***

We cordially invite you to submit a paper and participate in the Group Decision and Negotiation Conference, GDN 2016, to be held at Western Washington University, Bellingham, WA, on June 20-24, 2016. The conference will be preceded by a doctoral consortium, which gives PhD students in Group Decisions and Negotiations the opportunity to present and discuss their work with leading researchers in the field.

GDN 2016 is the 16th annual meeting organized by the INFORMS section on Group Decision and Negotiation. Conference topics include all aspects of group decisions and negotiations such as:

- Methodological & Theoretical Foundations
- Technological Foundations
- Behavioral Aspects
- Applications

Conference proceedings will be published in a volume of Springer Lecture Notes in Business Information Processing (LNBIP) as well as a local proceedings volume for authors who do not wish to transfer copyright of their paper.

- Important deadlines:
- February 7, 2016: Submission of full papers to be published in Springer LNBIP
- February 7, 2016: Submission of extended abstracts and short papers for publication in local conference proceedings
- April 1, 2016: Early bird registration deadline
- June 20-24, 2016: Conference

For further information, please visit the Conference Website at <http://wp.wvu.edu/gdn2016/>

***Deepinder Bajwa  
Sabine Koeszegi  
Rudolf Vetschera***

GDN 2016 Program Chairs

### 3 New Books/Publications

This section presents a list of papers published from 2015 or to appear. 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](mailto:lucie.galand@dauphine.fr).

#### 3.1 Books and Book Chapters

Aletaha D., **Classification of rheumatoid arthritis**, *Atlas of Rheumatoid Arthritis*, P Emery (editor), Springer, 3-21, 2015.

Gomes L.F.A.M., Araujo, R.M., Machado M.A.S., **Retail Location Analysis with TODIM-FSE**, In: R.Z.Ríos-Mercado; J.F.Camacho-Vallejo; J.L.González-Velarde; M.Laguna. (Org.). *Recent Advances in Theory, Methods, and Practice of Operations Research. 1st ed.*, Monterrey, Mexico: UANL - Casa Universitaria del Libro, 1:311-318, 2014.

Pereira J., Gomes L.F.A.M.; Paredes F.; Fuenzalida R.; Olguin N., **A multicriteria analysis of five ordering methods including the bullwhip effect criterion**, In: R.Z. Ríos-Mercado; J.F. Camacho-Vallejo; J.L. González-Velarde; M. Laguna. (Org.). *Recent Advances in Theory, Methods, and Practice of Operations Research. 1ed.*, Monterrey, Mexico: UANL - Casa Universitaria del Libro, 1:239-246, 2014.

#### 3.2 Journal Papers

Alves M. J., Henggeler Antunes C., Clímaco. J., **Interactive MOLPEXplorer - A Graphical-Based Computational Tool for Teaching and Decision Support in Multi-Objective Linear Programming Models**, *Computer Applications of Engineering Education*, 23(2):314-326, 2015.

Au J., Coleman A., Sullivan T., **A practical approach to well-being based policy development: What do New Zealanders want from their retirement income policies?**, *New Zealand Treasury Working Papers*, 15/14, 2015.

Baykasoğlu A., Gölcük İ., **Development of a novel multiple-attribute decision making model via fuzzy cognitive maps and hierarchical fuzzy TOPSIS**, *Information Sciences*, 301:75-98, <http://www.sciencedirect.com/science/article/pii/S0020025514012006>, 2015.

Bazgan C., Jamain F., Vanderpooten D., **Approximate Pareto sets of minimal size for multi-objective optimization problems**, *Operations Research Letters*, 43(1):1-6, 2015.

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## 4 Past Conferences, Workshops, and other News

### 4.1 Conference Report about the International Conference on Multiple Objective Programming and Goal Programming (MOPGP 2015)

## Conference Report

# The International Conference on Multiple Objective Programming and Goal Programming

***MOPGP 2015***

*Faculty of Economics, Business and Management, Tlemcen University*

*December 13-15, 2015*



This conference is sponsored by



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### *Opening Ceremony*

The Faculty of Economics, Business and Management at University of Tlemcen organized from 13 to 15 December 2015, with the co-sponsorship of the Association of European Operational Research Societies and the Tunisian Decision Aid Society the International Conference on Multiple Objective Programming and Goal Programming (MOPGP'15). The MOPGP'15 is the eleventh of the series of conferences and provides an international forum for presentations and discussion of research in all areas of Multi-objective decision analysis and Multi-Criteria Decision Aid. The first MOPGP conference was held at the University of Portsmouth, United Kingdom, June, 1994. The second conference was organized by University of Malaga, in Torremolinos, Spain, May, 1996. The third was held at the University of Laval, Quebec City, Canada, May-June, 1998. The fourth was organized by University of Economics in Katowice and took place at Beskidy Mountains at the south of Poland from 29 May to 1 June, 2000. The fifth was organized in Nara, Japan on June 4 – 7, 2002. The sixth was organized by the University of Tunis in Hammamet, Tunisia on April, 14-16, 2004. The seventh took place in the EURO Loire Valley, City of Tours, France from 12 to 14 June 2006. The eighth edition went back to the University of Portsmouth, United Kingdom from 24 to 26 September, 2008. The ninth edition was organized by the University of Sfax on May 24–26, 2010. The tenth edition was organized jointly with The 54th Annual conference of the Canadian Operational Research Society in the wondrous city of Niagara Falls from June 11 to 13, 2012. This edition held in the University of Tlemcen and chaired by Amal Kazi Tani Hassaine. MOPGP'15 received 110 manuscripts and after a peer review process, by national and international reviewers, 54 were accepted to be presented in the conference program. The conference program features a broad international representation from several countries, including: Algeria, Bahrain, Colombia, Kuwait, Morocco, Poland, South Africa, Tunisia and Turkey. The accepted papers include both theoretical and application research works from very diverse areas related to Multiple Objective Programming and Goal Programming.




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*Keynote Speakers*

## **Doctoral Workshop and Keynote Speeches**

During the first day of the MOPGP'15 conference, a Doctoral Workshop took place to assist graduate students in developing and improving their research projects and to increase interest among the student community in the areas of Multiple objective programming and goal programming. The workshop was led by Fouad Ben Abdelaziz (NEOMA Business School, France) and Mehrdad Tamiz (Kuwait University, Kuwait) who presented the key concepts related to the multi-objective programming area and the Goal Programming model and its main variants. These presentations were followed by an interactive session chaired by Hatem Masri (University of Bahrain, Bahrain) devoted to the questions of the doctoral students. On the second day of the conference, Matthias Ehrgott (University of Lancaster, UK) presented recent progress made in the field of multi-objective combinatorial optimization. The last day of the conference, Jacques

Teghem (University of Mons, Belgium) emphasized the increasing interest in the multi-objective scheduling problems through several real life problems.



*Conference Lunch*



*Conference Dinner (Renaissance Marriott, Tlemcen, Algeria)*

During the conference, 54 papers were presented and discussed in the following special sessions:

- MOP/GP Theory
- MOP/GP Application
- Meta-heuristics
- Finance and Accounting
- Economics and Game theory
- Health Care
- Telecommunication
- Supply Chain Management
- Uncertainty
- Fuzziness
- Invited Session on Islamic Finance

MOPGP 2015 hosted the kickoff meeting for the African Operations Research Society (AFORS). The AFORS is a "non profit" association domiciled in Tunisia and its affairs are regulated by a Council consisting of representatives/alternates of all its members and an Executive Committee which constitutes its board of directors. Its aim is to promote Operational Research throughout Africa.






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*Main Hall and Parallel Session at the EPST of Tlemcen*

### **Sightseeing tour** (15 December 2015)



*Tlemcen City  
Museum*



*Mansourah Minaret*



*The El-Mechouar Palace*

The half-day tour began in the Old Town of Tlemcen city by visiting a high place of history and an 8 century old witness of the Arab-Islamic civilization, the Citadel of “El-Mechouar”. It is a historical building and a vast fortress which is located at the heart of Tlemcen, the “Pearl of the Maghreb”. The Citadel of the Mechouar was built in 1145 under the reign of the Zianides dynasty. It was the official residence of the Zianides princes and the place where they held council with their ministers. It encloses the king’s palace, a fortress, a mosque, gardens, fountains, some ministers and doctor’s dwellings, a school and cells for advanced learners and students. These findings are brought to life by touristic guides available at the Citadel of “El-Mechouar”. The visit continues into one of the most important museum of Tlemcen wich is near to the citadel. The trip continues to the ruins of “Mansourah” built by the Marinid Prince “Abou-Yacoub” in 1299. All that remains of this beautiful city are the Mansourah ramparts which were once the walls of the city, and a 40 meters mosque minaret. The tour ends with the visit of Plateau of “Lalla Setti” Mausoleum which offers a wide panorama of the city of Tlemcen.




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*Closing Ceremony - Group Photo*




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*Conference Organizing Committee*

MOPGP 2015 would not be possible if it was not for the generous support of our sponsors. We are extremely grateful for their help in making the conference possible.

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The MOPGP'15 was an excellent conference and a real research experience for all participants. We look forward to seeing you in the next edition of the conference will be in France in 2017.

Finally, we would further like to thank the University of Tlemcen Staff, faculty and students for their efforts in organizing the MOPGP'15.

*Amal Kazi Tani Hassaine*  
Conference Chair

*Hatem Masiri*  
Conference Program Chair

## **5 Research Team Presentation: Introduction to the research group “Multicriteria Optimization and Econometric Modelling Applied to the Socio-economic Area”**

The research group “Multicriteria Optimization and Econometric Modelling Applied to the Socio-economic Area” of the University of Malaga (Spain) is an interdisciplinary group of researchers belonging to different areas, such as mathematicians, economists and programmers. This group, located into the Faculty of Economics and Business Administration, works in statistical and mathematical analysis applied to different sectors, for example education, transport, energy and labor market. Our main research topics include, although they are not limited to, the following points:

- Optimization with multiple objectives: methodology, computational implementation and real models.
- Statistical analysis and econometric modeling applied to the socio-economic area.
- Optimal allocation of resources from the education policy perspective.
- Analysis of optimal matching in the labor market of women and men-workers.
- Development of synthetic indexes.

From the multicriteria optimization point of view, our current research lines are focused on the development of theory, software and applications of multiobjective optimization techniques, in particular, interactive methods, reference point-based techniques and evolutionary algorithms (with and without preferences).

Evolutionary multiobjective optimization algorithms are based on derivative-free techniques and can manage criteria which are not explicitly defined by mathematical functions. Such criteria, commonly calculated by computationally expensive black-box simulators, are present in most real problems which involves solving several objectives and, in these situations, classical optimization methods cannot be used. This is the reason of the success of evolutionary algorithms for solving real-world multiobjective optimization problems.

Besides, since the expectations and preferences of real users and/or decision makers highly influence the final solution of any multiobjective optimization problem, we also concentrate in the development of techniques focused not only in solving multiobjective optimization problems, but also in helping the decision makers in the (post-optimization) decision-making task.

Among others, we have successfully applied multiobjective optimization techniques in fields such as education, workers’ satisfaction, electricity generation and sustainability issues, etc.

## Members

- Mariano Luque
- Oscar D. Marcenaro-Gutierrez
- Ana B. Ruiz
- Luis Alejandro Lopez-Agudo
- Beatriz Rodriguez
- Francisca Miguel
- Rubén Saborido
- Mónica Domínguez
- Miguel Angel Roper

## Ten important publications related to MOP

1. Luque, M., Ruiz, A.B., Saborido, R., Marcenaro-Gutierrez, O.D. (2015). On the use of the Lp distance in reference point-based approaches for multiobjective optimization, *Annals of Operations Research*, Vol. 235 (1), pp. 559-579.
2. Ruiz, A.B., Luque, M., Ruiz, F., Saborido, R. (2015). A Combined Interactive Procedure using Preference-based Evolutionary Multiobjective Optimization. Application to the Efficiency Improvement of the Auxiliary Services of Power Plants, *Expert Systems with Applications*, Vol. 42 (21), pp. 7466-7482.
3. Ruiz, A.B., Sindhya, K., Miettinen, K., Ruiz, F., Luque, M. (2015). E-NAUTILUS: A decision support system for complex multiobjective optimization problems based on the NAUTILUS method, *European Journal of Operational Research*, Vol. 246 (1), pp. 218-231.
4. Luque, M., Lopez-Agudo, L.A., Marcenaro-Gutierrez, O.D. (2015). Equivalent reference points in multiobjective programming, *Expert Systems with Applications*, Vol. 42 (4), pp. 2205-2212.
5. Luque, M., Marcenaro-Gutierrez, O.D., Lopez-Agudo, L.A. (2015). On the potential balance among compulsory education outcomes through econometric and multiobjective programming analysis, *European Journal of Operational Research*, Vol. 241 (2), pp. 527-540.
6. Ruiz, A.B., Saborido, R., Luque, M. (2015) A preference-based evolutionary algorithm for multiobjective optimization: the weighting achievement scalarizing function genetic algorithm, *Journal of Global Optimization*, Vol. 62 (1), pp. 101-129.
7. Luque, M., Miettinen, K., Ruiz, A.B., Ruiz, F., (2012). A Two-Slope Achievement Scalarizing Function for Interactive Multiobjective Optimization, *Computers & Operations Research*, Vol. 39 (7), pp.1673-1681.
8. Luque, M., Ruiz, F., Steuer, R.E. (2010). Modified Interactive Chebyshev Algorithm (MICA) for Convex Multiobjective Programming, *European Journal of Operational Research*, Vol. 204 (3), pp. 557-564.

9. Marcenaro-Gutierrez, O.D., Luque, M., Ruiz, F. (2010). An application of Multiobjective Programming to the study of Workers' Satisfaction in the Spanish Labour Market, *European Journal of Operational Research*, Vol. 203 (2), pp. 430-443.
10. Luque, M., Miettinen, K., Eskelinen, P., Ruiz, F. (2009). Incorporating Preference Information in Interactive Reference Point Methods for Multiobjective Optimization, *OMEGA - International Journal of Management Science*, Vol. 37 (2), pp. 450-462.

## Software developed at the research group

### *WASF-GA and Global WASF-GA*

- Authors: Saborido, R., Luque, M., Ruiz, A.B.
- Embedded in the framework jMetal: Java Framework For Multi-Objective Optimization with Metaheuristics (<http://jmetal.sourceforge.net/>)
- Year: 2015

### *Software for evaluation and analysis to the efficiency improvement of the Auxiliary Services of Power Plants.*

- Authors: Ruiz, A.B., Ruiz, F., Cabello, J.M., Luque, M., González, S.
- Year: 2012

### *PROMOIN (Interactive Multiobjective Programming)*

- Authors: Luque, M., Caballero, R., Ruiz, F., Molina, J.
- Year: 2000

## Some group photos



## 6 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 February issue is January 20<sup>th</sup> and the issue is intended to be published “at the beginning of February”. Usually the deadline for the September issue is August 20<sup>th</sup> 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).