

# International Society on Multiple Criteria Decision Making

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## Letter from the President

Dear Members of the International Society on MCDM,

It is my pleasure to address you to present the second issue of our newsletter in 2018.

I am happy to report that our membership is steadily increasing. As of today, we have 2660 members from almost 100 different countries.

I am excited that next year is an MCDM-conference year. The conference will take place in İstanbul, Turkey, June 16-21, 2019, chaired by İlker Topçu. The preparations are underway and you can find brief information in this newsletter about the conference.



The first call for session organizers will go out this month. Please make sure to visit the conference website, make a note of the deadlines, and plan to attend. Our conferences are not only scientifically great, but are also fun. İstanbul is a fascinating venue and I am sure attendees will have a rewarding experience.

Our Society has been giving Society Awards in each of its conferences since 1992. These are the most prestigious awards in our area acknowledging individuals who have had substantial impact on MCDM over their careers. Jyrki Wallenius is chairing the awards committee and his call for nominations can be found in this newsletter. Please plan to nominate individuals whom you believe are worthy of these awards.

We have been organizing a doctoral dissertation competition since 2011. Finalists, who are selected in advance, present their work and the winner is announced at the conference. I have been impressed with the finalists and awardees in the past and I am very pleased that we can listen to and recognize such high quality work. The competition is chaired by Jose Rui Figueira and he provides further information on the award and the application process in his call for applications in this newsletter. I urge all qualified individuals to apply for this prestigious award.

In addition to the Society and dissertation awards, the Wiley Prize is given to best practices of MCDM at our conferences. Theo Stewart is administering the Wiley prize and his detailed call for submissions is available in this newsletter. Please plan submitting your paper for this award if you believe you have an innovative contribution to the practice of MCDM.

The 13<sup>th</sup> MCDA/M Summer School was organized by Constantin Zopounidis, Michalis Doumpos, and their colleagues in Chania, Greece July 23 to August 4, 2018. This was the first summer school after we decided to have the summer schools more frequently. I am delighted to see a high demand in spite of the increased frequency of the summer school. I am a great fan of these schools as they serve the future of our field very well. I was at the summer school during its first week and I was

impressed with the venue, the quality of lectures, and the enthusiasm of the students. You can find a detailed account of the whole event prepared by the organizers in this newsletter. Overall, the summer school was very successful in educating and entertaining a new generation of MCDM researchers. I look forward to following the successes and contributions of the students of the summer school to our field and to our society in the near future. Many of the students have already become members of our society. I would like to thank all lecturers and the organizers for their voluntary contributions. I would especially like to mention and praise the efforts of Constantin Zopounidis and Michalis Doumpos and their colleagues in making the summer school a big success.

The coordinating committee of the summer schools has already decided the venue of the next summer school as Ankara, Turkey. Gülşah Karakaya and Banu Lokman will jointly organize the summer school at the Middle East Technical University in the summer of 2020; the exact dates are yet to be decided. I am delighted to see that we are not short of volunteers to take on this responsibility.

You can find several meeting announcements, calls for papers, list of publications, and other news in this newsletter. The announced meetings have strong MCDM components and I hope to see many of you there.

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

On a personal note, I am spending the 2018-2019 academic year at the Ross School of Business, University of Michigan, Ann Arbor, Michigan, USA. Greetings from the lively Ann Arbor!

*Murat Köksalan*

President of the International Society on MCDM  
president (at)mcdmsociety.org  
September 1, 2018  
Ann Arbor, MI

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 25<sup>th</sup> International Conference on Multiple Criteria Decision Making (MCDM 2019) in Istanbul



Dear friends and colleagues,

The preparations for the 25th International Conference on Multiple Criteria Decision Making (MCDM 2019) are going on. As you know, it will take place at Istanbul Technical University, Istanbul, Turkey from June 16th to June 21st, 2019.

It would be the second conference that will be held in Turkey; the first one was the 15th International Conference which was held in Ankara, Turkey in 2000 by MCDM society chair Murat Koksalan. We are very pleased to host you again in Turkey.

The official web site of our conference is [www.mcdm2019.org](http://www.mcdm2019.org) and the web site is up. We invite you to bookmark this page, and check it regularly for news, updates, and recent developments.

You may also follow us on Twitter (<https://twitter.com/mcdm2019>) and on Instagram ([www.instagram.com/mcdm2019](http://www.instagram.com/mcdm2019))

“MCDM beyond the Information Age” will be the conference main theme. There will be several topics and application areas as announced at the web site. We believe that the theme, the topics, and application areas will be of broad interest to academicians and students as well as professionals.

The Scientific Program Committee will invite delegates to submit their invited session proposals and contributions to MCDM2019 on September 12, 2018.

You are all most welcome to MCDM2019, the 25<sup>th</sup> organization of MCDM conferences...

*İstanbul’da görüşmek üzere! (See you in Istanbul!)*

Sincerely,

Y. İlker Topcu

Professor, Istanbul Technical University  
MCDM 2019 Conference Chair



## **1.2 Call for Nominations: Awards of the International Society on Multiple Criteria Decision Making**

The international Society on Multiple Criteria Decision Making presents, at each of its international conferences, up to three awards to individuals in honor of their outstanding, long-lasting, and influential contributions to the field of MCDM. These awards are:

**The MCDM Gold Medal:** This is the highest honor that the International Society on Multiple Criteria Decision Making bestows upon a scholar who, over a distinguished career, has markedly contributed to the theory, methodology, practice and professional development of MCDM.

**The MCDM Edgeworth-Pareto Award:** This is the highest distinction that the International Society on Multiple Criteria Decision Making bestows upon a researcher or practitioner of MCDM who has demonstrated a high level of creativity in developing novel areas of application of MCDM and associated methodology, markedly influencing the form of MCDM practice.

**The Georg Cantor Award:** This is the highest form of recognition that the International Society on Multiple Criteria Decision Making bestows upon a researcher who has personified the spirit of independent inquiry in developing innovative ideas in the theory and methodology of MCDM, significantly expanding the tools available to MCDM practice.

The 25<sup>th</sup> International Conference takes place in Istanbul, Turkey, during June 16-21, 2019. Nominations are now sought for awards to be made at this conference. Nominations should be emailed not later than January 31<sup>st</sup>, 2019 to Jyrki Wallenius ([jyrki.wallenius@aalto.fi](mailto:jyrki.wallenius@aalto.fi)). Please note the following with respect to making nominations:

- No self-nominations will be accepted.
- The nomination must clearly state for which award the nomination is being made.
- Provide a short statement as to why the nominee is worthy of the award, indicating his/her contributions to the MCDM field.
- Provide a CV for the nominee or a link to it.

Note that a condition of the awards is that the awardee attends the conference in person to receive the award and to present a plenary talk. More information concerning the awards and past awardees may be found at the website <http://www.mcdmsociety.org/content/awards>.

The members of the award committee for 2019 are as follows:

Valerie Belton, University of Strathclyde  
Kalyanmoy Deb, Michigan State University  
Salvatore Greco, Catania University  
Murat Köksalan, Middle East Technical University and University of Michigan, Ann Arbor  
(President of the MCDM Society)  
Wojtek Michalowski, University of Ottawa  
Theodor Stewart, University of Cape Town  
Ilker Topcu, Istanbul Technical University (Istanbul Conference Chair)  
Detlof Von Winterfeldt, University of Southern California  
Jyrki Wallenius (Chair), Aalto University

The committee reserves the right to make its own nominations and/or not to make particular awards.

*Jyrki Wallenius*  
(Chair)

### 1.3 Call for Submissions for the 2019 Wiley Practice Prize in MCDA

John Wiley & Sons Limited, as publishers of the *Journal of Multi-Criteria Decision Analysis*, sponsor a prize for the best paper describing a real-life application of multiple criteria decision making presented at International Conferences on Multiple Criteria Decision Making. This prize is once more to be offered at the next conference in Istanbul, Turkey, 16-21 June 2019 (<http://www.mcdm2019.org/>). The prize is US \$1000, while the winning paper and approved finalist papers will be published in the journal.

**To be eligible for the prize, a paper should describe a real-world application, or series of applications, of MCDA in which there is clear interaction between the authors and decision makers or other significant stakeholders. Papers simply proposing alternative approaches to problems taken from the literature will not be considered for the prize.**

Conference delegates wishing to have their papers considered for the prize should submit a full paper, preferably in PDF form with figures and tables integrated into the text, to Theodor Stewart (Editor in Chief of the journal) at [theodor.stewart@uct.ac.za](mailto:theodor.stewart@uct.ac.za), accompanied by a brief statement explaining the background of the application and the practical impacts of the study.

This submission implies that the paper has not been submitted for publication to any journal.

The following key dates will apply to the process:

- Initial submission of papers for the prize should be received by the editor **not later than 31 December 2018**. Authors are also required to submit abstracts of these papers to the conference by the deadline specified on the website above.
- A committee will perform a preliminary screening of submissions to select up to four provisional finalists. The decisions will be conveyed to authors by 14 February 2019.
- The provisional finalists will at this point be required **within two weeks** to upload their papers formally on to the JMCD A on-line submission system. (Instructions will be given at that time). The papers will then be subject to a full review according to the standard procedures of the journal.
- Based on the full reviews of the papers received by the journal, the finalists will be confirmed by 30 April, and their papers scheduled into a special session at the conference.
- The final decision of the practice prize jury (taking into account reviews of the written papers as well as the oral presentation) will be announced at the conference banquet, on 20 June 2019.

The prize winning paper is ensured publication in the journal, although minor revisions may still be requested. Decisions on the others will be subject to reviewers' comments, and may require revisions as a condition for publication. The intention is to group all of these papers into a single issue of the journal if at all possible.

*Theo Stewart*

#### **1.4 Call for Applications for the International MCDM Doctoral Dissertation Award 2019**

At the 25th International Conference on Multiple Criteria Decision Making (MCDM), the International Society on Multiple Criteria Decision Making will bestow the MCDM Doctoral Dissertation Award upon a scholar who has recently obtained a **doctoral degree** and demonstrated excellence in her or his doctoral dissertation research in Multiple Criteria Decision Making or a related field. The MCDM Doctoral Dissertation Competition identifies and recognizes outstanding doctoral dissertation research, completed on **January 1, 2017 or later**, in the development of theory, methodology, and/or the application of theory or methodology to MCDM.

The MCDM Doctoral Dissertation Award Committee will evaluate the applications, identify finalists, and choose the winner. The award will be announced at the 25th International Conference on Multiple Criteria Decision Making, Istanbul, Turkey, June 16 to June 21, 2019. Each finalist is required to give a talk at the conference. The finalists' conference fees will be waived.

**Deadline for applications:** Please email the zip file of the application packet to the awards committee at [phdaward@mcdmsociety.org](mailto:phdaward@mcdmsociety.org) by **February 15, 2019**. The finalists will be selected and all applicants will be informed about the results of their applications by April 1, 2019.

**Eligibility:** Those whose dissertations are in MCDM or a related field and who graduated with a doctoral degree on or after January 1, 2017. Only dissertations that are in English are eligible.

**Application (documents):** The application packet should include the following documents (all of which must be in English, except possibly the diploma):

1. Cover letter.
2. Applicant's CV, not exceeding 3 pages.
3. Scanned copy of the original diploma of the Doctoral Degree.
4. Electronic copy of the Doctoral Dissertation.
5. Extended Abstract of the Doctoral Dissertation in English, not exceeding four single-spaced pages.
6. Copies of publications/patents based on the Doctoral Dissertation, if any. Manuscripts accepted for publication in journals that are accompanied with the Editors' acceptance letter can also be submitted. These publications should be accompanied by a statement from the supervisor confirming that they are extracted from the dissertation.
7. An endorsement letter from the supervisor(s), highlighting the significance of the dissertation.
8. (Optional) Additional supporting letters that the applicant wishes to attach.

*José Rui Figueira*

Chair of the International MCDM Doctoral Dissertation Committee

Email: [figueira@tecnico.ulisboa.pt](mailto:figueira@tecnico.ulisboa.pt)

## **1.5 Report of EURO PhD Summer School on MCDA/M 2018**

### **EURO PhD Summer School on MCDA/M 2018**

23 July – 3 August 2018

Chania, Greece

The 13<sup>th</sup> MCDA/M Summer School was held in Chania, Greece from July 23 to August 4, 2018. This edition of the Summer School continued the tradition of the previous 12 events organized by the International MCDM Society and the EURO Working Group on Multicriteria Decision Aiding. The first event was organized in 1983, in Catania-Italy by Benedetto Matarazzo and the latest edition was organized in 2016 in Recife-Brazil, by Danielle Costa Morais and Luciana Hazin Alencar.

The event of this year was further supported by the Association of European Operational Research Societies (EURO), thus being organized as the 2018 EURO PhD Summer School on MCDA/M.

The Summer School was organized by the Technical University of Crete in cooperation with the Mediterranean Agronomic Institute of Chania (MAICh) and was held at the Conference Center of MAICh. The Summer School was co-chaired by Constantin Zopounidis and Michalis Doumpos (Technical University of Crete, Greece).

The MCDA/M Summer Schools provide participants with a unique opportunity to get a comprehensive and in-depth view of the state-of-the-art in MCDA/M approaches and methodologies, their applications in various areas, the relevant software decision support tools, and the interconnections of MCDA/M with other closely related theoretical and applied disciplines from OR/MS, computer science, engineering, and social sciences. Moreover, the Summer Schools provide a forum through which PhD students exchange knowledge, ideas and experiences, discuss open problems, obtain feedback from leading scholars in MCDA/M, and build fruitful collaborations, which strengthen the MCDA/M community and support its future progress.

Building on this philosophy, the 13<sup>th</sup> Summer School provided a detailed coverage of all established and emerging areas in MCDA/M, the new theoretical developments, software tools, and application areas.

In accordance with previous summer schools on MCDA/M, a target of approximately 50 participants was set. Ultimately, 52 students from 18 countries were chosen by the Organizing Committee out of 62 candidates who submitted their application by the given deadline. Approximately 15 more participants showed late interest in attending the EPS-MCDA/M, but these cases were not considered, because all positions have already been filled. Following the guidelines of EURO, only applications by PhD students were considered, with priority given to applicants from EURO member society countries. In the final selection, 46 out of the 52 candidates were from EURO member society countries. The remaining participants were from Brazil, Canada, and Mexico. All participants received a certificate of completion stating the ECTS credits accomplished.

The academic program of the school consisted of a combination of theoretical classes and case work. The theoretical lectures covered all the main theoretical advances in MCDA/M and their applications. Overall, the program included 26 theoretical lectures for a total of 39 hours (90 minutes each lecture). The lectures were delivered by well-known scholars in the field:

- Adiel Teixeira de Almeida (Universidade Federal de Pernambuco, Brazil)
- Michalis Doumpos (Technical University of Crete, Greece)
- Matthias Ehr Gott (Lancaster University, UK)
- Jose Figueira (Technical University of Lisbon, Portugal)
- Salvatore Greco (University of Catania, Italy & University of Portsmouth, UK)
- Evangelos Grigoroudis (Technical University of Crete, Greece)
- Miłosz Kadziński (Poznan University of Technology, Poland)
- Murat Köksalan (Middle East Technical University, Turkey)
- Kaisa Miettinen (University of Jyväskylä, Finland)
- Yannis Siskos (University of Piraeus, Greece)
- Eleftherios Siskos (National Technical University of Athens, Greece)
- Roman Słowiński, Poznan University of Technology, Poland
- Alexis Tsoukias (Université Paris Dauphine, France)
- Jyrki Wallenius (Aalto University, Finland)



The topics covered in the academic program included decision modeling, multi-attribute utility/value theory, interactive methods, outranking approaches, rule-based methods, UTA methods, group decision making, MCDA software, robustness analysis, robust ordinal regression, multi-objective combinatorial optimization, nonlinear multi-objective optimization, behavioral aspects, as well as applications in customer satisfaction and finance. The full program of the Summer School is available at <http://www.mcda-school18.tuc.gr/program.htm>

All lectures were thought-provoking, attractively presented, well-attended and highly appreciated by the students, who had an active participation in the lectures and interacted with the instructors.

In addition to the theoretical classes, the program also included a lecture by the President of the International MCDM Society, Murat Köksalan, that introduced the students to the MCDA/M community and its activities, as well as a lecture that provided the students with valuable information about the preparation of research publications, which is important for PhD students who are at their first steps of their research career. The lecture was given by Roman Słowiński, the coordinating Editor-in-Chief of EJOR.

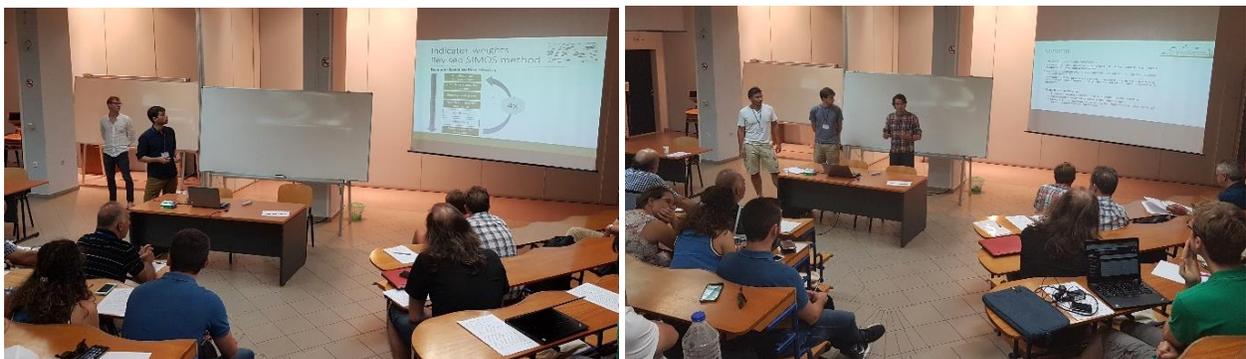
Most of the afternoon sessions focused on case work. A case study was prepared involving the multicriteria evaluation of the sustainability of cities. The case project was introduced to the students in the first day of the school by Evangelos Grigoroudis and Michalis Doumpos, who also acted as tutors for the students' work on the case study.

Students were organized into 7 groups. The groups were formed considering the background and research interests of the students, with emphasis given to form diversified groups and promote the exchange of different ideas and knowledge among students.



The groups applied different MCDA/M methodologies. Throughout the two weeks of the Summer School, the program included case work sessions (9 sessions), during which the student groups worked independently. The tutors and the instructors were also present and provided constructive feedback to the students and responded to questions regarding the handling of the case project and the application of MCDA/M methodologies.

On the last day of the Summer School each student group provided an open presentation of their work. The presentations were all high quality, reflecting the enthusiastic and hard work devoted by the students during the two weeks of the Summer School. The presentations and the results of the groups were evaluated by the Organizing Committee, who also provided constructive feedback and suggestions for future research. Moreover, three student groups received a special acknowledgment for the quality of their case project work.



Besides the academic program, a social program was included to strengthen ties between the participants to establish a future network. The events organized during the Summer School included a social dinner and an excursion.

The social dinner was held on the evening of Saturday 28<sup>th</sup> at the Mediterranean Agronomic Institute of Chania, whereas the excursion was organized on the afternoon of August 1<sup>st</sup>. The excursion included a visit at Venizelos Tombs (Eleftherios Venizelos, 1864-1936, was one of the most prominent Greek politicians who served seven times Prime Minister of Greece) and the traditional village of Stavros, a popular destination in Chania, known for its amazing beach where the scene with Anthony Quinn dancing Greek sirtaki was filmed for the well-known movie “Zorba the Greek”.



Overall, we feel that the 2018 EURO PhD Summer School on MCDA/M has succeeded its goals, bringing together young researchers who demonstrated an enthusiastic interest in MCDA/M and will contribute in promoting and advancing the field in the upcoming years. The academic and social program were highly appreciated by all participants (students and instructors), who also had free time to explore the beauties of Chania and the surrounding area.

The successful organization of such a challenging event would not have been possible without the support from the staff of the Conference Center of MAICH. Special thanks go to EURO for its generous support and the International MCDM Society for providing financial support to students from developing countries. Moreover, we should express our sincere gratitude to Evangelos Grigoroudis and Yannis Siskos for their active involvement as tutors for the case project as well as to all instructors who accepted to provide lectures at the Summer School and played a crucial role to the success of the academic program.

We are looking forward to seeing you all again next year, at the 25<sup>th</sup> International Conference on Multiple Criteria Decision Making, in Istanbul, Turkey!

*Constantin Zopounidis, Michalis Doumpos*

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

### 2.1 A note from the MCDM Section of INFORMS

The 2018 INFORMS Annual Meeting is coming soon. It will take place 4-7 November, 2018 in Phoenix, AZ, and will provide an opportunity to bring together leading academics, industry experts, students, INFORMS members, and representatives of government agencies. Attendees can look forward to an exciting conference with an expected number of 5,000+ attendees and 80+ tracks filling all time slots.

The MCDM Cluster will maintain the strong presence it has established at the recent INFORMS annual meetings. The Cluster will feature 16 sessions with 66 talks which will also fill the entire conference from Sunday early morning through Wednesday late afternoon. This year, the program includes an award session for the first time in which the three finalists for the Junior Researcher Best Paper award will present their work. The award jury will then carry out its final deliberations and announce the winner during the business meeting. This year's program also includes a tutorial on behavioral challenges in policy analysis with conflicting objectives offered by Gilberto Montibeller.

For more information on the conference, please visit

<http://meetings2.informs.org/wordpress/phoenix2018/>

The presenters include many members of the MCDM Society. I invite all other members of the Society to attend the conference which provides an excellent opportunity to widen their research networks. I look forward to seeing many of you in Phoenix.

Sincerely,

*Serpil Sayin*

President  
MCDM Section  
INFORMS

## 2.2 Evolutionary Multi- Criterion Optimization (EMO) 2019

### **Paper Submission Deadline: 24 September 2018 (11:59pm HAST)**

EMO 2019 is the 10th Edition of International Conference Series on Evolutionary Multi- Criterion Optimization (EMO), aiming to continue the success of previous EMO conferences. We will bring together both the EMO, multiple criteria decision-making (MCDM) communities, and other related fields and, moreover, focus on solving real-world problems in government, business and industry. Michigan is the birthplace of genetic algorithms research and EMO 2019 will plan on celebrating past 50 years of research and development in evolutionary computation and 10th edition of EMO conference series.

Following the tradition of the EMO community, the conference will be in single session format, with papers provided as either oral or as poster presentations. The conference format will include:

- Keynote speeches
- Tutorial presentations
- EMO track deliberations
- MCDM track deliberations
- Industry track deliberations

The conference will take place at Michigan State University's Kellogg Hotel and Conference center at East Lansing in Michigan, USA.

We aim to discuss all aspects of EMO development and deployment, including (but not limited to):

- EMO for handling of continuous, combinatorial and/or mixed-integer problems
- Constraint handling approaches
- Uncertainty and noise handling approaches
- Many-objective optimization
- Theoretical foundations
- Preference handling techniques
- Performance evaluation and metrics
- Multiobjectivization
- Local search techniques
- Hybrid approaches
  - Point and population-based hybrids
  - EMO and MCDM hybrids
- Stopping criteria
- Parallel EMO models and implementations
- Test functions and benchmark problems
- Algorithm selection approaches
- Comparative studies
- Metamodeling methods in EMO
- EMO in Bilevel and generic hierarchical optimization
- Knowledge-driven EMO
- Large-scale optimization
- Real-world applications
- EMO algorithm implementation

Springer will publish the EMO-2019 proceedings under LNCS Series. Full papers with a maximum of 12 LNCS style pages will be published. No distinction on Poster and Oral papers in terms of page length and quality will be made.

Springer has kindly instituted two Awards with award money: One **Best Paper Award** and one **Best Student Paper Award**.

**Sessions Planned:**

- Keynotes
- Tutorials
- EMO Sessions
- MCDM Sessions
- Industry Sessions
- Industry Booths for Software/Application Demonstration
- Poster Session
- Panel Session (to be finalized)

More information on [www.emo2019.org](http://www.emo2019.org).

### 3 New Books/Publications

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

#### 3.1 Books, book chapter, special issues

H. Bansal, P. Shukla, M. Dhar, **Trust and Credibility Analysis of Websites: Role of trust and credibility in evaluating online content**, in *Social Network Analytics for Contemporary Business Organizations*, H Bansal, G Shrivastava, G Nguyen, L-M Stanciu, IGI Global, Chapter 13, 259-286, 2018.

Y. Jin, K. Miettinen, H. Ishibuchi (Guest Editors), **Special Issue on Evolutionary Many-Objective Optimization**, *IEEE Transactions on Evolutionary Computation*, 22(1), 2018.

J. Krejčí, **Pairwise Comparison Matrices and their Fuzzy Extension: Multi-criteria Decision Making with a New Fuzzy Approach**, in *Series Studies in Fuzziness and Soft Computing*, 366, Springer, 2018.

B.O. Saracoglu, **Analytic Network Process vs. Benjamin Franklin's Rule to Select Private Small Hydropower Plants Investments**, *MedCrave Group LLC*, 2018.

#### 3.2 Journal papers

F. Abastante, S. Corrente, S. Greco, A. Ishizaka, I. Lami, **Choice architecture for architecture choices: evaluating social housing initiatives putting together a parsimonious AHP methodology and the Choquet integral**, *Land Use Policy*, 78:748-762, 2018.

H. Alabool, A. Kamil, N. Arshad, D. Alarabiat, **Cloud service evaluation method-based multi-criteria decision-making: A systematic literature review**, *Journal of Systems and Software*, 139:161-88, 2018.

D. Baatar, M. Ehrgott, H.W. Hamacher, I.M Raschendorfer, **Minimizing the number of apertures in multileaf collimator sequencing with field splitting**, *Discrete Applied Mathematics*, in press, 2018.

K. Belahcène, C. Labreuche, N. Maudet, V. Mousseau, W. Ouerdane. **An efficient SAT formulation for learning multiple criteria non-compensatory sorting rules from examples**, *Computers & OR*, 97:58-71, 2018.

T. Chugh, K. Sindhya, J. Hakanen, K. Miettinen, **A Survey on Handling Computationally Expensive Multiobjective Optimization Problems with Evolutionary Algorithms**, *Soft Computing*, to appear.

T. Chugh, Y. Jin, K. Miettinen, J. Hakanen, K. Sindhya, **A Surrogate-Assisted Reference Vector Guided Evolutionary Algorithm for Computationally Expensive Many-Objective Optimization**, *IEEE Transactions on Evolutionary Computation*, 22(1):129-142, 2018.

- A.S. Costa, J.R. Figueira, J. Borbinha, **A Multiple criteria nominal classification method based on the concepts of similarity and dissimilarity**, *European Journal of Operational Research*, 271(1):193–209, 2018.
- A. De Boni, R. Roma, G. Ottomano Palmisano, **Fishery Policy in the European Union: A Multiple Criteria approach for assessing sustainable management of Coastal Development Plans in Southern Italy**, *Ocean and Coastal Management*, 163:11-21, 2018.
- M. Ehrgott, A. Holder, O. Nohadani, **Uncertain data envelopment analysis**, *European Journal of Operational Research*, 268(1):231-242, 2018.
- K. Eyvindson, M. Hartikainen, K. Miettinen, A. Kangas, **Integrating Risk Management Tools for Regional Forest Planning: An Interactive Multiobjective Value at Risk Approach**, *Canadian Journal of Forest Research*, 48(7):766-773, 2018.
- V. Ferretti, J. Liu, V. Mousseau, W. Ouerdane, **Reference-based ranking procedure for environmental decision making: Insights from an ex-post analysis**, *Environmental Modelling & Software*, 99:11-24, 2018.
- S. Gafar, **Decision support top software products: A review**, *Engineering and Technology Journal*, 3:416-20, 2018.
- S. Greco, A. Ishizaka, B. Matarazzo, G. Torrisi, **Stochastic Multiattribute Acceptability Analysis: an application to the ranking of Italian regions**, *Regional Studies*, 52(4):585-600, 2018.
- C.O. Henriques, M. Luque, O.D. Marcenaro-Gutierrez, L.A. Lopez-Agudo, **A multiobjective interval programming model to explore the trade-offs among different aspects of job satisfaction under different scenarios**, *Socio-Economic Planning Sciences*, in press, 2018.
- A. Ishizaka, F. Lolli, E. Balugani, R. Cavallieri, R. Gamberini, **DEASort: assigning items with Data Envelopment Analysis in ABC classes**, *International Journal of Production Economics*, 199:7-15, 2018.
- A. Ishizaka, S. Siraj, **Are multi-criteria decision-making tools useful? An experimental comparative study of three methods**, *European Journal of Operational Research*, 264(2):462-471, 2018.
- P. Juszczuk, I. Kaliszewski, J. Miroforidis, **Trade-off guided search for approximate Pareto optimal portfolios**, *Multiple Criteria Decision Making*, 12:100-110, 2017.
- I. Kaliszewski, J. Miroforidis, **On upper approximations of Pareto fronts**, *Journal of Global Optimization*, 2018.
- G. Karakaya, M. Koksalan, **Interactive approaches for biobjective problems with progressively changing solution sets**, *International Transactions in Operational Research*, 2018.

- G. Karakaya, M. Koksalan, S.D. Ahipasaoglu, **Interactive algorithms for a broad underlying family of preference functions**, *European Journal of Operational Research*, 265(1):248-262, 2018.
- O. Khaled, M. Minoux, V. Mousseau, S. Michel, X. Ceugniet, **A compact optimization model for the tail assignment problem**, *European Journal of Operational Research*, 264(2):548-557, 2018.
- O. Khaled, M. Minoux, V. Mousseau, S. Michel, X. Ceugniet, **A multi-criteria repair/recovery framework for the tail assignment problem in airlines**, *Journal of Air Transport Management*, 68:137-151, 2018.
- J. Krejčí, A. Ishizaka, **FAHPSort: A fuzzy extension of the AHPSort method**, *International Journal of Information Technology and Decision Making*, 17(4):1119-1145, 2018.
- J. Krejčí, J. Stoklasa, **Aggregation in the Analytic Hierarchy Process: Why weighted geometric mean should be used instead of weighted arithmetic mean**, *Expert Systems with Applications* 114:97-106, 2018.
- P. Kunsch, A. Ishizaka, **Multiple-criteria performance ranking based on profile distributions: An application to university research evaluations**, *Mathematics and Computers in Simulation*, 154:48-64, 2018.
- S. Lauth Gadegaard, L. Relund Nielsen, M. Ehrgott, **Bi-objective branch-and-cut algorithms based on LP relaxation and bound sets**, *INFORMS Journal on Computing*, accepted, 2018.
- Z. Liu, M. Ehrgott, **Primal and dual algorithms for optimization over the efficient set**, *Optimization*, 2018.
- C. López, A. Ishizaka, **A scenario-based modelling method for optimising ECM usage**, *Expert Systems with Applications*, 97(1):253-265, 2018.
- D.M. Martin, M. Mazzotta, **Non-monetary valuation using Multi-Criteria Decision Analysis: Using a strength-of-evidence approach to inform choices among alternatives**, *Ecosystem Services*, in press, 2018.
- V. Mousseau, Ö. Özpeynirci, S. Özpeynirci, **Inverse multiple criteria sorting problem**, *Annals of OR*, 267(1-2):379-412, 2018.
- A.J. Nebro, A.B. Ruiz, C. Barba-González, J.M. García-Nieto, M. Luque, J.F. Aldana-Montes, **InDM2: Interactive Dynamic Multi-Objective Decision Making using evolutionary algorithms**, *Swarm and Evolutionary Computation*, 40:184-195, 2018.
- W. Ogryczak, T. Śliwiński, J. Hurkaa, M. Kaleta, P. Pałka, B. Kozłowski, **Large-scale periodic routing problems for supporting planning of mobile personnel tasks**, *Advances in Intelligent Systems and Computing*, 559:205-216, 2018.
- M. Ozmen, G. Karakaya, M. Koksalan, **Interactive evolutionary approaches to multi-objective feature selection**, *International Transactions in Operational Research*, 25:1027-1052, 2018.

Ö. Özpeynirci, S. Özpeynirci, V. Mousseau, **An interactive algorithm for multiple criteria constrained sorting problem**, *Annals of OR*, 267(1-2):447-466, 2018.

J. Pryce, T. Nguyen, M. Axford, G. Nieuwhof, M. Shaffer, **Symposium review: Building a better cow – The Australian experience and future perspectives**, *Journal of Dairy Science*, 101:3702-3713, 2018.

M. Ragot, M. Bonierbale, E. Weltzien, **From market demand to breeding decisions: A framework**, *CGIAR Gender and Breeding Initiative Working Paper 2*, 2018.

L. Rider, R. Aggarwal, P. Machado, J. Hogrel, A. Reed, L. Christopher-Stine, N. Rupert, **Update on outcome assessment in myositis**, *Nature Reviews Rheumatology*, 14:303-318, 2018.

S. Shahinur, A.M.M.S. Ullah, M. Noor-e-Alam, H. Haniu, A. Kubo, **A decision model for making decisions under epistemic uncertainty and its application to select materials**, *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 31(3):297-311, 2017.

O. Sobrie, N. Gillis, V. Mousseau, M. Pirlot, **UTA-poly and UTA-splines: additive value functions with polynomial marginals**, *European Journal of Operational Research*, 264(2):405-418, 2018.

M. Tabatabaei, M. Hartikainen, K. Sindhya, J. Hakanen, K. Miettinen, **An Interactive Surrogate-based Method for Computationally Expensive Multiobjective Optimization**, *Journal of the Operational Research Society*, to appear.

A.M.M.S. Ullah, N.-E. M. Alam, **Big data driven graphical information based fuzzy multi criteria decision making**, *Applied Soft Computing*, 63(2):23-38, 2018.

S. Validi, A. Bhattacharya, P. Byrne, **Sustainable distribution system design: a two-phase DoE-guided meta-heuristic solution approach for a three-echelon bi-objective AHP-integrated location-routing model**, *Annals of Operations Research*, In Press, 2018.

F. Vergara-Solana, M. Araneda, G. Ponce-Díaz, **Opportunities for strengthening aquaculture industry through multicriteria decision-making**, *Reviews in Aquaculture*, early online version, 2018.

J.Y.T. Wang, K.N. Dirks, M. Ehr Gott, J. Perace, A.K.L. Cheung, **Supporting healthy route choice for commuter cyclists: The trade-off between travel time and pollutant dose**, *Operations Research for Health Care*, in press, 2018.

Y. Xu, L. Zhang, C.-H. Yeh, Y. Liu, **Evaluating WEEE recycling innovation strategies with interacting sustainability-related criteria**, *Journal of Cleaner Production*, 190:618-629, 2018.

G. Zalewski, W. Ogryczak, **Network dimensioning with minimum unfairness cost for the efficiency**, *Advances in Intelligent Systems and Computing*, 559:217–229, 2018.

Y. Zhou-Kangas, K. Miettinen, K. Sindhya, **Solving Multiobjective Optimization Problems with Decision Uncertainty: An Interactive Approach**, *Journal of Business Economics*, to appear.

### 3.3 Conference proceedings

C. Barba-Gonzalez, V. Ojalehto, J. Garcia-Nieto, A.J. Nebro, K. Miettinen, J.F. Aldana-Montes, **Artificial Decision Maker Driven by PSO: An Approach for Testing Reference Point based Interactive Methods**, *15th International Conference on Parallel Problem Solving from Nature*, 2018.

K. Belahcène, C. Labreuche, N. Maudet, V. Mousseau, W. Ouerdane, Y. Chevaleyre. **Accountable approval sorting**, *27th International Joint Conference on Artificial Intelligence (IJCAI 2018)*, 2018.

T. Chugh, R. Allmendinger, V. Ojalehto, K. Miettinen, **Surrogate-assisted Evolutionary Biobjective Optimization for Objectives with Non-uniform Latencies**, *Genetic and Evolutionary Computation Conference (GECCO-2018)*, 609-616, 2018.

S. Gonzalez-Gallardo, R. Saborido, A.B. Ruiz, M. Luque, **An Improvement Study of the Decomposition-based Algorithm Global WASF-GA for Evolutionary Multiobjective Optimization**, *XVIII Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA 2018)*, Lecture Notes in Artificial Intelligence, in press. 2018.

I. Kaliszewski, J. Miroforidis, D. Podkopaev, **Multiple Criteria Decision Making and Multiobjective Optimization - A Toolbox**, in *Uncertainty and Imprecision in Decision Making and Decision Support: Cross-Fertilization, New Models and Applications, selected papers from BOS 2016 and IWIFSGN 2016*, 559:135-142, 2018.

Y. Zhou-Kangas, K. Miettinen, **A Simple Indicator based Evolutionary Algorithm for Set-based Minmax Robustness**, *15th International Conference on Parallel Problem Solving from Nature*, 2018.

Y. Zhou-Kangas, K. Miettinen, K. Sindhya, **Interactive Multiobjective Robust Optimization with NIMBUS**, *First International Workshop SimScience 2017*, 2018.

## 4 Past Conferences, Workshops, and other News

### 4.1 Report on the Sixth Dagstuhl Seminar on “Multiobjective Optimization”

The sixth Dagstuhl seminar on Multiobjective Optimization, organized this time by Kathrin Klamroth (Universität Wuppertal, DE), Joshua Knowles (Manchester University, UK), Günter Rudolph (TU Dortmund, DE), and Margaret M. Wiecek (Clemson University, USA) took place from January 14 to 19, 2018, at Schloss Dagstuhl (Wadern, Germany). The seminar, titled “Personalization in Multiobjective Optimization: An Analytics Perspective”, gathered 44 international academic researchers and industry representatives from the fields of Multiple Criteria Decision Making (MCDM) and Evolutionary Multiobjective Optimization (EMO).

Fourteen topical presentations were complemented by discussions in five working groups, crosslinking application challenges such as platform design and product lines, responsive and online personalization, and complex networks of decision makers, with research domains including model building, preference modelling, and algorithm design and efficiency. Specific topics included “Preference uncertainty quantification”, “Personalization and customization of decision support”, “Invariant rule extraction”, “Complex networks and MCDA”, and “Metamodelling for interactive optimization”. Two of the working groups split into subgroups during the seminar in order to focus more strongly on different aspects of the topics considered. They rejoined later to consolidate their findings.

On Wednesday afternoon, the seminar photograph was taken on the steps up to the little chapel of the castle. Taking benefit from a short break in the rainy weather, a group of researchers left right afterwards for a traditional hike exploring the surroundings of the Dagstuhl castle.

On Thursday evening, all researchers had the pleasure to participate in a Wine and Cheese party held in the music room of the castle. Thanks to several excellent musicians among the seminar participants, the event was accompanied by live music and singing, including the already traditional MCDM song that was composed during one of the earlier editions of the seminar series. The event was kindly supported by the ITWM Kaiserslautern.



In a closing session on Friday morning, all working groups presented their results. The seminar initiated several new research directions, and several working groups plan to submit extended versions of their reports to the special issue on “Personalization in Multiobjective Optimization: An Analytics Perspective” of the Journal of Multicriteria Decision Analysis, edited by Theo Stewart (submission deadline was July 31, 2018). The seminar concluded with an intensive discussion of future research challenges that could qualify as a topic for a next edition of this seminar series, which will be planned for 2020 or 2021. Carlos Fonseca (University of Coimbra, Portugal) will replace Joshua Knowles on the team of organizers who steps down after co-organizing three consecutive editions of this series.

*Kathrin Klamroth, Joshua Knowles, Günter Rudolph and Margaret M. Wiecek*

## 5 Imprints

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We are working on publishing the newsletter of the International Society on Multiple Criteria Decision Making two times a year. Usually, the deadline for the January issue is January 10<sup>th</sup> and the issue is intended to be published “around January 20<sup>th</sup>.” The deadline for the September issue is usually 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).