

International Society on Multiple Criteria Decision Making

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Letter from the President

Dear Members of the International Society on Multiple Criteria Decision Making,

Warm greetings to you all after an exceptionally warm and sunny summer in Jyväskylä!

The main event of our society, the International Conference on Multiple Criteria Decision Making is approaching. As you may already know, the 23rd conference in this series, the **MCDM2015** conference, will be organized in **Hamburg, Germany, on August 3-7, 2015**. The theme of the conference is Bridging Disciplines and hopefully we shall have a memorable and fruitful conference demonstrating collaboration among different disciplines, new developments and real applications. The Conference Chair, Professor Martin Josef Geiger, has kindly invited me to chair the program committee.

In this newsletter you can find a **call for session proposals** of the MCDM2015 conference with the deadline on **November 30, 2014**. The abstract submission system is already open and the abstract submission deadline is **February 27, 2015**. Further information is available at the recently renewed website <http://www2.hsu-hh.de/logistik/MCDM-2015/>. I hope that you all will very actively spread information about this conference to all potential participants who are interested in the methods, theory, new developments and/or applications of MCDM and I look forward to seeing many of you in Hamburg!

A new award was introduced in the program of our international conferences in 2011: the **MCDM Doctoral Dissertation Award**. The deadline for submitting applications to be considered for the MCDM2015 conference is **March 1, 2015**. The **call for applications** is in this newsletter. The finalists will present their research at the conference in Hamburg and the award will be presented in the banquet together with the other awards of the Society.

The **MCDA/MCDM Summer School** is organized every three years and the deadline for submitting proposals to organize the next summer school in 2016 is **September 30, 2014**. For further information, read the **call for proposals** in this newsletter.

The deadline for submitting papers to the **8th International Conference on Evolutionary Multi-Criterion Optimization** (<http://www.dep.uminho.pt/EMO2015/>) has been extended till September 30, 2014. The conference will take place in Guimarães, Portugal. Submissions are welcome in three tracks: core EMO, MCDM and real-world applications tracks. The **revised call for papers** and further **information about the MCDM track** are included in this newsletter.

If you are interested in attending the **22nd International Symposium on Mathematical Programming** (ISMP) in Pittsburgh, PA, USA, on July 12-17, 2015, a **call for sessions** in the cluster devoted to multi-objective optimization can be found in this newsletter. The session (of three talks) may be devoted to any aspect of multi-objective optimization, including theory, methods and challenges of applications. The conference website is <http://www.ismp2015.org/>. At the same time with the ISMP 2015 conference, the **EURO 2015 conference** will be organized in Glasgow, Scotland. For more information, see <http://www.euro2015.org/>.

One of the biggest conferences this summer was the 20th Conference of the International Federation of Operational Research Societies (**IFORS 2015**) in Barcelona, Spain, in July. In the

report which can be found in this newsletter one can see that there were a total of 34 sessions (each consisting of four talks) in MCDM related streams and in addition to these 134 talks, MCDM talks were also among the contributed talks. It is great that MCDM was so strongly present.

Again, we have lost one member of the MCDM community: Professor Professor Enrique Balletero has passed away. In this newsletter, you can find an obituary written by Professor Carlos Romero.

This newsletter also included information about recent publications and the Metaheuristic Optimization Group which operates in several countries. In addition, congratulations are in order to Prof. Constantin Zopounidis for becoming an Academician of the Royal Academy of Doctors in Spain. For more information on this, keep on reading this newsletter.

I warmly thank the active editorial team for preparing this newsletter and all those who provided material! I also remind you, dear readers, that your **feedback and contributions to the upcoming newsletters are most welcome!**

Remember that the officers of our Society can easily be contacted at the following email addresses:

Remember that the officers of our Society can easily be contacted at the following email addresses:

president (at) mcdmsociety.org,

president-elect (at)mcdmsociety.org,

secretary (at) mcdmsociety.org,

mcdm-award (at) mcdmsociety.org

phdaward (at) mcdmsociety.org and

newsletter (at) mcdmsociety.org.

Kaisa Miettinen

President of the International Society on MCDM

President (at) mcdmsociety.org

Professor and Vice-rector, University of Jyväskylä, Finland

P.S. It is important that you **keep your contact information up to date** at <http://mcdmsociety.org/members/>. Enter your email address and password to modify your data. If you have forgotten your password, please, click the "Forgot your password" link, type in your email address and you will receive instructions by email. If you face any problems in updating your data, e.g. your email address has changed, please, contact the Secretary of the Society at secretary (at) mcdmsociety.org.

1 Society News

1.1 Call for session proposals: 23rd International Conference on Multiple Criteria Decision Making (MCDM 2015)



23rd International Conference on Multiple Criteria Decision Making (MCDM 2015)

– Call for session proposals –



Dear friends and colleagues,

yet another warm *Moin* from Hamburg!

I cordially invite you to contribute and participate in to the upcoming 23rd International Conference on Multiple Criteria Decision Making.

The submission of *abstracts* is, technically, open already. The submission page can be found under <https://easychair.org/conferences/?conf=mcdm2015>. Note that the deadline for submitting talks/ abstracts is February 27th, 2015, so there is still plenty of time to contribute.

At this point, we first would like to invite you to submit *proposals for invited sessions* by the end of November 2014. When contributing with a proposal for an invited session, please send an email to MCDM2015@hsu-hh.de, (1) mention the title of the prospective invited session, (2) state the names of the session organizers, and (3) give a short description of the content covered in invited session.

In the past weeks, we have made an effort building a website for the conference. It can be found (and will remain) under:

<http://logistik.hsu-hh.de/MCDM-2015>

Please bookmark this page, and come back once in a while, checking for news, updates, and recent developments.

In the meantime, I remain, sincerely yours,

Martin Josef Geiger

1.2 Call for Proposals to Organize the MCDA/MCDM Summer School in 2016

International Summer Schools on MCDA/MCDM spread out knowledge of multicriteria decision aiding (MCDA) and multiple criteria decision making (MCDM) (including methods, theory, applications and software) among researchers and practitioners of future generations. The Summer Schools, organized every three years, are joint events of the International Society on Multiple Criteria Decision Making (<http://www.mcdmsociety.org>) and EURO Working Group on Multicriteria Decision Aiding (<http://www.cs.put.poznan.pl/ewgmca>).



We **welcome proposals** to host and organize the next MCDA/MCDM Summer School in 2016.

While preparing the proposal, please, pay careful attention to the *Guide for Organizers of MCDA/MCDM Summer Schools* and make sure that you are prepared to follow it. The Guide can be found at http://mcdmsociety.org/conf.html#Guide_School.

The Organizer of the Summer School is responsible for the finances of the summer school and is expected to lead the organization and to disseminate widely information as directed and helped by the Co-ordinating Committee (introduced in the Guide). The current members are Profs Jose Figueira (figueira@ist.utl.pt), Martin Josef Geiger (m.j.geiger@hsu-hh.de), Salvatore Greco (salgreco@unict.it), Murat Köksalan (president-elect@mcdmsociety.org), Kaisa Miettinen (president@mcdmsociety.org), Francisco Ruiz (secretary@mcdmsociety.org) and Roman Slowinski (roman.slowinski@cs.put.poznan.pl).

The proposal should contain at least the following information:

1. Name of Organizer(s) with address, email and telephone
2. Contact email address (if other than the one above)
3. Venue and host institution of the Summer School
4. Tentative dates of the Summer School
5. Support from host institution and from other organizations (if available or whether can be applied, e.g. financial or other type, please, specify details)
6. Possible assistance available (estimate of the number of staff members and students to be involved in local organization)
7. Estimated participation fee (including accommodation, lunches, coffees, material given to the participants). Indicate also maximum participation fee which will not be exceeded
8. Information about how the Summer School venue can be reached from e.g. main airports
9. Proximity of accommodation to the Summer School venue
10. Information whether some of the instructions in the Guide cannot be followed (with explanation why so)

11. Any past experience in organizing summer schools or international conferences and collecting financial support for them (in the proposed venue or elsewhere, give names, dates and further information)

The Co-ordinating Committee will make the decision in the autumn 2014. It is possible that the decision of the organizer of the subsequent Summer School will be made as well, so, please mention in your proposal whether you are interested in organizing the summer school in 2019.

Send your proposal by email to the President of the International Society on MCDM, Prof. Kaisa Miettinen, at president@mcdmsociety.org by **September 30, 2014**. You may contact any member of the Co-ordinating Committee for further information.

1.3 International MCDM Doctoral Dissertation Competition

At the 23rd International Conference on Multiple Criteria Decision Making, 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 (MCDM) or a related field. The MCDM Doctoral Dissertation Competition identifies and recognizes outstanding doctoral dissertation research, completed since the beginning of 2013, 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 provide recommendations to the MCDM Executive Committee for the final decision. The award will be announced at the 23rd International Conference on Multiple Criteria Decision Making, Hamburg, Germany, August 3-7th, 2015. The finalists are expected to give a talk at the conference. The finalists will be exempt from paying the conference fee.

Deadline for applications: Please email the zip file of the application packet to the awards committee at phdaward@mcdmsociety.org by **March 1st, 2015**. The finalists will be informed by June 1st, 2015.

Eligibility: Those whose dissertation is in MCDM or a related field and who graduated with a doctoral degree after January 1st, 2013. Only dissertations which have been written in English are eligible.

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

- Cover letter
- Applicant's 2-3 page resume
- Scanned copy of the original diploma of the Doctoral Degree
- Electronic copy of the Doctoral Dissertation
- Extended Abstract of the Doctoral Dissertation in English, limit of four single-spaced pages
- Copies of publications/patents based on the Doctoral Dissertation, if any. In this case, we need a statement from the supervisor saying that the publication(s) derive from the dissertation. Also include publications accepted for a journal, accompanied with the Editor's acceptance letter.
- An endorsement letter from the supervisor(s), highlighting the significance of the dissertation
- (Optional) Additional supporting letters that the applicant wishes to attach

International MCDM Doctoral Dissertation Committee

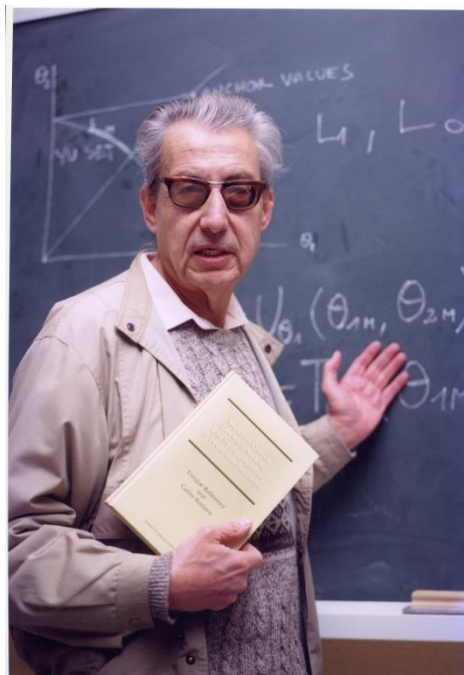
Jyrki Wallenius (Chair)

Email: Jyrki.Wallenius@aalto.fi

2 To the Memory of Professor Enrique Ballesteros

Our colleague, Professor Enrique Ballesteros, passed away on 2nd June last from a heart attack. Professor Ballesteros was born in Arganda del Rey, a small village in the province of Madrid on 7 June, 1928. He obtained his PhD ("Doctor Ingeniero Agrónomo") from the Technical University of Madrid and a Master degree in Economics Sciences from the Complutense University, Madrid. He was a versatile and brilliant intellectual: economist, mathematician, member of the Spanish Parliament (1979-1989), painter, writer, etc.

As an economist, he wrote around 20 books on different economics areas (business administration, accounting, appraisal techniques, etc), which had an enormous influence on the education of a whole generation of young Spanish social scientists. At the end of the eighties, once he had left the Spanish Parliament, he started to research in our field, generating seminal contributions in MCDM and economics, stochastic goal programming, utility interpretation of compromise programming, portfolio theory, etc. All these contributions were published in primary journals and were highly cited by the profession.



Since his youth, Professor Ballesteros had a serious sight problem. He fought his near blindness with enormous courage, being an example of scientific enthusiasm and ethical behavior to all his disciples. He received several distinctions throughout his career. Recently, the Technical University of Valencia conferred him with its maximum distinctions, its Gold Medal and a "Doctor Honoris Causa".

I have chosen the magical poetry of the following verses from a sonnet by English poet Rupert Brooke to say farewell to a remarkable person:

"...he leaves a white

Unbroken glory, a gathered radiance,

A width, a shining peace, under the night"

Enrique, rest in peace, and my eternal gratitude to you for your beneficial intellectual influence as from the first stages of my academic career, when you taught me Mathematics and Economics at the end of the sixties.

Carlos Romero

Technical University of Madrid

3 Upcoming Events and Call for Papers

3.1 MOP at 22nd International Symposium on Mathematical Programming (ISMP)



MOP at ISMP

Dear colleagues

The 22nd International Symposium on Mathematical Programming (ISMP) will take place in the city of Pittsburgh, PA, USA, on July 12-17, 2015. ISMP invites academics and industrial users of mathematical optimization to discuss recent advances and important challenges from theory and practice. The Symposium is held every three years on behalf of the Mathematical Optimization Society. For further information of the conference, see www.ismp2015.org.

The Symposium includes a cluster on multi-objective optimization chaired by Kaisa Miettinen (kaisa.miettinen@jyu.fi) and Matthias Ehrgott (m.ehrgott@lancaster.ac.uk).

We would like to have a strong presence of the society and multi-objective optimization and welcome your participation in the cluster. Please contact us by email if you are interested in organising a session (consisting of three talks) or presenting an invited talk in some of the sessions in the cluster on any aspect of multi-objective optimisation. This includes theory, methods and challenges of applications. Abstract submission via the conference website will be open from 1 September. The task of a session chair is to invite speakers, check the appropriateness of their abstracts and chair the session in the conference. If you organize a session, you will receive further instructions from cluster chairs on how to register speakers in your session so that they can enter their abstracts.

We wish active and versatile presence of talks on multi-objective optimization!

Matthias Ehrgott, Lancaster University

Kaisa Miettinen, University of Jyväskylä

3.2 MCDM Track in the EMO Conference - Submissions are Welcome until September 30, 2014

Since the middle of the nineties, Evolutionary Multiobjective Optimization (EMO) has become a popular and useful field of research and application. EMO algorithms use a population based approach in which more than one solution participates in an iteration and evolves a new population of solutions in each iteration and this provides an implicit parallel search ability, thereby making EMO viable for solving multiobjective optimization problems involving e.g. nonconvexity and discontinuity etc. EMO community organizes biannual international conferences. The first EMO conference was organized in Zurich (Switzerland) in 2001, with later conferences taking place in Faro (Portugal) in 2003, Guanajuato (Mexico) in 2005, Matsushima-Sendai (Japan) in 2007, Nantes (France) in 2009, Ouro Preto (Brazil) in 2011 and Sheffield (UK) in 2013. The 8th International Conference on Evolutionary Multi-Criterion Optimization will take place in the historic city of Guimarães, PORTUGAL. The event is being organised by the University of Minho, Guimarães, Portugal and has as general chairs António Gaspar-Cunha (University of Minho, Portugal), Carlos Henggeler Antunes (University of Coimbra, Portugal) and Carlos Coello Coello (CINVESTAV-IPN, Mexico).

There is a clear need for cross-fertilization between the EMO and the MCDM communities and various joint papers and collaborations demonstrate the usefulness of hybridizing ideas from both communities. Thus, it has become a consolidated tradition of the conferences of the International Society on MCDM to organize a stream on EMO while EMO conferences organize a special track on MCDM. EMO 2015 wants to continue this tradition in order to advance further the growing ties between EMO and MCDM communities. With this aim, in the MCDM track, full papers are invited on new developments in the multiple criteria decision making area that might be blended with EMO themes. Note that the papers do not yet need to involve EMO elements. Both original research, tutorial and survey papers are welcome in this track.

The EMO 2015 conference's plenary speaker are Thomas Stützle (IRIDIA laboratory of Université libre de Bruxelles, Belgium), Luís Santos (University of São Paulo and Embrapa, Brazil), Carlos Fonseca (University of Coimbra, Portugal) and Murat Köksalan (Middle East Technical University, Turkey), founding President of INFORMS Section on MCDM and President-Elect of the International Society on MCDM.

The deadline to submit a paper for EMO 2015 is the 30th of September 2014. Further information can be found at the website of the conference: <http://www.dep.uminho.pt/EMO2015/>.

MCDM Track Chairs

Kaisa Miettinen, University of Jyväskylä, Finland
Salvatore Greco, University of Catania, Italy

CALL FOR PAPERS

EMO 2015 is the 8th International Conference on Evolutionary Multi-Criterion Optimization, aiming to continue the success of the previous EMO meetings. EMO 2015 will bring together the evolutionary multi-criterion optimization (EMO) and multiple criteria decision making (MCDM) communities. Special attention will be paid to EMO and MCDM application for solving real-world problems in government, business and industry.

The conference programme will include:

- Invited keynote speakers
- EMO track
- MCDM track
- Real-world applications track

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.

EMO Track

Full papers are invited on novel aspects of EMO theory and methodology. A list of topics can be found in the conference web page.

MCDM Track

In this track, full papers are invited for the integrated MCDM track on new developments in the multiple criteria decision making community that might be blended with EMO themes. Original research, tutorial and survey papers are welcome in this track.

Real-World Applications Track

Papers are invited from both within and outside the academy on real-world problems in government, business, industry and interdisciplinary sciences, whose solutions have benefitted from the recent application of EMO or MCDM methods. Papers addressing issues that decision makers generally have in trusting formal approaches over their own experience and intuitions are also invited.

Publication

All accepted works will be published as full papers in Springer-Verlag's Lecture Notes in Computer Science (LNCS) series.

Papers are limited to a maximum size of 15 pages.

Important Dates

Submission deadline	30 September 2014
Notification of acceptance	4 November 2014
Camera-ready submission	2 December 2014
Conference	29 March -1 April 2015

Venue

The conference will take place at the Campus de Azurém of the University of Minho in the historical city of Guimarães in Portugal.

Guimarães is located approximately 350 km from Lisbon, the Portuguese capital, and about 50 km from Porto, the country's second largest city. The Porto International Airport (OPO) has regular flights to the main international cities by several flag companies as well as low cost ones.



Committees

General Chairs:

António Gaspar-Cunha, University of Minho, Portugal
Carlos Henggeler Antunes, University of Coimbra, Portugal
Carlos Coello Coello, CINVESTAV-IPN, Mexico

MCDM Track Chairs:

Kaisa Miettinen, University of Jyväskylä, Finland
Salvatore Greco, University of Catania, Italy

Real-world Applications Track Chairs:

Robin C. Purshouse, University of Sheffield, UK
Carlos Henggeler Antunes, University of Coimbra, Portugal

EMO Steering Committee:

Carlos Coello Coello, CINVESTAV-IPN, Mexico
David Come, Heriot-Watt University, UK
Kalyanmoy Deb, Michigan State University, USA
Peter J. Fleming, University of Sheffield, UK
Carlos M. Fonseca, University of Coimbra, Portugal
Hisao Ishibuchi, Osaka Prefecture University, Japan
Joshua D. Knowles, University of Manchester, UK
Kaisa Miettinen, University of Jyväskylä, Finland
J. David Schaffer, Binghamton University, USA
Lothar Thiele, ETH Zürich, Switzerland
Eckart Zitzler, PH Bern, Switzerland

3.3 6th International Workshop on Multiple Criteria Decision Making'15, March 22 – 24, 2015

International Workshop on Multiple Criteria Decision Making (IWoMCDM) is a scientific event organized every two years in Jaskółka Hotel in Ustroń at the south of Poland among the charming hills of Beskidy Mountains by Department of Operations Research, University of Economics in Katowice, in cooperation with Polish Mathematical Society Upper Silesia Branch, INFORMS Polish Section and Polish Operational and Systems Research Society.

It is devoted to the theory and applications in the field of multiobjective optimization, goal programming and multiple criteria decision aid. IWoMCDM papers, after the blind review process, are published in the international journal Multiple Criteria Decision Making ((ISSN 2084-1531). Starting from 2009 the journal is registered in EBSCO Publishing full text electronic database.

IWoMCDM has been organized from 2005 and accompanies Polish National Conference on *Preference Modeling and Risk*. In the both events more than 100 participants usually take part, which gives an opportunity to discuss and solve scientific problems in a circle of professionals or start the cooperation and joint future research. The conference venue is in Ustroń, a nice small town at the foot of Beskidy Mountains.

Papers submitted to IWoMCDM should be focused on:

- multiobjective mathematical programming,
- multiattribute utility theory,
- MCDA methods,
- data envelopment analysis,
- interactive methods,
- fuzzy approach,
- meta-heuristics,
- group decision making,
- other theoretical and applicational MCDM issues.

The papers submitted to IWoMCDM'15 may be up to 40000 characters long.

The important dates are as follows:

Registration:	06.01.2015
Abstract submission:	06.01.2015
Abstract approval:	21.01.2015
Full paper submission:	24.02.2015
Fee payment:	from 01.12.2014 to 01.03.2015

IWoMCDM fee is 350 EUR. The registration fee includes: accommodation (full board), conference materials and publication in Multiple Criteria Decision Making vol.10 (2015) or vol. 11 (2016).

For more details see

<http://www.iwomcdm.ue.katowice.pl/>

We are looking forward to seeing you in Ustroń in March 2015!

Tadeusz Trzaskalik

3.4 *Call for Book Chapters "Recent Advances on Computational Intelligence in Defense and Security"*

To be published in: Springer's Studies in Computational Intelligence Series

Website: <http://www.ieeeottawa.ca/ci/cids-book/>

Abstract submission deadline: October 30, 2014

Volume Co-Editors:

Rami Abielmona, Larus Technologies Corporation, Canada

Rafael Falcon, Larus Technologies Corporation, Canada

Nur Zincir-Heywood, Dalhousie University, Canada

Hussein Abbass, Australian Defense Force Academy, Australia

Motivation:

Given the rapidly changing and increasingly complex nature of global security, we continue to witness a remarkable interest within the defense and security communities in novel, adaptive and resilient techniques that can cope with the challenging problems arising in this domain. These challenges are brought forth not only by the overwhelming amount of data reported by a plethora of sensing and tracking modalities, but also by the emergence of innovative classes of decentralized, mass-scale communication protocols and connectivity frameworks such as cloud computing, sensor networks, intelligent transportation systems and the Internet of Things. Realizing that traditional techniques have left many important problems unsolved, and in some cases, not addressed, further efforts have to be undertaken in the quest for algorithms and methodologies that can accurately detect and easily adapt to emerging threats.

We sense there is a need for gathering a representative set of the most recent undertakings having to do with novel applications of Computational Intelligence (CI) techniques to the defense and security sectors.

This volume aims at publishing high-quality research efforts rooted in Computational Intelligence as applied to defense and security problems. First-class contributions addressing research challenges in these areas and their CI-based solutions (i.e., neural networks, fuzzy systems, evolutionary computation, swarm intelligence, rough sets, granular computing, and other emerging learning or optimization techniques) are solicited.

Submission Topics

Papers should present original work validated via analysis, simulation or experimentation, including but not limited to the following topics:

Advanced Architectures for Defense Operations

- Multi-Sensor Data Fusion
- Hard-Soft Data Fusion
- Context-Aware Data Fusion

- Employment of Autonomous Vehicles
- Intelligence Gathering and Exploitation
- Mine Detection
- Situation Assessment
- Impact Assessment
- Process and User Refinement
- Automatic Target Recognition
- Mission Weapon Pairing and Assignment
- Sensor Cueing and Tasking
- Self-Healing Systems

Modeling and Simulation of Defense Operations

- Logistics Support
- Mission Planning and Execution
- Resource Management
- Red Teaming
- Computational Red Teaming
- Course of Action Generation and Recommendation
- Models for War Games
- Risk-Aware Decision Support
- Multi-Agent Based Simulation
- Critical Infrastructure Protection
- Strategic Planning
- Counterterrorism and Counterinsurgency
- Behavioral or Cognitive Learning
- Human Modeling: Behavior, Emotion, Motion

Security Applications

- Surveillance
- Suspect Behavior Profiling
- Anomaly Detection
- Automated Handling of Dangerous Situations or People
- Stationary or Mobile Object Detection, Recognition and Classification
- Intrusion Detection Systems
- Cyber-Security
- Air, Maritime & Land Security
- Network Security
- Biometrics Security
- Authentication Technologies

Keywords:

security and defense; surveillance; computational intelligence; target tracking; mission planning;
 multi-sensor data fusion; intrusion detector; maritime domain awareness; multi-agent systems;
 unmanned aerial vehicles;

Technical Program Committee (preliminary)

Andrzej Najgebauer, Military University of Technology, Poland
David Van Veldhuizen, Air Force Research Laboratory, USA
Krzysztof Slot, Technical University of Lodz, Poland
Moufid Harb, Larus Technologies Corporation, Canada
Sansanee Auephanwiriyaikul, Chiang Mai University, Thailand
Suresh Sundaram, Nanyang Technological University, Singapore
Timothy Havens, Michigan State University, USA
Branko Ristic, DSTO, Australia
Dmitry Gorodnichy, Canadian Border Services Agency, Canada
Fred Petty, US Naval Research Laboratory, USA
Vincenzo Piuri, University of Milan, Italy
Nathalie Japkowicz, University of Ottawa, Canada
James Dankert, BAE Systems, USA
Srinivas Mukkamala, ICASA, USA
Misty Blowers, Air Force Research Lab, USA
Alain Auger, DRDC Valcartier, Canada

- * Abstract notification deadline: November 30, 2014
- * Full chapter submission deadline: January 31, 2015
- * Full chapter notification deadline: March 31, 2015
- * Camera-ready submission deadline: May 31, 2015
- * Volume publication expected: Late August, 2015

4 New Books/Publications

This section presents a list of papers published in 2012, 2013 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.

4.1 Books and Book Chapters

Tchangani A. P., **Bipolarity in Decision Analysis: a way to cope with human judgment**. In: *Exploring Innovative and Successful Applications of Soft Computing*. Edited by: Antonio D. Masegosa, Pablo J. Villacorta, Carlos Cruz-Corona, M.S. Garcia-Cascales, María T. Lamata, and José L. Verdegay, 216-244, 2014.

4.2 Journal Papers

Abastante F., Bottero M., Greco S., Lami I., **Addressing the Location of Undesirable Facilities through the Dominance-based Rough Set Approach**, *Journal of Multi-Criteria Decision Analysis*, 21(1-2):3-23, 2014.

Allmendinger R., Handl J., Knowles J., **Multiobjective Optimization: When Objectives Exhibit Unequal Latencies**, *European Journal of Operations Research*, to appear.

Argyris N., Morton A., Figueira J.R., **CUT: A Multi-Criteria Approach for Concavifiable Preferences**, *Operations Research*, 62(3):633-642, 2014.

Baizyldayeva U., Vlasov O., Kuandykov A., Akhmetov T., **Multi-Criteria Decision Support Systems. Comparative Analysis**, *Middle-East Journal of Scientific Research*, 16:1725-30, 2013.

Baležentis T., Baležentis A., **A Survey on Development and Applications of the Multi-criteria Decision Making Method MULTIMOORA**, *Journal of Multi-Criteria Decision Analysis*, 21(3-4):209-222, 2014.

Beck B., Iversen P., Sashegyi A., **Combining Information for Quantitative Decision-making in Drug Development**, *Journal of Multi-Criteria Decision Analysis*, 21(3-4):139-151, 2014.

Belhou L., Galand L., Vanderpooten D., **An efficient procedure for finding best compromise solutions to the multi-objective assignment problem**, *Computers & Operations Research*, 49:97-106, 2014.

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4.3 Conference Proceedings

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4.4 Research Reports and PhD Thesis

Sullivan T., Hansen P., **Determining benefits-related criteria and weights for prioritizing health technologies**, *Occasional Report*, 14/01, Centre for Health Systems, University of Otago, 2014.

5 Past Conferences, Workshops, and other News

5.1 A report on the 20th Conference of the International Federation of Operational Research Societies in Barcelona (Spain), July 13th – 18th, 2014

The 20th Conference of the International Federation of Operational Research Societies was held at the Barcelona convention centre. According to the conference organizers, the IFORS conference attracted a record number of participants: over 2600 from all over the world. Due to the large number of participants, up to 4 slots every day and in each slot up to 45 parallel sessions were organized. The topics



covered were quite diverse covering all topics in operations research including both theory and practice. Additionally, four plenary sessions were organized: Operations Research and Health Policy: Models that Can Make a Difference by Professor Margaret L. Brandeau, Analytics and the Art of Modelling by Professor Jaime Barceló, Operations Research in BASF's Supply Chain Operations by Robert Blackburn and Understanding Strengths and Weaknesses of Optimization Algorithms with New Visualization Tools and Methodologies by Professor Kate Smith-Miles. The plenary lectures were very interesting and many conference participants attended them.

The area of MCDM was well represented in the conference as six streams related to MCDM were organized:

1. Analytic Hierarchy Process/Analytical Network Process (Organizer: C-C Huang, number of sessions: 3),
2. Multiobjective Linear, Integer, and Combinatorial Optimisation (Organizer: M. Ehrgott, number of sessions: 1),
3. Multiobjective Optimization (Organizer: E. Carrizosa, number of sessions: 7),
4. Multiobjective Optimization - Theory, Methods and Applications (Organizers - J. Hakanen, M. Hartikainen, K. Miettinen, number of sessions: 16),
5. Multiple Criteria Decision Making and Optimization (Organizers - J. L. Gonzalez, Velarde, G. W. Weber, number of sessions: 5), and
6. Qualitative Multiple Criteria Decision Making (Organizers - M. Bohanec, V. Rajkovič, number of sessions: 2).



For example, sessions were held on interactive MCDM, multiobjective optimization in practice, surrogate-assisted multiobjective optimization, robustness in multiobjective optimization, new trends in evolutionary multiobjective optimization etc. Several well-known researchers from the MCDM community participated to present their recent research results.

In addition to the conference talks, several conference organizers were promoting future conferences, specifically; Professor Valerie Belton actively advertised the EURO 2015 conference. Researchers from the University of Jyväskylä and Professor Martin Josef Geiger actively promoted the 23rd International Conference on Multiple Criteria Decision Making (MCDM 2015) to be held in Hamburg, Germany. In addition, researchers from the University of Jyväskylä promoted the 8th International conference on Evolutionary Multi-Criterion Optimization to be held in Guimaraes, Portugal and advertised the call for proposals to organize the next MCDM/MCDA Summer School.

Karthik Sindhya, Jussi Hakanen

Industrial Optimization Group

University of Jyväskylä, Finland

5.2 Prof. Constantin Zopounidis Elected as Academician by the Royal Academy of Doctors (Spain)

Professor Constantin Zopounidis (Technical University of Crete and Audencia Nantes School of Management) was elected Academician on Thursday, July 10, 2014 in a formal meeting for the 100th anniversary of the formal establishment of the Royal Academy of Doctors. The foundation efforts started in the Middle Ages when the Spanish Government appointed a Council of 100 Elders which would deal with the establishment of laws in maritime law and commerce in Barcelona. After several attempts in 1914, the Council of Elders was renamed Royal Academy of Doctors, and is based in Barcelona.



In 1920 it took the name "College of Doctors enrolled in Cataluña", and in 1924 by the Royal Order of the Department of Public Institution and Fine Arts, it was called "College of Registered Doctors of the University District of Barcelona". It had an intense cultural life in its time until HM Alfonso XIII deigned to preside over the solemn final session of 1919 in the Auditorium of the University. It has a short life during the Second Republic and virtually disappeared with the Civil War. It was rebuilt in 1943, making a big push under the chairmanship of the illustrious Dr. Guillem de Benavent, who held the prestigious position until his death in 1963. It was preceded by Dr Jordi Xifra Heras, who brings the best of the culture and science of his time to the Tribunal. In 1977 Dr. Lluís Dolcet took his place, who continued brilliantly in the line of his predecessors at the Academy. He left the presidency in 1988 due to health and age, with Dr. Joseph Casajuana elected in his place. In 2012 Dr. Alfredo Rocafort Nicolau took the position. In 1989 it gained a wide re-establishment: on March 13, the academy is recognized as an entity of public law as the "Academy of Doctors" and on October 2, HM King Juan Carlos I granted the title of "Real" and since then, it has been recognised as the Royal Academy of Doctors. King Juan Carlos and Queen Sofia presided, at the Palace of Music, at a solemn academic session on 10 December 1992. The Royal Academy is formed of 100 academicians, divided into five sections: Health Sciences, Social Sciences, Humanities, Experimental Sciences and Technological Sciences. Since its refoundation, it has produced 67 doctoral publications.

Constantin Zopounidis is Professor of Financial Engineering and Operations Research at the Technical University of Crete (Greece) and Distinguished Research Professor at Audencia Nantes, School of Management (France).

Since the 1980s he has worked extensively on MCDM and its managerial applications, mainly in the area of financial decision making. Among others, his research has contributed to the development of preference elicitation and disaggregation approaches for multicriteria sorting problems, the introduction of computational intelligence methods in this context and the

development of multicriteria DSSs and knowledge-based systems, which are have been used by financial institutions, in areas such as credit granting, financial planning, and bank management.

Constantin Zopounidis has published more than 180 journal papers and 120 papers in conferences proceedings, edited volumes, and encyclopedias, in areas related to the above fields. He has also edited or authored more than 65 books and volumes and prepared about 30 special issues in premier OR/MS journals.

Currently he is editor-in-chief of the International Journal of Financial Engineering and Risk Management (Inderscience), the Journal of Computation Optimization in Economics and Finance (Nova Publishers), as well as co-editor-in-chief of Operational Research (Springer), and the International Journal of Multicriteria Decision Making (Inderscience). He is topical editor on decision analysis for the Encyclopedia of Operations Research and Management Science (Wiley), associate editor in Optimization Letters (Springer) and New Mathematics and Natural Computation (World Scientific), and member of the editorial board of several other journals in OR/MS, such as EJOR and the EURO Journal on Decision Processes.

In recognition of his scientific work, Constantin Zopounidis has received several awards from international research societies. In 1996, he was awarded the Gold Medal and Diploma of Social and Human Sciences from the MOISIL International Foundation, for his research in multicriteria intelligent decision support systems and their applications in financial management. In 2000, he received the Best Interdisciplinary Research Paper Award from the Decision Sciences Institute and in 2010; he received the highly commended paper award from the Emerald Literati Network. In addition, in 2012 he was the recipient of the Long-lasting Research Contribution Award in the field of Financial Engineering & Decision Making by ESCP Europe.

Michael Doumpos

6 Research Team Presentation: Metaheuristic Optimization Group , City University of Hong Kong, Hong Kong, University of Essex, UK, and Xidian University, China. Professor Qingfu Zhang

1. Introduction

I started my research on optimization in 1990 when I was an MSc student. My MSc thesis developed a variant of Karmer's algorithm for linear programming, which was published in ACTA Mathematicae Applicatae, SINICA in 1996. My PhD work focused on neural network algorithms for optimization and principal component analysis. I moved to evolutionary computation field after I finished my PhD studies in 1994. Over the last 20 years, my major research theme is to combine ideas and techniques from different areas such as mathematical programming, evolutionary computation and machine learning for designing efficient optimization methods. Viewing crossover and mutation operators in genetic algorithms as experimental design problems, I designed orthogonal genetic algorithms. I have studied estimation of distribution algorithms, which can be regarded as a mix of machine learning and evolutionary computation.

In multiobjective optimization area, I have developed MOEA/D (multiobjective evolutionary algorithms based on decomposition) with Hui Li and RM-MEDA (Regularity Model Based Multiobjective Estimation of Distribution Algorithm) with Aimin Zhou and Yaochu Jin. Both algorithms combine ideas from evolutionary computation and traditional optimization.

I am a Professor at the Department of Computer Science, City University of Hong Kong since 2014, a Professor at University of Essex, UK (on leave until July, 2016), and a Changjiang Visiting Chair Professor in Xidian University, China since 2011. Currently, I am establishing Metaheuristic Optimization Group (MOP) at City University of Hong Kong. I have very much enjoyed working with my PhD students, research assistants/associates, academic visitors and research collaborators from these three universities and many other places in the world.

2. Members:

- a) Team members at City University of Hong Kong.
 1. Professor Sam Kwong
 2. Associate Professor Raymond Wong
 3. Associate Professor Minming Li
 4. Mr. Ke Li
 5. Mr. Xiao Zhang
 6. Mr. Yu Zhou
- b) Team Members at University of Essex, UK
 1. Professor Edward Tsang
 2. Professor Simon Lucas
 3. Dr. Abdel Salhi
 4. Dr. Qin Chen
 5. Dr. Hong Li
 6. Mr. Ahmad Alhindi
 7. Mr. Hamid R Jalalian

- c) Research Collaborators/Students at Xidian University, China
1. Professor Licheng Jiao
 2. Professor Maoguo Gong
 3. Professor Yongchang Jiao
 4. Professor Yuping Wang
 5. Mr. Zhenkun Wang
 6. Mr. Yang Wang
 7. Mr. Luping Wang

3. Ten Important Publications related to Multiobjective Optimization

1. L. Ke, Q. Zhang and R. Battiti, A Simple yet Efficient Multiobjective Combinatorial Optimization Method Using Decomposition and Pareto Local Search, *IEEE Trans on Cybernetics*, 2014.
2. Ke Li, Q. Zhang, S. Kwong, M. Li, R. Wang, Stable Matching Based Selection in Evolutionary Multiobjective Optimization, *IEEE Transactions on Evolutionary Computation*, 2014.
3. H-L. Liu, F. Gu and Q. Zhang, Decomposition of a Multiobjective Optimization Problem into a Number of Simple Multiobjective Subproblems, *IEEE Trans. on Evolutionary Computation*, vol. 18, no. 3, 450-455, 2014.
4. B. Liu, Q. Zhang, F. Fernández, and G. Gielen, An Efficient Evolutionary Algorithm for Chance-constrained Bi-objective Stochastic Optimization and Its Application to Manufacturing Engineering, *IEEE Trans. on Evolutionary Computation*, vol. 17, no. 6, pp786-796, 2013.
5. L. Ke, Q. Zhang and R. Battiti, MOEA/D-ACO: A Multiobjective Evolutionary Algorithm Using Decomposition and AntColony, *IEEE Trans on Cybernetics*, vol. 43, no. 6, pp1845-1859, 2013.
6. Q. Zhang, W. Liu, E. Tsang and B. Virginas, Expensive Multiobjective Optimization by MOEA/D with Gaussian Process Model, *IEEE Trans on Evolutionary Computation*, vol. 14, no.3, pp 456-474, 2010.
7. A. Zhou, Q. Zhang and Y. Jin, Approximating the Set of Pareto Optimal Solutions in Both the Decision and Objective Spaces by an Estimation of Distribution Algorithm, *IEEE Trans on Evolutionary Computation*, vol. 13, no. 5, pp1167-1189, 2009.
8. H. Li and Q. Zhang, Multiobjective Optimization Problems with Complicated Pareto Sets, MOEA/D and NSGA-II, *IEEE Trans on Evolutionary Computation*, vol. 12, no 2, pp 284-302, 2009
9. Q. Zhang, A. Zhou and Y. Jin, RM-MEDA: A Regularity Model Based Multiobjective Estimation of Distribution Algorithm, *IEEE Trans. on Evolutionary Computation*, vol. 12, no. 1, pp 41-63, 2008
10. Q. Zhang and H. Li, MOEA/D: A Multi-objective Evolutionary Algorithm Based on Decomposition, *IEEE Trans. on Evolutionary Computation*, vol.11, no. 6, pp712-731, 2007

4. Software

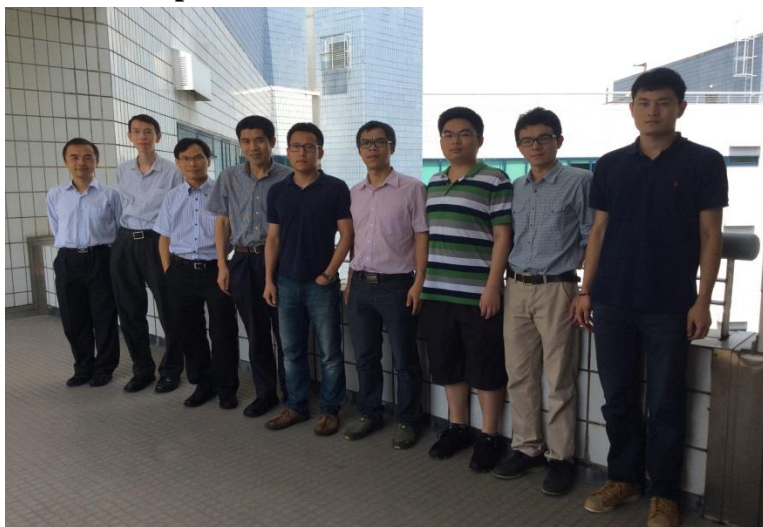
The source codes of MOEA/D and RM-MEDA can be downloaded from

<http://dces.essex.ac.uk/staff/zhang/> or

<http://www6.cityu.edu.hk/stfprofile/qingfu.zhang.htm>

MOEA/D can also be found in some other algorithm packages such as Jemetal, MOEA Framework and PyGMO.

5. Group Photos



Team Members at City University of Hong Kong. From Left to right: Minming Li, Raymond Wong, Sam Kwong, Qingfu Zhang, Ke Li, Hui Li (a visitor from Xian Jiaotong University), Xi Lin (a visitor from Columbia University), Xiao Zhang and Yu Zhou.



A group meeting at Xidian University, China. From Left to right: Liangjun Ke, Hui Li, Yang Wang, Qingfu Zhang, Yu Lei, Maoguo Gong, Zhenkun Wang, Mingyang Zhang, Zhao Wang, Luping Wang and Lijia Ma.

7 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. Contributions can be sent at any time to the editor (please see the address provided above).