International Society on Multiple Criteria Decision Making

MCDM

E-News • 2010 • Issue 2 (December)

Contents

Front: Red Panda, Odense Zoo, Denmark. © Martin J. Geiger

1 Society News

1.1 The 21st International Conference on Multiple Criteria Decision Making, June 13–17, 2011, Jyväskylä, Finland

Dear Members,

On behalf of the organizing committee, am happy to tell you that the preparation of the 21st International Conference on Multiple Criteria Decision Making (MCDM2011) is making good progress. The conference will be organized on **June 13–17, 2011** at the University of Jyväskylä, Finland in the Agora building which is located next to lake Jyväsjärvi. Agora has modern facilities and provides an excellent venue.

The theme of the conference is Environment and Policy and we welcome contributions related to theory, method development, software and applications in all fields of multiple criteria decision making. We plan to begin the conference on Sunday June 12, 2011 with a welcome reception and continue till Friday. Besides plenaries and contributed, industrial and invited sessions, we plan to have a panel chaired by Prof. Jyrki Wallenius (who also is the President of the Society) and workshops where industry representatives can present their problems and solution ideas and members of the audience can comment and seek for joint interest. In addition, we shall reserve sessions for discussions. This means that during the conference at the registration desk one can reserve a slot to discuss a research idea or a paper and people can sign up for it. And according to the traditions of the Society, we shall have an outing on Wednesday afternoon, a banquet dinner on Thursday evening and talks given by the award winners on Friday.

The tradition of our Society has been to financially support participants coming from developing countries. We expect to have limited support for such participants. More information will be available in January 2011. Preference is given to individuals who are active members of the Society.

Some information of the conference is already available at http://www.jyu.fi/mcdm2011 and the site is regularly updated. The call for sessions was opened this spring, the first call for papers is open, and the deadline for abstract submissions is January 31, 2011, see https://www.jyu.fi/en/congress/mcdm2011/callpapers/call-for-papers for further information about abstract submission. We also hope you can help us by advertising the conference. The conference poster is available at https://www.jyu.fi/en/congress/mcdm2011/Press/mcdm2011-poster.pdf.

We look for sponsors and partners and hope that you can distribute the invitation: https://www.jyu.fi/en/congress/mcdm2011/sponsors/call-for-participation-and-partners.

We hope that this will be an event where as many of you as possible can take part so that we can have many fruitful discussions and exchange ideas.

You are all warmly welcome to MCDM2011!

Kaisa Miettinen
General Chair of MCDM2011, mcdm2011 (at) mcdmsociety.org
President-Elect, International Society on MCDM, President-elect (at) mcdmsociety.org

1.2 2nd Call for Abstracts – The 21st International Conference on Multiple Criteria Decision Making, Jyväskylä, Finland

The biennial Conference aims to bring together researchers and practitioners who address Multiple Criteria Decision Making and Multiobjective Optimization. We expect about 200 participants from all over the world. The Conference theme is *Environment and Policy.*

We invite abstracts and *discussions* relevant to the conference theme as well as in any areas of Decision Making, Support and Optimization under Multiple Criteria, especially:

– Advancements in MCDM Theory
– New Approaches and Decision Support Systems
– Multiobjective Optimization
– Multiple Criteria Decision Aiding
– Group Decision Making, Negotiations
– Goal Programming
– Evolutionary Algorithms and MCDM
– Multiattribute Utility or Value Theory
– Preference Modelling
– Behavioral Issues in Decision Making
– Risk and Uncertainty
– Environmental Decision Making
– Applications of MCDM
– New Areas where MCDM is Applied, such as DEA, Finance, etc.
– Computing and Software for MCDM
– Teaching MCDM

A participant cannot give more than one talk in the conference (except for discussion sessions). The person who gives a talk, has to submit an abstract.

The abstract must not exceed 350 words (including possible LaTeX commands). If you want to submit an abstract, please visit our web-page for detailed instructions.

Important dates:

1. Deadline for abstract submission – January 31, 2011;

2. Acceptance notification – not later than February 28, 2011;

3. Early-bird and talk presenters registration – until March 15, 2011;

4. Deadline for registration – May 1, 2011.

Please note that *if you are going to give a talk* at the Conference (after having your abstract accepted), you must register and pay the registration fee not later than March 15, 2011.

Selected full papers will be published (after reviewing) in special issues of several OR journals. They can be submitted after the Conference; the deadline will be announced later.

Wiley Practice Prize (see Section 1.4) will be awarded during the Conference. To apply for it, your full paper (practice oriented) should be submitted according to instructions on our web-site. The finalists are expected to give their talks at the Conference before the final decision.

During the conference, the International Society on MCDM will honor the MCDM Doctoral Dissertation Award to a young scholar, who has obtained a doctoral degree in the MCDM and/or related fields. To apply, please visit our web-site and see Section 1.5.

Conference fees:

1. Regular: early-bird 375 € (normal 500 €) 2. Student/PhD student: early-bird 200 € (normal 300 €) 3. Industry participant: early-bird 500 € (normal 650 €)

The conference fee includes conference materials (e. g. the abstract book); refreshments and lunches daily; welcome reception (June 12); half-day outing (June 15), and evening banquet with boat cruise (June 16). Please visit our web-site for some important information concerning conference fees.

Organizing committee:

Kaisa Miettinen (General Chair), Univ. of Jyväskylä, Dept. of MIT
Jussi Hakanen, Univ. of Jyväskylä, Dept. of MIT
Pekka Salminen, Univ. of Jyväskylä, School of Business and Economics
Tero Tuovinen, Univ. of Jyväskylä, Dept. of MIT
Hannele Wallenius, Aalto University School of Science and Technology
Marja-Leena Rantalainen, (Secretary), Univ. of Jyväskylä, Dept. of MIT

Program committee:

Pekka Korhonen (Co-chair), Aalto University School of Economics, FINLAND
Jyrki Wallenius (Co-chair), Aalto University School of Economics, FINLAND
Christer Carlsson, Åbo Akademi, FINLAND
Kalyanmoy Deb, IIT Kanpur, INDIA & Aalto University School of Economics, FINLAND
Matthias Ehrgott, University of Auckland, NEW ZEALAND
Raimo Hämäläinen, Aalto University School of Science and Technology, FINLAND
Juhani Koski, Tampere University of Technology, FINLAND
Gang Kou, University of Electronic Science and Technology of China, Chengdu, CHINA
Murat Köksalan, Middle East Technical University, TURKEY
Kaisa Miettinen, University of Jyväskylä, FINLAND
Jaap Spronk, Rotterdam School of Management, Erasmus University, NETHERLANDS
Ralph E. Steuer, University of Georgia, USA
Daniel Vanderpooten, Universite Paris Dauphine, FRANCE

For further information please visit our conference web-site or contact the Conference Secretariat by e-mail: mcdm2011@mcdmsociety.org.

Prof. Kaisa Miettinen
Organizing Committee, General Chair

Prof. Jyrki Wallenius,
Prof. Pekka Korhonen
Program Committee, Co-Chairs

1.3   Call for Nominations: MCDM Awards

The International Society on Multiple Criteria Decision Making (MCDM) (http://mcdmsociety.org/) has been presenting awards at each of its meetings since 1992. The next set of awards will be presented at the 21st International Conference on MCDM in Jyväskylä, Finland, June 13–17, 2011 (http://www.jyu.fi/mcdm2011). The Society has three awards: 1. MCDM Gold Medal, 2. Edgeworth-Pareto Award, and 3. Georg Cantor Award, and nominations are welcome to the awards generally. The awards committee will make a decision on how many (1-3) and who are awarded.

Submit nominations to: Professor Pekka Korhonen, Department of Business Technology, Aalto University, School of Economics, P.O. Box 21220, 00076 Aalto, Finland (preferably by e-mail), mcdm-award@mcdmsociety.org. Contact him for further information.

To assure full consideration:

1. Make the nominations by February 15, 2011.

2. Indicate the name of the nominee, why (s)he is worthy of the award, his/her contributions to the MCDM field, and anything else that is relevant to the award.

3. Provide the CV of the nominee or the link to it.

Awardees are expected to attend the conference and give a talk. More information concerning the awards and past awardees may be found on the web site at http://mcdmsociety.org/intro.html#Awards.

Pekka Korhonen
Chair of the Awards Committee

1.4   Call for applications: Wiley Practice Prize

Kaisa Miettinen, University of Jyväskylä, Finland

John Wiley & Sons Limited, as publishers of the Journal of Multi-Criteria Decision Analysis, are once more sponsoring a prize for the best paper describing a real-life application of multiple criteria decision making presented at the 21st International Conference on Multiple Criteria Decision Making to be held in Jyväskylä, Finland in June 2011. The prize is US $ 1000, while the winning paper and approved finalist papers will be published in the journal.

Conference delegates wishing to have their papers considered for the prize should submit full papers by 31 January, 2011 directly to Theo Stewart (Editor in Chief of the journal) at theodor.stewart@uct.ac.za, with a copy to the conference organizers at mcdm2011-info@lists.jyu.fi. This submission implies that the paper has not been submitted for publication to any journal. The adjudication process will then be as follows.

A committee will perform a preliminary screening of submissions to select finalists. (It is expected that at most 4 finalists will be selected). The finalists will be informed by 30 April, 2011.

The finalists will at this point be required to upload their papers formally on to the JMCDA 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.

Finalist papers which have been submitted to the journal will be assembled into a special practice prize session at the conference, where their status as finalists will be advertised.

The final decision of the practice prize jury will be announced by 30 September 2011. The jury will take into consideration both the presentation at the conference and the refereesŠ reports from the journal.

The prize winning paper is ensured publication in the journal, although minor revisions may be requested. Decisions on the others will be subject to reviewersŠ comments, and may require revisions. The intention is to group all of these papers into a single issue of the journal.

Please note that submitting a full paper to the Wiley Practice Prize competition does not replace submitting an abstract to the Conference.

1.5 Call for applications: MCDM Doctoral Dissertation Award

Kaisa Miettinen, University of Jyväskylä, Finland

At the 21st International Conference on Multiple Criteria Decision Making, the International Society on Multiple Criteria Decision Making will honor the MCDM Doctoral Dissertation Award to a young scholar who has recently obtained a doctoral degree and completed an excellent doctoral dissertation in the Multiple Criteria Decision Making (MCDM) and/or related research fields.

Once applications are received, 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 21st International Conference on Multiple Criteria Decision Making, University of Jyväskylä, Finland, June 13–17, 2011. The finalists are expected to give a talk at the conference and the final decision will be made after the talks.

Application Process:

Deadline for applications: February 1, 2011. Please send the zip file of the application packet to Yong Shi, the chair of the MCDM Doctoral Dissertation Award Committee at yshi@unomaha.edu and yshi@gucas.ac.cn.

Eligibility: All applicants, whose dissertation is in the MCDM and/or related fields was written in English and graduated with a doctoral degree in 2009, 2010 or 2011.

The application packet should include the following documents:

- Cover letter

- Detailed resume

- Scanned copy of the original diploma of Doctoral Degree /Scanned copy of dissertation acceptance form signed by all committee members for recent graduates who do not have the diploma

- Electronic copy of the Doctoral Dissertation Report of the corresponding supervisor

- Extended Abstract of the Doctoral Dissertation in English, limit of four single-spaced pages

- Copy of related publications/patents based on the Doctoral Dissertation, if any

- Supporting letters of three references, at least two from persons who were not Dissertation Advisors or did serve on the Dissertation Committee

MCDM Doctoral Dissertation Award Committee:

- Yong Shi (Chair), Chinese Academy of Sciences, China /University of Nebraska at Omaha, USA

- Kalyanmoy Deb, Indian Institute of Technology Kanpur, India/Aalto University School of Economics, Finland

- Andrzej Jaszkiewicz, Poznan University of Technology, Poland

- Kathrin Klamroth, University Wuppertal, Germany

- Gang Kou, University of Electronic Science and Technology, China

- Heeseok Lee, Korea Advanced Institute of Science and Technology, Korea

- Hirotaka Nakayama, Konan University, Japan

- Serpil Sayin, Koç University, Turkey

- Francisco Ruiz, University of Málaga, Spain

- Lothar Thiele, Swiss Federal Institute of Technology Zurich, Switzerland

- Margaret Wiecek, Clemson University, USA

2 Upcoming Events and Call for Papers

2.1 Evolutionary Multi-Criterion Optimization Conference EMO 2011, April 5–8, 2011, Ouro Preto, Brazil

http://www.mat.ufmg.br/emo2011/index.htm

EMO is a bi-annual international conference series devoted to Evolutionary Multi-Criterion Optimization. The first EMO was organized in Zurich (Switzerland) in 2001, and the other editions took place in Faro (Portugal) in 2003, Guanajuato (Mexico) in 2005, Matsushima-Sendai (Japan) in 2007 and Nantes (France) in 2009. Ouro Preto (Minas Gerais, Brazil) will host the Sixth International Conference on Evolutionary Multi-Criterion Optimization (EMO 2011).

EMO 2011 will take place in Hotel Estalagem das Minas Gerais, located near the city of Ouro Preto. The event will be organized by the Universidade Federal de Minas Gerais, with the cooperation of Universidade Federal de Ouro Preto and Centro Federal de Educação Tecnológica de Minas Gerais.

General scope:

- Theory and methodology papers, presenting contributions to the methodology of EMO and to its theoretical foundations;

- Innovative applications of EMO, describing novel ways to solve real problems.

Topics include, but are not limited to:

- Algorithmic aspects of evolutionary-based algorithms: Constraint handling; Diversity preservation, elitism techniques; Interactive EMO; High number of objectives and/or decision variables; Handling costly functions; Theoretical analysis of EMO algorithms; Test problems, and performance metrics; Parallel algorithm issues

- Hybridization with other techniques: Nature-inspired methods (such as particle swarm, EDAs, differential evolution, or immunological algorithms); Local search techniques; OR methods (such as GRASP, TABU, or VNS/ILS); Surrogate functions; Constructive metaheuristics

- Real-world applications: Production, Manufacturing and Logistics; Engineering design; Financial applications; Bioinformatics and health; Computational intelligence and information management

MCDM Track:

To foster the interaction between the EMO community and the MCDM community, a special Multiple Criteria Decision Making (MCDM) Track will be held as an integral part of the EMO 2011 Conference. The objective is to take the opportunity of this conference for blending ideas from EMO and Multi-Criteria Decision Aiding / Decision Making.

Papers on all aspects of multiobjective optimization and/or multicriterion decision making are invited for submission to the MCDM track, including those not related to evolutionary multiobjective optimization.

The topics include, but are not limited to:

- Multiple Criteria Decision Aiding

- Multiple Criteria Classification, Ranking, and Sorting

- Multiple Objective Continuous and Combinatorial Optimization

- Goal Programming

- Multiple Objective Metaheuristics

- Preference Modelling

- Fuzzy Multiple Criteria Decision Making

EMO 2011 will include Keynote Lectures, Oral Sessions, Interactive Poster Sessions and Industrial Application Sessions. The complete program will be available at the Conference Website on early February.

2.2 2011 IEEE Symposium on Computational Intelligence in Multi-criteria Decision-Making (2011 IEEE MCDM), April 11–15, 2011, Paris, France

Carlos Coello Coello, CINVESTAV-IPN , Mexico

<center>http://www.ieee-ssci.org/</center>

2011 IEEE MCDM will be held simultaneously with over 30 other symposia and workshops in one location at the IEEE Symposium Series on Computational Intelligence 2011 (IEEE SSCI 2011). This international event promotes all aspects of the theory and applications of computational intelligence. Sponsored by the IEEE Computational Intelligence Society, this event will attract top researchers, professionals, practitioners and students from around the world. The registration, which will allow participants to attend any session in any technical meeting, will also include the complete set of the proceedings of all the meetings, coffee breaks, lunches, and the banquet.

2011 IEEE MCDM will bring together scientists, engineers and students from around the world to discuss the latest advances in the field of CI applied to issues in MCDM. Topics covered include applications of computational intelligence technologies, such as neural networks, fuzzy systems, evolutionary computation, and other emerging techniques in the following or similar areas:

- Multiobjective Search/Optimization (MOO): Multi-objective evolutionary algorithms; Meta-heuristics (scatter and Tabu search); Particle swarm optimization; Ant colonies, bacteria optimization, and other heuristic search methods

- Multiobjective Machine Learning (MOML): Accuracy and complexity tradeoff; Accuracy-interpretability, stability-plasticity dilemma; Pareto-based ensemble generation; Pareto-analysis of learning systems

- Multiobjective Analysis of Biological Systems: Pareto-approach to life history evolution; Robustness and evolvability; Energy consumption and functional efficiency in neural organization; Bioinformatics

- Decision Making (DM) Techniques: Preference elicitation and representation; Aggregation/tradeoff operators & algorithms; Fuzzy logic based DM techniques; Bayesian and other DM techniques

- Interactive Visualization (IV): Progressive aggregation methods; Decision maker in the loop; Integration of MOO, ML, DM, and IV to support Multicriteria Decision Making

2.3 5th Global Conference on Power Control and Optimization (PCO'2011), June 1–3, 2011, Dubai

CALL FOR PAPER   **WWW.PCOGLOBAL.COM**

The Fifth Global Conference on Power Control & Optimization

1–3 June 2011
La Meridien Hotel
DUBAI

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Welcome to PCO 2011 DUBAI!

It is our great pleasure to announce the fifth Global Conference on Power Control and Optimization PCO 2011, which will be held in La Meridien Hotel, DUBAI, UAE, from 1 – 3 June, 2011. The conference is technically sponsored by AIP, Elsevier, Inderscience and Springer, and organized by PCO global society IPO285080. Scope of the conference is contemporary and original research and educational development in the area of electrical power engineering, control systems and methods of optimization. The Topics of the conference includes, but not limited to, the following topics:

- Hybrid energy, saving and biotechnology
- Future energy planning and environment
- Power systems, protection and reliability
- Scheduling, distribution and chaos
- Controllers, drives and machine design
- Smart system, mechatronics and robotics
- Nano physics, NEMS and MEMS
- Simulators and software engineering
- Soft computing and computational intelligent
- Fuzzy and hybrid optimization

- Artificial immune systems & neural network
- Game theory and continuous optimization
- Evolutionary algorithm and economics
- Operation research and management
- Industrial Informatics and planning
- Production design and rough set
- Line, pattern searches and decision making
- Cams & gear design and optimum valves
- Network, mobile and wireless communication
- Scheduling and assignment problems

Prospective authors from universities or institutes and industries are invited to submit the full paper by email before the deadline. Paper should be submitted electronically, formatted in MS-Word, as per PCO guideline. All papers will be peer reviewed by independent specialists as per IEEE guide. PCO-10 proceeding will be published online by AIP. Selected papers will be published in Elsevier, Springer, InderScience, T&F and other Journals.

Tutorial/Special Sessions

Proposal for holding tutorials/special sessions, and workshop are invited from prospective authors, industrial bodies and academicians should be addressed to the Chair. The program committee is currently looking for financial sponsors from industry, publishers, and professional bodies.

Important Dates

Submission of Full Papers: 01/03/11
Notification with Peer Review: 20/03/11
Camera-ready Paper: 25/04/11
Registration with Full Payment: 30/04/11

Conference Fee

The registration fee of **400.00 EURO** is to be paid by all Conference participants. This includes three day Conference meeting, Abstract and CD-ROM proceedings, lunches and tea breaks. The fee is unique and identical for all delegates. The registration form must be submitted by email before the deadline to: **pcoglobal@gmail.com**. Each accepted paper must be presented by one of the authors after paying the necessary fee.

Technical Sponsors

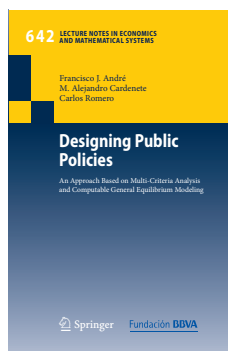INDERSCIENCE PUBLISHERS   ELSEVIER   SpringerLink   Professional Engineering Publishing   EUROPT

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3 New Books

3.1 Designing Public Policies: An Approach Based on Multi-Criteria Analysis and Computable General Equilibrium Modeling

Carlos Romero, Technical University of Madrid, Spain

Designing Public Policies: An Approach Based on Multi-Criteria Analysis and Computable General Equilibrium Modeling by Francisco J. André, M. Alejandro Cardenete, and Carlos Romero (Editors). Volume 642 of the series *Lecture Notes in Economics and Mathematical Systems*, Springer-Verlag, ISBN: 978-3-642-12182-1.

This book presents a methodological approach for the joint design of economic and environmental policies. The starting point is the observation that, in practice, policy makers do not usually have a well-defined objective, but they are typically concerned about a number of economic and environmental indicators that conflict with each other. In view of this, policy making is addressed by combining two separate analytical approaches: multiple criteria decision making (MCDM) and computable general equilibrium (CGE) modeling. The aim is to come up with a methodological framework for policy design which is both operational and consistent with economic theory. In short, this book offers a unified view of this novel approach, paying special attention to the connections between economic and environmental objectives. The methodological foundations are presented as well as some real applications that illustrate the pragmatic value of the theoretical proposal.

Content Level: Research

Keywords: Computable General Equlibrium Models (CGE); Environmental Policies; Macroeconomic Policies; Multiple Criteria Decision Making (MCDM); Optimization

Related subjects: Economic Policy; Environment / Developmental / Agricultural Economics; Microeconomics / Industrial Organization; Operations Research & Decision Theory; Probability Theory and Stochastic Processes

4 Sources of Information

- Homepage of the International Society on Multiple Criteria Decision Making. Website: http://www.mcdmsociety.org

- Kaisa Miettinen's website has several interesting links with Operational Research and Multi-Criteria websites (scientific societies, journals, conferences, etc.). Website: http://users.jyu.fi/~miettine/lista.html

- The website of the EURO Working Group on Multicriteria Decision Aiding has lots of useful information on multi-criteria. Website: http://www.inescc.pt/~ewgmcda/index.html

- Vincent Mousseau's database of research publications on MCDA has more than 2400 records, and it is a good source of information. Website: http://www.lamsade.dauphine.fr/mcda/biblio/

- Carlos A. Coello Coello maintains the EMOO web page, an archive of publications, software and other material related to multi objective optimization. Website: http://www.lania.mx/~ccoello/EMOO/

- Information on the Analytic Hierarchy Process (AHP) and the related International Symposia Series: http://www.isahp.org/

- - The Continuous Optimization Working Group of EURO: http://www.iam.metu.edu.tr/EUROPT/

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We are working on publishing the newsletter of the International Society on Multiple Criteria Decision Making three times a year. Contributions can be sent at any time to the editor (please see the address provided above).