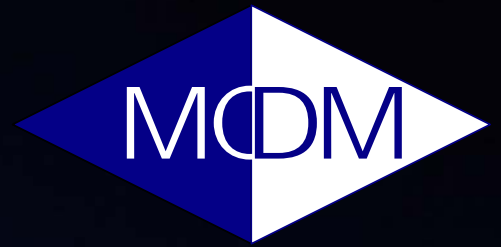


International Society on Multiple Criteria Decision Making



E-News • 2007 • Issue 2 (August)



Contents

Letter from the President	2
1 19th International Conference on Multiple Criteria Decision Making, January 7–12, 2008	2
2 Society News	6
2.1 Call for Nominations: MCDM Awards	6
2.2 Call for Nominations: President Elect of the Society	6
3 Past Conferences and Workshops	6
3.1 65th meeting of the European Working Group Multiple Criteria Decision Aiding (MCDA65), April 12–14, 2007, Poznań, Poland	6
4 Upcoming Events	9
4.1 7th International Heinz Nixdorf Symposium: Self-Optimizing Mechatronic Systems, February 20–21, 2008	9
5 New Publications	10
5.1 Special Issue of <i>Annals of Operations Research</i>	10
5.2 Electronic Proceedings of Dagstuhl Seminar on Practical Approaches to Multi-Objective Optimization	11
5.3 <i>Enterprise Architectures and Digital Administration</i> by Ambrose Goikoetxea . . .	11
6 Sources of Information	12
Imprint	12

Letter from the President

Dear Friends and Colleagues:

As I write, there is only four or five months to go before our next International MCDM meeting. I trust that I will see many of you there, in summer in Auckland, New Zealand. Under the capable direction of Matthias Ehrgott, I am sure that this will be a time to remember, to renew old acquaintances and to make new friends.

One innovation coming out of the next meeting is that, with the collaboration of Wiley & Sons, delegates will receive a two-year electronic subscription to the *Journal of Multi-Criteria Decision Analysis*. This should prove to be a valuable benefit to delegates, and is also part of our efforts to ensure that there is a high-level quality journal available which specializes in MCDM/MCDA. In order for the field to progress, we need papers in MCDM/MCDA to have a clear profile and not just be lost as another tool of OR. I would also encourage you to submit papers to JMCDA, and also to read the excellent papers there when carrying out the literature review phase of your research.

The conference in January will also see the election of new executive committee members, including that of a new president elect (for 2012-2016). Jyrki Wallenius will be taking office as president after the conclusion of the January meeting, and will shortly be communicating with members regarding procedures for nominating new office-bearers.

To those of you in Northern Hemisphere academic institutions – I trust that you had a good summer, and are full of enthusiasm for the new academic year ahead

Best wishes

Theo Stewart
August 2007

1 19th International Conference on Multiple Criteria Decision Making, January 7–12, 2008

MCDM for Sustainable Energy and Transportation Systems

Matthias Ehrgott, The University of Auckland

Call for Papers and Sessions

The 21st century heralds an age of exponentially increasing demand for energy and transportation services in a globalised economy. Climate change and other environmental impacts of human economic activity necessitate the consideration of conflicting goals in decision making processes to develop sustainable systems. The science of multiple criteria decision making has a lot to offer in addressing this need. The International Society on Multiple Criteria Decision Making (MCDM) is organising its 19th International Conference under the theme MCDM for Sustainable Energy and Transportation Systems.

Abstracts are now called for and should be submitted by email to mcdm2008@esc.auckland.ac.nz. All areas of MCDM are welcome and papers related to the theme of the conference are especially encouraged.

- Multiple Criteria Decision Aiding
- Multiple Criteria Classification, Ranking, and Sorting
- Multiple Objective Continuous and Combinatorial Optimisation

- Multiple Objective Metaheuristics
- MCDM and Preference Modelling
- Fuzzy MCDM
- MCDM Software
- Applications of MCDM
- Foundations of MCDM
- MCDM and Social Science

Extended abstracts should be up to two A4 pages in 12pt font or similar. Abstracts must contain the name and affiliation of all authors, plus the email address of the corresponding author for notification of acceptance. Abstracts can be submitted in plain text, Latex, or Word formats, but postscript and pdf files are not acceptable. In order to be included in the conference programme at least one author must have registered and paid the appropriate fee.

Colleagues interested in organising invited sessions should contact the organising committee at mcdm2008@esc.auckland.ac.nz as soon as possible.

Track on Evolutionary Multiobjective Optimisation

As part of the conference a special track on Evolutionary Multiobjective Optimisation (EMO) will be organised. EMO utilizes evolutionary computation techniques to determine/approximate Pareto optimal solutions and became very popular in recent years. Besides comparison and integration of EMO and MCDM, the track will also cover EMO algorithm developments, test problems, metrics and comparative studies for EMO as well as real-world and industrial applications of EMO algorithms. It is intended to deepen interactions and collaborations of EMO and MCDM.

The EMO track is organized by Boris Naujoks, University of Dortmund, Germany. For more information contact boris.naujoks@uni-dortmund.de

Invited Speakers

- Jim Petrie (University of Sydney)
- Anna Nagurny (University of Massachusetts at Amherst)
Title of the talk: Multicriteria Decision-Making for the Environment: Sustainability and Vulnerability Analysis of Critical Infrastructure Systems from Transportation Networks to Electric Power Supply Chains
Abstract In this talk, I will demonstrate how multicriteria decision-making can be utilized as a powerful framework for evaluating the sustainability of the critical infrastructure networks that underpin our societies and economies. These networks, which include transportation networks and electric power supply chains, in their present realizations, contribute in a major way to global pollution. I will show how environmentally conscious decision-makers can achieve the same environmental standards/results acting independently as would be achieved from certain governmentally imposed environmental standards. I will also describe recent results in network efficiency measurement and vulnerability analysis that allow one to determine, in the context of relevant criteria, which nodes and links (or combinations thereof) of network systems are most important in that their removal has the greatest impact on the network efficiency. This research has major implications for security, including environmental security, and infrastructure protection.

Social Programme

- Powhiri at the Waipapa Marae
- Cruise to Waiheke Island and Conference Banquet at Mudbrick Winery <http://www.mudbrick.co.nz>
- Visit to Auckland Museum including a Maori performance <http://www.aucklandmuseum.com>

Proceedings Volume

Springer will publish a proceedings volume in the “Lecture Notes in Economics and Mathematical Systems”. A call for full papers will be published on the conference website.

Registration Fees

- Full registration fee is NZD 600 (early) or NZD 750 (late).
Includes attendance at all sessions, coffee breaks, lunches, book of abstracts, conference dinner, excursion, and a two year electronic subscription of the Journal of Multi-Criteria Decision Analysis, <http://www.wiley.com/WileyCDA/WileyTitle/productCd-MCDA.html>
- Student registration fee is NZD 300 (early) or NZD 375 (late).
Includes the same as full registration, except for the journal subscription. Student registration must be accompanied by proof of full time student status that can be sent by email to mcdm2008@esc.auckland.ac.nz or fax to MCDM 2008 Secretariat, +64 9 373 7468.
- Registration is only possible via the conference website: <http://mcdm2008.orsnz.org.nz>

Dates

- Abstract submission deadline: 15 September 2007
- Notification of acceptance: 7 October 2007
- Early registration deadline: 15 October 2007
- Late registration deadline: 15 December 2007

Local Organising Committee

Matthias Ehrgott (Chair), Ivan Kojadinovic, Richard Lusby, Michael O’Sullivan, Andrea Raith, Paul Rouse, Lizhen Shao, Bassy Tam, Cameron Walker, Judith Wang, Hamish Waterer, Oliver Weide

International Executive Committee

Theodor J. Stewart, University of Cape Town (President); Valerie Belton, University of Strathclyde; Carlos A. Bana e Costa, Technical University of Lisbon; Jose R. M. Figueira, Technical University of Lisbon; Martin Josef Geiger, University of Hohenheim; Salvatore Greco, Università di Catania; Birsan Karpak, Youngstown State University; Kathrin Klamroth, University of Erlangen Nuremberg; Murat M. Köksalan, Middle East Technical University; Hirotaka Nakayama, Konan University; Mark Ridgley, University of Hawai’i at Manoa; Daniel Vanderpooten, Université Paris Dauphine; Luis Vargas, University of Pittsburgh; Jyrki Wallenius, Helsinki School of Economics; Constantin Zopounidis, Technical University of Crete; Kaisa Miettinen, Helsinki School of Economics



19th International Conference on Multiple Criteria Decision Making

MCDM for Sustainable Energy and Transportation Systems

7th – 12th January 2008

The University of Auckland, Auckland, New Zealand



Deadline for abstract submission September 30, 2007

Deadline for early registration October 15, 2007

www.esc.auckland.ac.nz/mcdm2008

mcdm2008@esc.auckland.ac.nz



2 Society News

2.1 Call for Nominations: MCDM Awards

Murat Köksalan, Middle East Technical University

The International Society on Multiple Criteria Decision Making (MCDM) has been presenting awards at each of its meetings since 1992. The next set of awards will be presented at the 19th International Conference on MCDM in Auckland, New Zealand, January 7–12, 2008 (<http://www.esc.auckland.ac.nz/mcdm2008/>). The Society welcomes nominations for the following awards: 1. MCDM Gold Medal, 2. Edgeworth-Pareto Award, and 3. Georg Cantor Award.

Submit nominations to: Professor Murat Köksalan, Industrial Engineering Department, Middle East Technical University, 06531 Ankara, Turkey or (preferably) by email, koksalan@ie.metu.edu.tr. Contact him for further information.

To assure full consideration:

1. Make the nominations by September 10, 2007.
2. Indicate the name of the nominee, why he or she is worthy of the award, his/her contributions to the field, and anything else that is relevant to the award.
3. Provide a CV of the nominee.

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://project.hkkk.fi/MCDM/intro.html>.

2.2 Call for Nominations: President Elect of the Society

Jyrki Wallenius, Helsinki School of Economics

Jyrki Wallenius, Helsinki School of Economics, is chairing upon Theo Stewards request, a nomination committee for the President Elect of our society.

Nomination should be sent to: Jyrki Wallenius, Helsinki School of Economics, P.O. Box 1210, 00101 Helsinki, Finland or (preferably) by email to Jyrki.Wallenius@hse.fi.

3 Past Conferences and Workshops

3.1 65th meeting of the European Working Group Multiple Criteria Decision Aiding (MCDA65), April 12–14, 2007, Poznań, Poland

Martin Josef Geiger, University of Hohenheim

The 65. meeting of the EURO working group “Multicriteria Decision Aiding” took place from April 12–14 in Poznań, Poland. Exactly as you might think now, the workshop was organized and hosted by Prof. Roman Słowiński (Poznań University of Technology) and his research group, and let me say that right away: They did a great job, making everybody feel welcome and comfortable.

21 talks were announced from which 19 took place:

- C. Gonzales, P. Perny S. Queiroz: Collective decision making in combinatorial domains using GAI-Networks

- S. Damart, M. A. Aloulou, D. Bouyssou, V. Mousseau, F. Montignac: Pratique de la méthodologie MACBETH en situation d'experts multiples: le cas de l'évaluation des technologies de stockage d'hydrogène
- L. Monroy, F. R. Fernández: Weighted multicriteria simple games
- L. Kruš: On some procedures supporting multicriteria cooperative decisions
- M. J. Geiger: Solving the biobjective knapsack problem – an interactive approach
- C. Bazgan, H. Hugot, D. Vanderpooten: Using complementary dominance relations in dynamic programming for 0-1 multi-objective knapsack problem
- N. Belacel: Data Mining-Based Clinical Decision Support System: Opportunities and Challenges
- J. Pictet, D. Bollinger: Partial aggregation of group MCDA results obtained with an outranking method
- F. Cadier, G. Coppin, P. Lenca: Some results on a cognitive approach in collective decision making modeling
- M. Chabane: Aide a la décision pour la conception de structures participatives
- Skulimowski, P. Rotter: Preference elicitation, reference sets and relevance feedback
- D. Bouyssou, V. Mousseau, A. Tsoukias: Ordinal measurement procedures
- L. D. Phillips, A. Morton: When values conflict: how citizens, stakeholders and experts contributed to formulating policy for managing the UK's radioactive waste
- R. D. Condor, A. Scarelli, R. Valentini: Decision support for global environmental agreements
- R. Bisdorff, V. Mousseau, M. Pirlot: D2-Decision Deck – une plateforme logicielle générique d'aide multicritère à la décision
- I. Kaliszewski: Commercial applications of MCDM decision support – any chance for them?
- Hsu-Shih Shih: A note on the incremental analysis for multiple criteria decision making
- M. Trzaskalik-Wyrwa, M. Nowak, T. Trzaskalik: Application of multicriteria analysis to restoration of historical portable organ
- R. Botreau, J. Capdeville, P. Perny, I. Veissier: Multicriteria evaluation of animal welfare at farm level: an application of MCDA methodologies

Besides these regular oral presentations, numerous papers have been submitted for discussion which simply cannot all be mentioned here but nevertheless contributed to scientific success of the workshop.

With 72 participants coming from 20 countries, the workshop truly was an international event. As it had to be expected, the biggest group in terms of nationalities came from Poland as the hosting country (22 participants), followed by France with 13 and Spain with 7 participants. Other countries included Italy and Switzerland (each 3 participants), Belgium, England, Greece, Marokko, Portugal (each 2 participants), and Germany, Finland, Canada Lithuania, Luxemburg, Romania, Taiwan, Czech Republic, Tunisia and Vojvodina.

Traditionally, the workshops of this particular EURO working group allow *and* encourage the presentation of material in two languages, English and French, which explains why several talks have been given in French.



Prof. Bernard Roy, working group coordinator, Université Paris-Dauphine



Beautiful Poznań



Prof. Roman Słowiński, Poznań University of Technology

Besides the scientific program, the participants have been invited to a pipe organ concert, given by Prof. Elzbieta Karolak in one of Poznań's most beautiful churches, the huge Baroque Parish Church of St. Stanislaus. Also, an impressive conference dinner has been organized, and the dances performed during the banquet by the traditional folk dancing group have been really appreciated by everybody.



Participants of MCDA'65

Workshop website: <http://www.mcda65.org/>

4 Upcoming Events

4.1 7th International Heinz Nixdorf Symposium: Self-Optimizing Mechatronic Systems, February 20–21, 2008

Benjamin Klöpper, University of Paderborn

The integration of mechanical engineering and information technology results in extensive potentials. This is expressed by the term “mechatronics”. This term refers to the symbiotic cooperation of mechanics, electronics, control engineering and software technology, in order to improve the behavior of a technical system. Future mechatronical systems encompass subsystems with inherent partial intelligence due to integrated micro processors. The behavior of the complete system will be characterized by communication and cooperation of intelligent subsystems. From the information technology point of view it is a distributed system of cooperating agents. This establishes fascinating possibilities for the design of mechatronical products of tomorrow. The term Self-optimization characterizes this perspective: Self-optimization of a technical system is the endogenous adaption of objectives as reaction to changing influences and the resulting autonomous adjustment of parameters or structure and consequently of the system’s behavior. Thus Self-optimization is substantially beyond the well-known control and adaptation strategies; Self-optimization enables systems to act with inherent “intelligence”, to react independently and flexibly to changing operation conditions.

Challenges on the way to tomorrow’s technical systems While there are many application examples of mechatronics, the potential of Self-optimization in mechanical engineering appears only in rough outlines. It obviously needs fantasy to define machines with inherent partial intelligence. Substantial preconditions for the accomplishment of this challenge are the scientific exploration and an adequate presentation for engineering issues of the paradigm of Self-optimization. The second challenge is the development of a methodology to design self-optimizing mechanical systems. As outstanding characteristic designers cannot anticipate.

The topics of interest for the 7th International Heinz Nixdorf Symposium include:

- Adaptive Control and Self-optimization
- “Intelligent Movement” of Multi-Body Systems
- Multi-Objective Optimization and Optimization under Consideration of Uncertainty
- Current Developments in Sensor and Actuators
- New Technologies in Domain Spanning Design
- Intelligent Agents in Engineering Applications
- Safety and Dependability
- Prevention of Product Piracy

The papers should address the area of mechanical engineering and related areas like automotive, aircraft construction, medical engineering, robotics, etc. Paper Submission:

Details about the Full Paper submission will be available on <http://www.hni.upb.de/en/symposium2008>.

Draft papers should be submitted until October 1, 2007

Authors will receive the acceptance notification on November 2, 2007

Final Papers should be sent until December 10, 2007

Organizers

Prof. Dr.-Ing. Jürgen Gausemeier Prof. Dr. rer. nat. Franz-J. Rammig Prof. Dr. rer. nat. Wilhelm Schäfer

Program Committee

Prof. Dr.-Ing. Dr. h.c. A. Albers, Universität Karlsruhe; Prof. Dr.-Ing. R. Anderl, TU Darmstadt; Prof. Dr.-Ing. Prof. h.c. T. Bertram, Universität Dortmund; Dr.-Ing. T. Börnchen, Alfons Haar Maschinenbau GmbH; Prof. Dr. Dr. h.c. M. Broy, TU München; Prof. Dr. ir. H. v. Brussel, Katholieke Universiteit Leuven; Prof. Dr.-Ing. R. Dudziak, FH Bochum; Prof. Dr.-Ing. K. Feldmann, Universität Erlangen; Dr.-Ing. M. Hahn, iXtronics GmbH; Prof. K. Kim, PhD, University of California at Irvine; Prof. Dr. H. Kopetz, TU Wien; Prof. Dr. I. H. Krüger, University of California at San Diego; Dr.-Ing. R. Lachmayer, Prof. Dr.-Ing. U. Lindemann, TU München; Dipl.-Ing. E. Mertens, Forschungszentrum Karlsruhe; PD Dr.-Ing. S. Möhringer, Möhringer Anlagenbau GmbH; Prof. Dr. C. Pereira, Universität Porto Alegre, Brasilien; Prof. Dr.-Ing. U. Rückert, Universität Paderborn; Prof. Dr. R. Scheidl, Universität Linz; Dr. H.-P. Schöner, DaimlerChrysler AG; Dr.-Ing. J. Schuller, Audi AG; Prof. Dr. T. Tamai, University of Tokyo, Japan; Prof. M. Tomizuka, PhD, University of California at Berkeley; Prof. Dr.-Ing. E. G. Welp, Ruhr-Universität Bochum; Prof. W. Wolf, PhD, Princeton University

Contact

Dipl.-Inf. Sebastian Pook

Heinz Nixdorf Institut, University of Paderborn

E-Mail: Sebastian.Pook@hni.upb.de

Phone: +49 (0) 5251/60 62 61

Fax : +49 (0)5251/60 62 68

Dipl.-Wirt.Inf. Benjamin Klöpper

Heinz Nixdorf Institut, University of Paderborn

E-Mail: klloepper@hni.upb.de

Phone: +49 (0) 5251/60 62 61

Fax : +49 (0)5251/60 62 68

5 New Publications

5.1 Special Issue of *Annals of Operations Research*

Constantin Zopounidis and Michael Doumpos, Technical University of Crete

A special issue of *Annals of Operations Research* (Volume 154, Number 1, October 2007), edited by Constantin Zopounidis and Michael Doumpos has appeared. The publication is devoted to the topic “Managerial Decisions with Multiple Criteria” and comprised the following articles:

- Alexis Tsoukiàs: On the concept of decision aiding process: an operational perspective. [doi:10.1007/s10479-007-0187-z](https://doi.org/10.1007/s10479-007-0187-z)
- Altannar Chinchuluun and Panos M. Pardalos: A survey of recent developments in multi-objective optimization. [doi:10.1007/s10479-007-0186-0](https://doi.org/10.1007/s10479-007-0186-0)
- Lawrence D. Phillips and Carlos A. Bana e Costa: Transparent prioritisation, budgeting and resource allocation with multi-criteria decision analysis and decision conferencing. [doi:10.1007/s10479-007-0183-3](https://doi.org/10.1007/s10479-007-0183-3)
- Fernando Tavares-Pereira, José Rui Figueira, Vincent Mousseau and Bernard Roy: Multiple criteria districting problems. [doi:10.1007/s10479-007-0181-5](https://doi.org/10.1007/s10479-007-0181-5)

- Christophe Labreuche and M. Grabisch: The representation of conditional relative importance between criteria. [doi:10.1007/s10479-007-0184-2](https://doi.org/10.1007/s10479-007-0184-2)
- Jacinto González-Pachón and Carlos Romero: Inferring consensus weights from pairwise comparison matrices without suitable properties. [doi:10.1007/s10479-007-0182-4](https://doi.org/10.1007/s10479-007-0182-4)
- Altannar Chinchuluun, Dehui Yuan and Panos M. Pardalos: Optimality conditions and duality for nondifferentiable multiobjective fractional programming with generalized convexity. [doi:10.1007/s10479-007-0180-6](https://doi.org/10.1007/s10479-007-0180-6)

5.2 Electronic Proceedings of Dagstuhl Seminar on Practical Approaches to Multi-Objective Optimization

Kaisa Miettinen, Helsinki School of Economics

As an additional outcome of the Dagstuhl Seminar on Practical Approaches to Multi-Objective Optimization (also see issue March 2007 of our newsletter), the electronic proceedings are now available online: <http://drops.dagstuhl.de/portals/06501/>

The proceedings have been edited by Jürgen Branke, Kalyanmoy Deb, Kaisa Miettinen and Roman Słowiński, and give a brief overview about the contents of the seminar mostly in the form of abstracts. It is worth to mention that a book partly based on the seminar with the title “Multiobjective Optimization: Interactive and Evolutionary Approaches” (with the same editors) is currently in preparation and will be published by Springer-Verlag.

5.3 *Enterprise Architectures and Digital Administration* by Ambrose Goikoetxea

Hooi Yean Lee, World Scientific Publishing

Warm Greetings from World Scientific.

We bring to your attention this newly published book on Enterprise Architectures (EA) by Ambrose Goikoetxea and Kathie Sowell. Both authors share in this book their experience in the planning, design, and assessment of enterprise architectures for several government organizations and federal agencies over the last 5-8 years. You can visit our website at <http://www.worldscibooks.com/business/6239.html> for sample chapters and details information about the book.

Dr Goikoetxea suggested to us to promote his book to members of International Society on Multiple Criteria Decision Making (MCDM). We will be happy to offer your members a special 20 discount off the regular price if you buy directly from us. Do feel free to contact me if you have any queries.

Order your copy now at World Scientific's online bookstore (<http://www.worldscibooks.com/business/6239.html>) from now till October 30, 2007 and Quote the discount code "WS6239" as you place your order.

Hooi Yean Lee (Ms)
Marketing Department
World Scientific Publishing
<http://www.worldscientific.com>
Email: hylee@wspc.com

6 Sources of Information

- Homepage of the International Society on Multiple Criteria Decision Making. Website: <http://www.terry.uga.edu/mcdm/>
- Kaisa Miettinen's website has several interesting links with Operational Research and Multi-Criteria websites (scientific societies, journals, conferences, etc.). Website: <http://www.mit.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/~ewgmcd/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/>

Imprint

Martin Josef Geiger
Lehrstuhl für Industriebetriebslehre (510A)
Universität Hohenheim
D-70593 Stuttgart
Germany

☎: +49 711 45923462

☎: +49 711 45923232

✉: mjgeiger@uni-hohenheim.de

The newsletter of the International Society on Multiple Criteria Decision Making is published three times a year (March, July, November). Contributions can be sent at any time to the editor (please see the address provided above).