



**EUROPT**

## Newsletter 3 of EUROPT

The Continuous Optimization Working Group of EURO

<http://www.iam.metu.edu.tr/EUROPT/>

January 2007

EUROPT - The Continuous Optimization Working Group of EURO

## Words from the Chair

Dear Members of EUROPT, dear Friends,

Hopefully, you all entered the New Year 2007 well and feel fine. As most of you know, last year we lost our dear teacher Prof. Dr. Alexander Rubinov. In November 28-30, 2006, at the 5<sup>th</sup> Ballarat Workshop, we shared a precious time on his memory. We thank the organizers of this workshop, especially, Prof. Dr. Adil Bagirov and all the local colleagues, for making this special event possible, and our thoughts are with Alex' dear widow Zari and their two sons. At the same occasion, Mrs. Zari took out of our hands, from EUROPT, the plate related to the EUROPT Fellowship 2006, given to Professor Alexander Rubinov as our first fellow. Closer information can be found at our EUROPT homepage, and a report about the workshop is in preparation.

There has been a second great loss at the end of 2006: the death of another dear friend and supporter of many ones of us: Prof. Dr. Peter L. Hammer (Rutgers University, USA)! He passed away after a tragic traffic accidents, just after he completed his 70<sup>th</sup> birthday. Peter has been a very important scientist in the fields of Discrete Optimization, Data Mining and Operational Research. The famous journals which he founded and edited will also in the future serve us so much. Our thoughts and feelings are with his dear widow Anca and the two sons.

Thank you very much, dear Alex, thank you very much, dear Peter!

At the occasion of EURO XXII 2007, there will be two Memorial Sessions in honour of both wonderful teachers. The session organizers will be our friends and EUROPT members Prof. Adil Bagirov and Prof. Jakob Krarup.

In this 3<sup>rd</sup> Newsletter, you will find many important announcements of some meetings from all over the world, again, among of them our Joint EUROPT-OMS Meeting and EURO XXII 2007. Altogether, they may serve for providing us, all the members of EUROPT, excellently in 2007. It would be wonderful, if we could meet and share unforgettable moments. What is more, the door to you personal engagement into our events is always wide open! Further announcements will follow.

EUROPT has its classical scientific fields, namely, Linear and Cone-Linear Optimization, Convex Analysis and Generalized Convexity, Global Optimization, Multi-Objective Optimization, Stochastic Programming and Nonlinear Optimization. These areas are also represented by the members of the EUROPT Managing Board. But, as some of you may remember, EUROPT is fostering the following areas, too, contributing to their development under the roof of Continuous Optimization and the umbrella of EURO:

- Continuous Optimization in Finance,
- Data Mining,
- Dynamical Systems,
- Inverse Problems and
- Optimal Control,

and we are going on supporting our two new sister EURO Working Groups

- EURO CBBM: "OR in Computational Biology, Bioinformatics and Medicine" and
- EURO ORD: "OR for Development".

You are cordially welcome to help supporting the two new EURO WGs, and to serve as important coworkers in the worthwhile process of strengthening Finance, Data Mining, Dynamical Systems and Inverse Problems of Optimal Control within our network of science and friendship, EUROPT.

Are you interested? Then, please write to me ([gweber@metu.edu.tr](mailto:gweber@metu.edu.tr))! I will be glad.

Now, I wish us a lot of pleasure when reading this 3<sup>rd</sup> Newsletter! Thanks to our friend and newsletter editor Kaisa for all her care and tasteful efforts.

With best wishes, Your sincerely,  
Gerhard-Wilhelm Weber  
Chair of EUROPT

## Some Conferences

International Workshop II on Applications of Wavelets to Real World Problems, Isparta, Turkey, June 7-9, 2007. Deadline for abstracts: March 1, 2007. Further information: <http://www.sdu.edu.tr/sempozyum/iww2007/>

EUROGEN 2007, Evolutionary and Deterministic Methods for Design, Optimization and Control with Applications to Industrial and Societal Problems in Jyväskylä, Finland, June 11-13, 2007. Deadline for abstracts: January 31, 2007. Further information: <http://www.mit.jyu.fi/eurogen2007>.

**Joint EUROPT-OMS Meeting: 2nd Conference on Optimization Methods & Software and 6th EUROPT Workshop "Advances in Continuous Optimization", Prague, Czech Republic, July 4-7, 2007. Deadline for abstracts: April 30, 2007. Further information: <http://cio.umh.es/europt-oms/>.**

A Workshop on OR for Developing Countries - Young Researchers and PhD Symposium, Prague, Czech Republic, July 7, 2007. Further information: <http://euro2007.vse.cz/wordc.doc>.

EURO-CBBM Workshop: Workshop on OR in Computational Biology, Bioinformatics and Medicine, Prague, Czech Republic, July 8, 2007. Deadline for abstracts: April 1, 2007. Further information: <http://euro2007.vse.cz/cbbm.pdf>

EURO XXII, 22<sup>nd</sup> European Conference on Operational Research in Prague, Czech Republic, July 8-11, 2007. Deadline for abstracts: February 28, 2007. Further information: <http://euro2007.vse.cz/>.

INFORMS International Meeting in Puerto Rico, July 8-11, 2007. Deadline for abstracts: February 1, 2007. Further information: <http://meetings.informs.org/PuertoRico07>

6th International Congress on Industrial and Applied Mathematics, Zurich, Switzerland, July 16-20, 2007. Deadline for abstracts: March 30, 2007. Further information: <http://www.iciam07.ch/index>.

The Second International Conference on Continuous Optimization of the Mathematical Programming Society, ICCOPT 07 - MOPTA-07, Hamilton, Canada, August 12-17, 2007. Deadline for abstracts: April 30, 2007. Further information: <http://iccopt-mopta.mcmaster.ca/>.

Second International Conference on Optimization and Optimal Control will be held in Mongolia from July 17 to July 20, 2007. Deadline for abstracts: May 1, 2007. Further information: <http://www.ise.ufl.edu/cao/cooc2007/>.

More conferences are listed at <http://www.mit.jyu.fi/mieltine/lista.html#Conferences>.

## CALL for PAPERS by YOUNG RESEARCHERS in CONTINUOUS OPTIMIZATION

Second Mathematical Programming Society <http://www.mathprog.org/> International Conference on Continuous Optimization, ICCOPT II <http://iccopt-mopta.mcmaster.ca/>, Hamilton, Canada, August 12-17, 2007.

Submissions are invited for a special session at ICCOPT II dedicated to papers authored by young researchers. The submitted papers should be in the area of continuous optimization and satisfy one of the following three criteria:

- a) passed the first round of normal refereeing process in an open journal;
- b) published in the year of 2005 or after (including forthcoming);
- c) certified by a thesis advisor or postdoctoral mentor as a well-polished paper that is ready for submission to an open journal.

Papers can be single-authored or multi-authored, subject to the following criterion:

- d) Each paper must have at least one principal author who was under age 30 on January 1, 2003 and has not earned a Ph.D before that date.

In case of joint authorship involving senior researchers (i.e., those who fail both the age test and the Ph.D. test), one senior author must certify the pivotal role and the principal contribution of the qualifying author in the work. The Selection Committee will decide on questions on eligibility in exceptional cases. The selection criteria will be based solely on the quality of the paper, including originality of results and potential impact.

The following items are required for submission:

- A) the paper for consideration;
- B) a brief description of the contribution (limited to 2 pages)
- C) a statement about the status of the paper: not submitted, under review, accepted, or published (when) in a journal;
- D) a certification of the principal author's eligibility in terms of age and Ph.D. (by the first author's advisor or department chair);
- E) in case of joint authorship involving a senior researcher, a certification by the latter individual about the qualifying author's pivotal role and principal contribution.

The deadline for submission is April 7, 2007.

Submission should be sent electronically in Adobe Acrobat pdf format, to the Chair of the Selection Committee, Professor Kees Roos, email: [c.roos@tudelft.nl](mailto:c.roos@tudelft.nl)

Up to 4 papers will be selected; the selected papers will be featured in a dedicated session in ICCOPT II; travel expenses of the first authors of the selected papers will be partially paid for by the Conference. If a selected paper has not been published nor submitted for publication, the author(s) will be invited to submit the paper for publication in the special Mathematical Programming, Series B issue of ICCOPT papers, which will be subject to the usual review of a Mathematical Programming paper.

Selection Committee:

- \* Kees Roos email: [C.Roos@tudelft.nl](mailto:C.Roos@tudelft.nl) (chair)
- \* Arnold Neumaier, email: [Arnold.Neumaier@univie.ac.at](mailto:Arnold.Neumaier@univie.ac.at)
- \* Levent Tuncel, email: [ltuncel@math.uwaterloo.ca](mailto:ltuncel@math.uwaterloo.ca)
- \* Yinyu Ye, email: [yeye@stanford.edu](mailto:yeye@stanford.edu)
- \* Akiko Yoshise, email: [yoshise@sk.tsukuba.ac.jp](mailto:yoshise@sk.tsukuba.ac.jp)

See also <http://iccopt-mopta.mcmaster.ca/papercompetit.htm>

## Call for Applications: **EURO Management Science Strategic Innovation Prize (MSSIP 2007)** on the topic of OR/MS in Logistics

The prize is intended to recognize the role of Operational Research/Management Science in Logistics. Needless to say that Logistics or Supply Chain Management is taking centre stage in Operations. In the business world, Supply Chain Management has been a crucial discipline in a global world with an increasing number of players involved in bringing even the simplest of products to the customer. It is fair to say that a separate science of Supply Chain Management has been developed in the last fifteen years (even though Logistics goes back many centuries or even millennia).

Recent events have propelled Supply Chain Management into the boardroom in some businesses but the true strategic impact of Logistics is still poorly appreciated by numerous companies. This is even more the case among policy makers. Obviously, Logistics has always been central to successful military operations and the recent dramatic tsunami in Asia has convinced everyone of the central role of Logistics in disaster response as well. In spite of this rise in attention to logistics, many organizations (public or private) have not yet taken the logical next step of reorganizing their structures accordingly.

OR/MS has been a large contributor to the newly developed science of Logistics/Supply Chain Management. But there is a lot yet to do. The MSSIP 2007 price intends to recognize the OR/MS contribution but also to encourage researchers and professionals to continue and perhaps even increase their efforts in contributing to the content as well as the recognition of Logistics/Supply Chain Management as a core discipline and function in business and society.

Attempting to describe Logistics/Supply Chain Management as a field of study in a few lines would be an impossible task. Any OR/MS professional or researcher has her/his own definition. It is our intent to allow for a broad definition in searching for the prize winner. Keeping in mind the name of the prize, originality, impact and strategic importance are words that will lead our deliberations. So we will kindly regard innovative applications of OR/MS to new or unusual Logistics situations. Think for example about risk, robustness, agility, humanitarian organizations, new products/markets/services, interfaces and integration with other disciplines like accounting and finance, and the like. The list is endless and the examples are only meant to provide an idea of what the jury will be looking for. Standard tools applied to conventional problems, especially those dealing with narrow operational problems, will not be considered. No matter how well done they are.

The submission should be a single or jointly authored unpublished paper describing either a successful application of known OR/MS methodologies to a real problem in the broadly defined area of Logistics/Supply Chain Management, or novel methodologies that have been developed in order to solve relevant problems in this area. Again, **innovative and strategically relevant approaches and results will be privileged given the nature of the prize.**

The paper is to be submitted in electronic form to the chair of the jury, no later than **March 1, 2007.**

Luk N. Van Wassenhove, Chairperson ([luk.van-wassenhove@insead.edu](mailto:luk.van-wassenhove@insead.edu))  
Henry Ford Professor of Manufacturing, INSEAD

## **Changes in TOP, the OR Journal of the Spanish Statistics and OR Society**

TOP is an international journal of Operations Research, created and supported by the Spanish Society of Statistics and Operations Research. TOP is now distributed by Springer Verlag, and has been selected by ISI-Thomson for its database and will be indexed in the Science Citation Index Expanded.

The emphasis of TOP is placed on original papers on Operations Research and Management Sciences, covering either mathematical issues of Operations Research or applications to real-world decision making problems.

Research lines encouraged include, among others, Game Theory, Location, Routing, Queuing and Stochastic Models, Supply Chain Management, Combinatorial Optimization, Convex Optimization, Multiple-Criteria Decision Analysis and Global Optimization (both exact and heuristic methods).

Further details, including instructions for online submission of manuscripts:

<http://www.springer.com/east/home/business/operations+research?SGWID=5-40521-70-173677307-detailsPage=journaldescription>

Editors-in-Chief

Emilio Carrizosa ([ecarrizosa@us.es](mailto:ecarrizosa@us.es)) and Justo Puerto ([puerto@us.es](mailto:puerto@us.es))

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## **Report on EURO Summer Institute 2006 in Wittenberg, German**

ESI XXIV - Optimization Challenges in Engineering: Methods, Software, and Applications  
Mirjam Dür (Darmstadt), Petra Huhn (Clausthal), Kathrin Klamroth (Erlangen), Christiane Tammer (Halle)

EURO institutes are organized on an annual basis by EURO, the Association of European Operational Research Societies. They take place in different countries and focus on varying topics. For two weeks, they bring together 20 to 30 carefully selected junior scientists and give them the opportunity of joint discussions, of forming networks with international colleagues, and of meeting renowned researchers in their field. This is accomplished by a combination of an inspiring scientific program with interesting social activities.

This year's ESI was carried out by the German Operations Research Society (GOR) and the EURO Working Group on Continuous Optimization (EUROPT). It was organized by Mirjam Dür, Petra Huhn, Kathrin Klamroth and Christiane Tammer. It was initiated, however, by Gerhard-Wilhelm Weber, the chair of EUROPT, and Tamás Terlaky, whom we wish to thank for their continuing support. Additional valuable support was provided by Gerhard Wäscher, the head of the GOR, which we appreciated very much.

The topic of this year's ESI was modern optimization methods and their applications in engineering science. This is reflected by the composition of the Scientific Committee which had the following members: Mirjam Dür (Darmstadt, Germany), Horst Hamacher (Kaiserslautern, Germany), Petra Huhn (Clausthal, Germany), Florian Jarre (Düsseldorf, Germany), Kathrin Klamroth (Erlangen, Germany), Michal Kocvara (Prague, Czech Republic), Claude Lemarechal (INRIA, France), Yurii Nesterov (Louvain, Belgium), and Tamas Terlaky (Hamilton, Canada).

#### *Location*

ESI took place in the buildings of the LEUCOREA foundation in the city of Wittenberg, Germany. Founded in the year 1994, the LEUCOREA foundation aims at bringing new international scientific and cultural life to Wittenberg, at the same place where 500 years ago one of the most renowned universities of Germany was established. The old university, the LEUCOREA, was founded in 1502, and only a few years later it was proud to have Martin Luther and Philipp Melanchthon among its professors. During the following centuries the university moved to Halle, however, the buildings remained and now accommodate nicely renovated lecture rooms, computer labs, a cafeteria and several guest rooms. The pleasant atmosphere, the excellent working conditions and the hospitality and enthusiasm of the employees of the LEUCOREA foundation were highly appreciated by all participants of ESI and contributed to its success.

#### *Participants*

The participants of ESI were doctoral and post-doctoral students from EURO-countries and from associated organizations. They had to apply for participation by submitting an original and unpublished paper to their national OR-societies, and the selection process was based on the quality of this work. Co-operations with IFORS (International Federation of Operational Research Societies) and ALIO (Asociación Latinoamericana de Investigación Operativa) broadened the national variety of the participants, and in the end all five continents were represented at this year's ESI: We had participants from Austria, Belgium, Brazil, Canada, Germany, Hungary, India, Iran, Ireland, Israel, Italy, Lithuania, New Zealand, South Africa, Spain, Switzerland and Turkey. The international atmosphere of ESI added to its success and was positively mentioned by all of its participants.

#### *Scientific Program*

The scientific program combined short courses by nine invited, internationally renowned scientists in the field with contributions by the participating students who presented their work in 30 minute talks. Annick Sartenaer (FUNDP Namur, Belgium) made the start and gave the first of the nine lectures of approximately five hours each. She gave an introduction into trust region methods in nonlinear optimization. Andrew Conn (IBM, USA) continued the following day with an introduction to derivative free optimization. After that, Andrea Walther (TU Dresden, Germany) and Andreas Griewank (HU Berlin, Germany) jointly taught automatic differentiation. Their presentations were accompanied by practical computer exercises. The second week began with an introduction to semidefinite programming and interior point methods given by Tamás Terlaky (McMaster University, Canada). Conic quadratic and convex optimization were the topic of Erling Andersen (MOSEK, Denmark). The practical applications of convex optimization were discussed in detail by Lieven Vandenberghhe (UCLA, USA), who focussed, among others, on modelling issues and engineering applications. Michal Kočvara (Academy of Sciences Prague, Hungary) presented recent developments in structural optimization and the relations to semidefinite programming. The final talk of the week and of the ESI was given by Hans-Georg Bock (University of Heidelberg, Germany) on dynamical processes and optimal control problems and their applications.

The short courses of the invited speakers were complemented by 30 minute presentations of the participating students. Each of them had the opportunity to present his/her research and to discuss it with the other participants and with the invited speakers. The research topics were relatively widespread and ranged from theoretically oriented topics as, for example, nonsmooth Newton methods, to multicriteria optimization, and to various applications, for example, in engineering design, data mining, telecommunication, routing problems and structural optimization. The presentations initiated many interesting discussions, ideas were exchanged, and some of the participants even started to work on joint projects and papers.

#### *Social Program*

To emphasize also the social and cultural aspects of the summer institute and to show the participants some of Germany's beauty, the scientific program was complemented by an extensive social program. This included a

guided tour through Wittenberg and the participation in the “Wittenberg Night”, trips to Dresden (with a city tour and visits of the Semper Opera and the reconstructed Church of our Lady) and to Berlin (with a city tour and visits of the parliament building (Reichstag) and the “Night of Open Museums”), as well as a local trip to the renaturated coal mining area Goitzsche near Bitterfeld. Joint barbecues, visits to the local bars in Wittenberg and a party evening organized by the participants completed the program.

For the organisation of the excursions, for the local support in Wittenberg and also preceding the ESI, a special thank is given to the “ESI Crew” consisting of Stefan Bundfuss, Jochen Gorski, Andreas Löhne, Sylke Sauter and Alexander Thekale from Darmstadt, Erlangen and Halle.

#### *Special Journal Issue*

As explained in the “Guidelines for EURO Institutes”, it is the intention of EURO to have a special issue of their journal EJOR devoted to the Institute. This is the reason behind the rather complicated application procedure (applicants were expected to submit an unpublished paper in order to be considered). Although all previous EURO Institutes had their special issue, it turned out that this was not possible for our ESI (and presumably the same will be true for future Institutes). The reason is that EJOR has a huge backlog of papers, and has therefore stopped to accept proposals for special issues. As our participants had already run through the application procedure, we were still planning to bring out a special issue, and we are happy that the journal *Mathematical Methods of Operations Research (MMOR)* has accepted to publish it. For future Institutes, we strongly encourage EURO to change the guidelines for the application procedure and to develop a concept for EURO Institutes without a possibility to publish the results thereof. In our understanding, introducing young people to the process of writing papers and brushing the papers up such that they can be published has always been a central element of these schools and has definitely been an important incentive in the past for young researchers to apply and attend. If this possibility is not given any more, suitable alternatives should be provided.

#### *Conclusion*

For all participants of the ESI, the summer school was an excellent opportunity to get a broader knowledge of their own field of research, to learn about new methodologies and techniques, and to build up a network of connections with young researchers from all parts of the world, as well as renowned professionals. Because of the relatively long duration of 15 days, the atmosphere was relaxed and there was plenty of time for extensive discussions and scientific exchange. Several participants used the opportunity to continue on to the annual meeting of the German OR Society which took place in the week right after ESI in Karlsruhe, Germany.

As mentioned above, EURO summer or winter institutes take place on an annual basis. The next event in this series will be a EURO winter institute in Estoril from January 27th until February 10th, Portugal. The topic of this winter institute is *Location and Logistics*; further information can be found at <http://ewi2007.fc.ul.pt/>

#### *Sponsors*

Last but not least, we would like to thank our sponsors for their generous support which made this event possible: EURO – The Association of European Operational Research Societies, GOR – The German Operations Research Society, The LEUCOREA Foundation, ILOG, Siemens, The State of Saxony-Anhalt, Vereinigung der Freunde der Technischen Universität Darmstadt, Martin Luther University Halle-Wittenberg

For a full report, see [http://www.iam.metu.edu.tr/EUROPT/ESI2006\\_finalreport.pdf](http://www.iam.metu.edu.tr/EUROPT/ESI2006_finalreport.pdf).

## **Some changes/additions related to EURO XXII**

Instead of the previously announced 2 streams on Semi-Infinite Optimisation (namely, Linear and Nonlinear Semi-Infinite Optimisation), there is one united one: "Semi-Infinite Optimisation"; Session Organizers: J.J. Rückmann and O.Stein; (M. Goberna, M.A. Lopez and M. Todorov became new SEOs).

New session in the Main Stream Continuous Optimization & Control has been added. Convex Optimization: Theory and Algorithms organized by Angelia Nedich (University of Illinois at Urbana-Champaign) and Asu Asu Ozdaglar (MIT).

# Course on: Global Optimization: Models, Algorithms, Software, and Applications

Presented by János D. Pintér, PCS Inc., Halifax, NS, Canada, [www.pinterconsulting.com](http://www.pinterconsulting.com).

Venue: Széchenyi István University, Győr, Hungary, March 26-28, 2007.

For details, please, visit [http://math.sze.hu/index.php?option=com\\_content&task=view&id=12&Itemid=24](http://math.sze.hu/index.php?option=com_content&task=view&id=12&Itemid=24).  
For further information, you can also contact Dr. Pintér [jd\\_pinter@hfx.eastlink.ca](mailto:jd_pinter@hfx.eastlink.ca).

Course registration and logistic details are to be arranged with the University; contact: Dr. Zoltán Horváth [horvathz@sze.hu](mailto:horvathz@sze.hu).

## Call for Papers: Methodology of Societal Complexity

EURO XXII, Prague, 2007, Czech Republic, July 8-11, 2007

The stream of methodology of societal complexity consists of:

**Session I: Societal complexity and Safety**

**Session II: Societal complexity and Sustainable Development**

**Session III: Societal complexity and Healthcare**

Send abstracts/papers for one of the sessions as invited papers before 31 January 2007 to

Stream organizer: Dorien J. DeTombe

Euro Working Group on Methodology of Societal Complexity

International Research Society on Methodology of Societal Complexity

P.O. Box. 3286, 1001 AB Amsterdam, The Netherlands, Tel: +31 20 6927526

New E-Mail: [DeTombe@nosmo.nl](mailto:DeTombe@nosmo.nl)

<http://www.geocities.com/doriendetombe>

Notification of acceptance: 28 February 2007

For further information, see <http://www.geocities.com/doriendetombe/detombeeuropague2007.html>

## Some words from the Newsletter Editor

Dear reader,

I hope you find these newsletters useful. I would like to remind you that your input, suggestions, ideas, announcements etc. are very welcome. Please, contact me! I would like to ask you to kindly write 'EUROPT Newsletter' as the subject of your email! Finally, I'd like to thank Gerhard-Wilhelm Weber for all his help in collecting news to this Newsletter.

Kaisa Miettinen ([miettine at hse.fi](mailto:miettine@hse.fi))

### EUROPT NEWSLETTER

**Editor-in-Chief:** Kaisa Miettinen

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