METU, Ankara, Turkey | IAM, METU | Association of European OR Societies | EURO Working Group on Continuous Optimization | University of Twente, Enschede, The Netherlands | University of Iceland, Reykjavik, Iceland

"Velkomin heima!" –

Scientific Exchange and Friendship in Hospitable Iceland

Report about 5th EUROPT Workshop on Advances in Continuous Optimization, June 30 - July 1, 2006, Reykjavik, Iceland

by
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This international *5th EUROPT Workshop on Advances in Continuous Optimization* was organized by EUROPT (http://www.iam.metu.edu.tr/EUROPT/) and it took place directly before the *EURO XXI 2006* meeting (http://www.euro2006.org/). It continued in the line of EUROPT workshops held: 2000 in Budapest, 2001 in Rotterdam, 2003 in Istanbul and 2004 in Rhodes, of EURO Summer Institutes and Mini Conferences. Our engagement during EURO conferences but also other larger meetings and, furthermore, some smaller workshops and seminars supported complete the spectrum of our group's meetings.

The workshop aimed to bring together researchers from continuous optimization and from related fields of discrete optimization, operational research, economy and technology. It intended to be a forum for the exchange of recent scientific developments and for the discussion of new trends. The scope of the workshop included all aspects of smooth, nonsmooth and discrete optimization from fundamental research to numerical methods and applications. In accordance with the theme of *EURO XXI 2006*, *"OR for Better Management of Sustainable Development"*, also our 5th EUROPT Workshop had a special theme in addition: *"Applications in the Energy Sector"* about which we had some valuable presentations and addresses. Indeed, the collaboration and harmony between EUROPT and the organizers of *EURO XXI 2006* went excellently and, by this, EUROPT significantly contributed to the great success of *EURO XXI 2006* which became the by far largest EURO conference ever since (the comparably large *Joint EURO-INFORMS Meeting* in Istanbul, 2003, was a common meeting of two organizations). Closer details will be mentioned below.

Iceland with its unique nature, our attractive workshop and the wealth of streams and presentations in Continuous Optimization and entire OR prepared at the following conference

EURO XXI 2006 invited friends from all over the world to join the workshop and spend a precious, unforgettable time.

Over the centuries, the Icelanders have been a nation of seafarers – Leif Ericson, famous Viking, "the discoverer of America", is known in all over the world. In these years, Iceland has become a very popular destination for many travelers from everywhere on earth because of the unique heritage of its Nordic nature: glaciers, geysirs, hot springs, lava fields, crystal-clear sea and fresh air ... (Figure 1) – and, in this year, because of Iceland's hospitality given to modern Operational Research and, in particular, Continuous Optimization!

"Komdu soel!" – "Cordially welcome!" and *"Velkomin heima!" – "Welcome at home!"*:

Indeed, it is the hospitality of our friends from the University of Iceland by which we continued our series of special EUROPT events in a most precious ambience; we were convinced that this could become a *once in a lifetime experience* for all of us.

In the years of EUROPT's history which began in 2000, the geographical focus of our working group's activities was mostly located in Middle and South-East Europe – now, we are going "North-West!". The workshop organizers are grateful to the local friends, but also to the participants who travelled from places on earth so far, about the close and fruitful collaboration in preparation that we had with the organizers of the conference *EURO XXI 2006* which followed the workshop. Also to the distinguished members of the *Program Committee* of our annual EUROPT workshop we express our gratitude for their encouragement and advice!

Figure 1: Impressions from Iceland's nature.

At this 5th EUROPT workshop we had a precious scientific program consisting of 6 Invited Lectures and 33 Contributed Lectures – the number of participants was about 80 such that there was a richness of knowledge and experience gathered which served for a premium exchange in the areas of continuous optimization. For that this meeting had become possible at all, we are giving special thanks to our valuable sponsors: *EURO*, *MathFinance AG*, *Maximal Software, Inc.*, *Pinter Consulting Services Inc.*, *TOBB ETÜ* and *University of*

Iceland, *University of Twente*, *Middle East Technical University* (especially, *Institute of Applied Mathematics*), both from Ankara, and *EUROPT*.

EUROPT's annual meetings often take place during important football competitions; this time it was the FIFA Worldcup in Germany. Likewise for this mega event, also for the scientific event of our workshop, the motto holds: *"The star is ... the team!"*. So we had a wonderful understanding, we discussed and formulated future plans, projects and common visions, and we restructured the management of EUROPT.

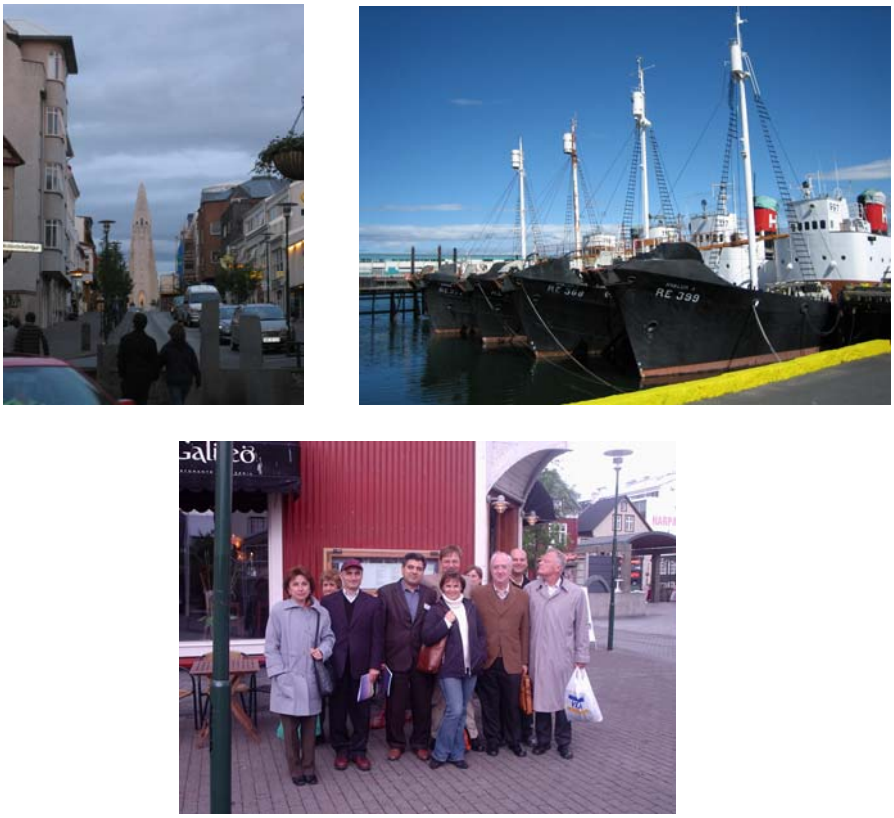


Figure 2: Impressions from Reykjavik and from near to Kafé Reykjavik..

The close and surprising relationships between our 5th EUROPT workshop and the worldcup in Germany was also one of the motives in the *Welcome Remarks* which *Prof. Dr. Oliver Stein* in the name of the OC gave at the early morning of June 30. At the evening before, at June 29, there was a pleasant *Welcome and Getting Together* already in in the building *Skolabaer*, where the University of Iceland hosted us excellently. The *Conference Dinner* took place in the evening of June 30 in *Kafé Reykjavik* which is located in the historical center of Iceland's capital and by this and by its interior equipment unfolds a very special atmosphere (Figure 2). At that evening, addresses were given by the former EUROPT Coordiator *Prof. Dr. Florian Jarre* and former EUROPT Coordiator *Prof. Dr. Gerhard-Wilhelm Weber*. In fact, at the next day, *July 1, 2006*, EUROPT Honorary Coordinator *Prof. Dr. Tamás Terlaky*, informed about the result of the election which resulted in an acceptance of a new management structure of EUROPT, including a six persons' *Board* with various scientific areas covered and tasks fulfilled and a two years cycle as well, where the first Board consists of the following colleagues from EUROPT: *Prof. Dr. Gerhard-Wilhelm Weber* (Chair), *Prof. Dr. Florian Jarre* (Past Chair), *Prof. Dr. Marco A. Lopez-Cerda* (General Vice Chair, Chair Elect) and the Board Members *Prof. Dr. Mirjam Dür*, *Prof. Dr. Kaisa Miettinen* and *Prof. Dr. Leonidas Sakalauskas*. Thanks to Prof. Terlaky and to the other EUROPT

Honorary Coordinator, *Prof. Dr. Tibor Illes*, for their important role in the restructuring process, and also *Cand. Dr. Zsolt Csizmadia* who with the honorary coordinators conducted the election procedure carefully. The workshop ended in the early evening of July 1; Gerhard-Wilhelm Weber gave *Concludings Remarks* which consisted of a survey presentation called *"*6 *Years EUROPT - EURO Working Group on Continuous Optimization"*.

The themes of lectures given by the *Invited Speakers'* representated some of the modern and important areas of Continuous Optimization: *Prof. Dr. Adil Bagirov* spoke about derivative-free algorithms in nonsmooth optimization, *Prof. Dr. Gianni DiPillo* explained a new primal-dual algorithm, while *Prof. Dr. Petra Huhn* referred about the complexity theory of interior point methods (IPMs), *Prof. Dr. Klaus Schittkowski* spoke about numerics and application of SQP methods, *Prof. Dr. Marc Teboulle* gave a unified approach to clustering by Continuous Optimization and, finally, *Prof. Dr. Etienne De Klerk* talked about a topic related to linear and semi-definite programming.

Likewise for each of the EUROPT workshops, summer institutes or mini conferences which we had, also for our 5th EUROPT workshop, we are going to have a Special Issue of a journal – this time, of *CEJOR* which is *Central European Journal of Operations Research*. The guest editors will be *Prof. Dr. Oliver Stein*, *Prof. Dr. Georg Still*, *Prof. Dr. Tamás Terlaky* and *Prof. Dr. Gerhard-Wilhelm Weber*. The Call for Papers is went out in the meantime!

A few sentences are reserved for one of our closest friends*: Prof. Dr. Alexander Rubinov* from the University of Ballarat in Australia. The close friendship which we have between EUROPT and *Pacific Optimization Research Activity Group* (*POP*) is very closely related with his name and it expresses itself in the rich program of *EURO XXI 2006* and, in particular, in the many participants from Australia, that continent on earth which is most far away and really antipodal to Iceland. In fact, the board of POP kindly approved POP's endorsement into our entire Iceland project. Dear *Alex*, thank you very much for all your efforts, devotion and sympathy, and let us wish to you, especially, for a good and robust health!

This remaining part of the report is structured as follows:

- *Lists and Boards:* topics, invited speakers, coorganizing institutions and groups, sponsors, program committee, organizing committee,
- *Scientific Program* (link),
- *Announcements*,
- *EUROPT's Contribution to EURO XXI 2006*,
- *Finance (Cashing Up)*,
- *EURO MC Poster*,
- *Thanks to the Sponsors*, and
- *Small Collage on Gratitude.*

❖ *Lists and Boards*

Topics

The workshop topics include but were not limited to:

- linear and nonlinear programming,
- semidefinite and semi-infinite optimization,

- complementarity problems,
- derivative-free optimization,
- global and stochastic optimization,
- non-smooth analysis and optimization,
- optimal control,
- optimization of technological, bio- and social systems,
- financial optimization and
- a Special Topic: Applications in the Energy Sector.

Our ***Invited Speakers*** (after short-term changes caused by travel problems) were

- Adil Bagirov (University of Ballarat, Australia),
- Etienne de Klerk (University of Limburg, The Netherlands),
- Gianni Di Pillo (University of Rome "La Sapienza", Italy),
- Petra Huhn (University of Clausthal, Germany),
- Klaus Schittkowski (University of Bayreuth, Germany) and
- Marc Teboulle (Tel-Aviv University, Israel).

The ***Coorganizing Institution*** and ***Groups*** are:

- University of Iceland,
- EUROPT (EURO Working Group on Continuous Optimization),
- Middle East Technical University, Ankara, Turkey, and
- University of Twente, Enschede, Netherlands.

The following ***Sponsors*** have been supporting us:

- EURO,
- EUROPT,
- MAXIMAL Software, Inc., London, GB,
- Pinter Consulting Services Inc., Halifax, Canada,
- MathFinance AG, Waldems, Germany,
- University of Iceland, Reykjavik, Iceland,
- University of Twente, Enschede, The Netherlands,
- TOBB ETÜ, Economy and Technology University, Ankara, Turkey, and
- Middle East Technical University, Ankara, Turkey, especially, Institute of Applied Mathematics.

The ***Organizing Committee*** had the following members:

- B. Karasözen (Middle East Technical University, METU, Ankara, Turkey),
- B. Kristjansson (Maximal Software, London, GB),
- S. Olafsson (University of Iceland, Reykjavik, Iceland),
- J. Pinter (Dalhousie University, Halifax, Canada),
- O. Stein (Technical University Aachen, Germany),
- G. Still (University of Twente, Enschede, The Netherlands),

- G.-W. Weber (Middle East Technical University, METU, Ankara, Turkey),

our local representative and contact

- P. Jensson (University of Iceland, Reykjavik, Iceland)

and the young colleague of OC,

- A. Tezel (Middle East Technical University, METU, Ankara, Turkey).

The ***Programme Committee*** had the following members:

- E.J. Anderson (University of New South Wales, Sydney, Australia),
- A. Bagirov (University of Ballarat, Australia),
- A. Ben-Tal (Technion, Haifa, Israel),
- I. Bomze (University of Vienna, Austria),
- V. Demyanov (State University, St. Petersburg, Russia),
- S. Didrik Flam (University of Bergen, Norway),
- O. Ghattas (Carnegie Mellon University),
- M. Goberna (University of Alicante, Spain),
- D. den Hertog (University of Tilburg, The Netherlands),
- T. Illes (Eotvos Lorand University of Sciences, Budapest, Hungary),
- J. Jahn (University of Erlangen-Nuremberg, Germany),
- F. Jarre (University of Düsseldorf, Germany),
- A. Jofre (Universidad de Chile, Santiago, Chile),
- H. Th. Jongen (Technical University Aachen, Germany),
- G. Leitmann (University of California, Berkeley, USA),
- M. Lopez (University of Alicante, Spain),
- A. Nemirovski (Technion, Haifa, Israel),
- D. Pallaschke (University of Karlsruhe, Germany),
- M. Pinar (Bilkent University, Ankara, Turkey),
- G. Pflug (University of Vienna, Austria),
- B. Polyak (Institute for Control Science, Moscow, Russia),
- D. Ralph (University of Cambridge, UK),
- R.T. Rockafellar (University of Washington, Seattle, USA),
- W. Römisch (Humbold University, Berlin, Germany),

- K. Roos (Technical University Delft, The Netherlands),
- A. Rubinov (University of Ballarat, Australia),
- J.J. Rückmann (Universidad de las Americas, Puebla, Mexico),
- E. Sachs (University of Trier, Germany),
- L. Sakalauskas (University of Vilnius, Lithuania),
- A. Shapiro (Georgia Institure of Technology, Atlanta, USA),
- S. Smale (University of California, Berkeley, USA),
- A. Sofer (George Mason University, Fairfax, Washington DC, USA),
- M. Teboulle (Tel-Aviv University, Israel),
- T. Terlaky (McMaster University, Hamilton, Canada),
- R. Tichatschke (University of Trier, Germany),
- M. Todorov (Universidad de las Americas, Puebla, Mexico),
- L. Vandenberghe (University of California, Los Angeles, USA),
- L.N. Vicente (University of Coimbra, Portugal),
- R. Wets (University of California, Davis, USA),
- H. Wolkowicz (University of Waterloo, Canada) and
- S. Zhang (The Chinese University of Hong Kong, China).

Due to the paper submissions from all over the world, we expected a very good participation at the workshop and for the first time in the series of EUROPT workshops had to allow *parallel sessions* of contributed talks. Please find our

❖ *Scientific Program*

under http://wwwhome.math.utwente.nl/~stillgj/COPT06/iceland-program%20new2.pdf and, for closer information, the *Workshop Booklet* with the Abstracts under http://wwwhome.math.utwente.nl/~stillgj/COPT06/booklet.pdf (the cover page and back page are just our workshop poster and our thanks to the sponsors which you may see below). Furthermore, at the site http://wwwhome.math.utwente.nl/~stillgj/COPT06/, many of the expositions given on the workshop are now becoming collected and will be found there.

❖ *Announcements*

- Announcements at EUROPT homepage (http://www.iam.metu.edu.tr/EUROPT/),
- Announcements at EURO homepage: *"Calendar"* (http://www.euro-online.org/display.php?page=calendar),
- Announcements by EUROPT e-mail list (repeatedly;

cf. Letters at http://www.iam.metu.edu.tr/EUROPT/),
DMANET
(http://www.zaik.uni-koeln.de/AFS/publications/dmanet/),
NA Digest (http://www.netlib.org/na-digest-html/),
Opt-Net (http://optnet.itwm.fhg.de/opt-net/),
to POP, SIAM and other groups.

❖ *EUROPT's Contribution to EURO XXI 2006*

- 21 Invited Streams initiated and organized by or with EUROPT - about ½ of all talks;
- IFORS Distinguished Lecture – by a member of EUROPT: *Prof. Dr. Saul Gass*;
- a number of special lectures and many further contributed talks given by EUROPT members;
- from the 14 Semi-Plenaries, 4 were given by members of EUROPT;
  from the 8 Tutorials, 4 ones were proposed by streams related with our EUROPT;
  there are 5 Keynotes, 2 of which were proposed by streams related also with EUROPT;
  finally, there were 4 Panels – 2 of which were organized by members of EUROPT;
- 3 EUROPT members in PC or OC of EURO XXI 2006.

For names and any other closer information, please visit http://www.euro2006.org/. Last but not least, just as brothers or sisters of EUROPT, two new EUROPT Working Groups, initiated by us and in the next years carefully chaired by precious, became established in worthy *Foundation Meetings* during *EURO XXI 2006*:

(a) *EURO WG "OR in Computational Biology, Bioinformatics and Medicine"*, and

(b) *EURO WG "OR for Development"*.

Here, we are all welcome!

❖ *Finances (Cashing Up)*

A. Income

Registration fee: EUR 90 Number of participants (registration in advance): 80

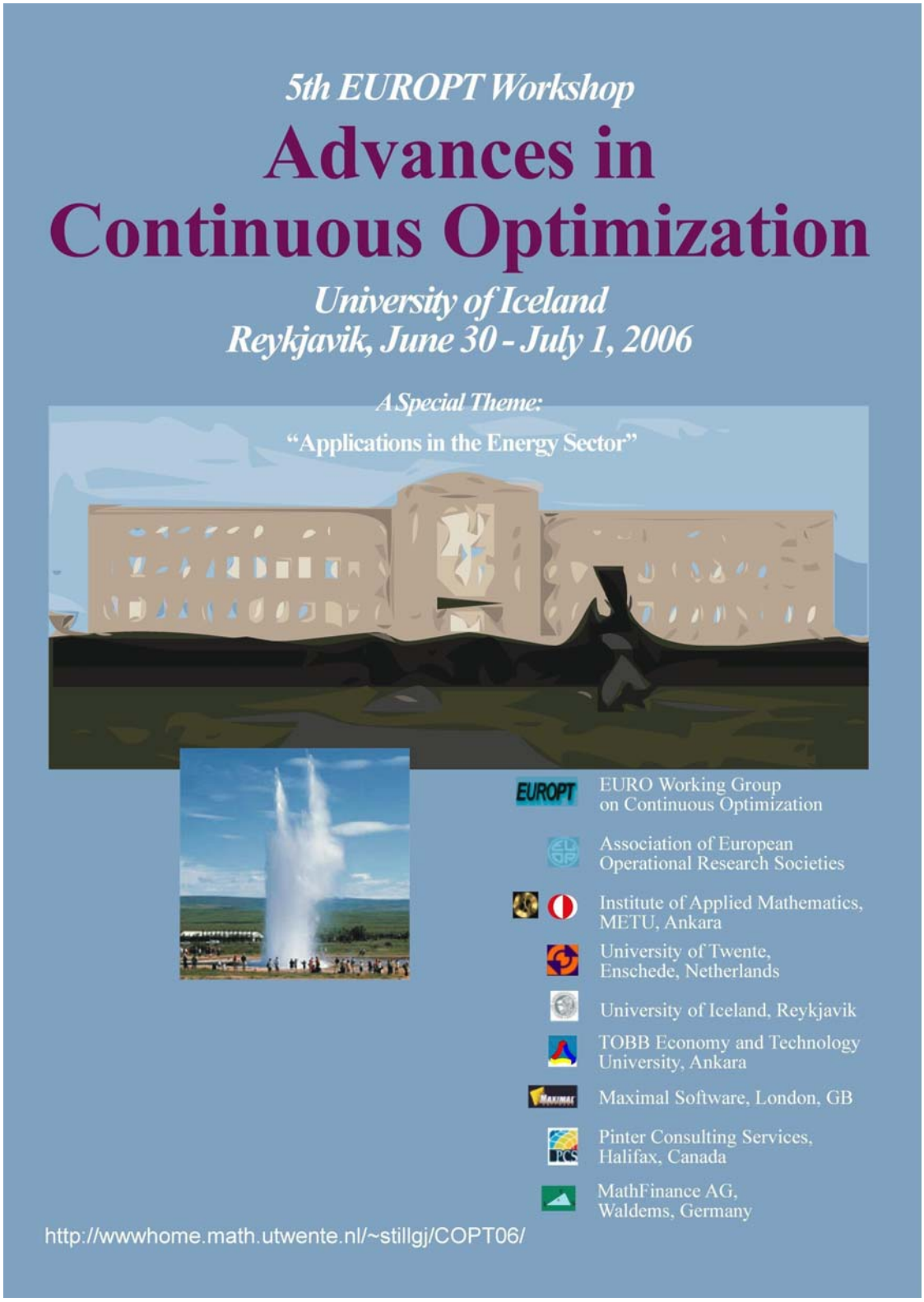
Registration fees:	EUR 5400	(from 60 participants)
Sponsorship: 1. EURO	EUR 3000	(for 12 participants)
2. EUROPT	EUR 1800	(for all participants)
3. TOBB University	EUR 500	(for all participants)
4. University of Iceland	EUR 500	(for all participants)
5. University of Twente	EUR 400	(for all participants)
6. METU, IAM	EUR 400	(for all participants)
7. Maximal Software	EUR 500	(for all participants)
8. Pinter Consulting Services	EUR 500	(for all participants)
9. MathFinance AG	EUR 250	(for all participants)

Total Income:	**EUR**	**13250**	

B. Expense

1) Expenses – fixed:			
Printing costs:	EUR	789	
Paper covers/bags:	EUR	421	
Total fixed costs	**EUR**	**1210**	
2) Expenses – variable:			
Catering			
Lunch	EUR	1347	
Coffee breaks	EUR	1011	
Welcome sessions	EUR	1347	
Conference dinner (up to participants contrib.)	EUR	2000	
Total variable costs:	**EUR**	**5705**	
3) Supplies:			
Telephone, copies, badges	**EUR**	**1735**	
4) Invited speakers: (all costs besides registration fee waived, lunch, miscellaneous)			
Travel, accommodation	**EUR**	**2490**	from EURO: EUR 750
5) Support for Eastern European participants: (all costs besides registration fee waived, lunch, miscellaneous)			
Accomodation, partially travel	**EUR**	**2110**	here, from EURO: EUR 2250
Total expense:	**EUR**	**13250**	
C. Profit	**EUR**	**0**	

❖ ***Poster of 5th EUROPT Workshop***



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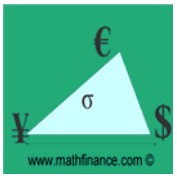
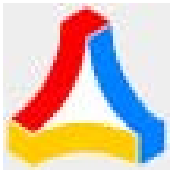


MathFinance AG
http://www.mathfinance.com/

Maximal Software, INC
http://www.maximalsoftware.com/

Pinter Consulting Services
http://www.pinterconsulting.com/



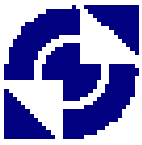
TOBB Economy and Technology University
http://www.etu.edu.tr

University of Iceland
http://www.hi.is

METU,
Ankara,
Turkey

IAM,
METU

http://www.iam.metu.edu.tr/



University of Twente,
Enschede,
The Netherlands

http://www.utwente.nl/

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

❖ ***Small Collage on Gratitude*** *(Slides from the Closing Session)*

We cordially thank our dear Honoray Coordinators

Tamas

Tibor

and our dear Coordinator

Florian

We cordially thank our dear local friends

Bjarni

Pall

Snjolfur

We cordially thank our dear friends

Aysun

Oliver

Georg

We ❤ Iceland!

A cordial thank also to ***all*** those friends who served to contributed on making our *5th EUROPT Workshop on Advances in Continuous Optimization* a success and, as we hope, contribution to collaboration, friendship and development in the area of continuous optimization, in Europe and the world!

Photos: *Cordial thanks* to our workshop participants
Dr. Vaida Bartkute (Institute of Mathematics and Informatics, Vilnius, Lithuania),
Prof. Dr. Alexander Krüger (University of Ballarat, Australia),
Prof. Dr. Tatiana Tchemisova (University of Aveiro, Portugal),
and to our friend and participant at EURO XXI 2006
Diplom-Kauffrau Nicole Sunke (University of Siegen, Germany)!
There is a ***wealth of more impressions***, maybe also about You, at:
http://www.iam.metu.edu.tr/EUROPT/h_photos.html.)

PS: The series of our EUROPT workshops will go on next year with

A Joint EUROPT-OMS Meeting:
the 2nd Conference on Optimization Methods & Software
and the 6th EUROPT Workshop on Advances in Continuous Optimization,
July 4-7, 2007, in Prague, Czech Republic.

Perhaps you would like to make a note about this event today already!

Ankara, September 6, 2006