



Activities of
EUROPT
EURO Working Group on Continuous Optimization
in 2006 and 2007

1 Introduction

EUROPT, Continuous Optimization Working Group of EURO (EUROPT WG), has been founded at IPM2000 Workshop in Budapest, Hungary, July 2000. That workshop was a satellite event of the EURO-XVII Conference. At these days, there were about 50 founding members. In the sequel of our first workshop, EUROPT had three further workshops: workshop Smooth and Nonsmooth Optimization, Theory and Applications, in Rotterdam, The Netherlands, July 2001, before EURO XVIII, then Workshop on Advances in Continuous Optimization, in Istanbul, Turkey, July 2003, before the 5th EURO/INFORMS Joint International Meeting 2003, and Workshop on Challenges of Continuous Optimization in Theory and Applications, July 2004, before EURO XX. Still in July 2004, we enjoyed EURO Summer Institute “Optimization and Data Mining” in Ankara, while in June-July 2005, we celebrated 17th EURO Mini Conference “Continuous Optimization in the Industry” in Pécs, Hungary. In Ankara, November 2005, we were coorganizers of “Workshop on Sustainable Living in Rural Areas of Turkey” and of “Spatial Data Mining Workshop” (ISPRS 2005). In 2006, our Workshop “Advances in Continuous Optimization” and a very strong contribution to EURO XXI 2006, both in Reykjavik, Iceland, and EURO Summer Institute 2006 “Optimization Challenges in Engineering: Methods, Software and Applications”, Wittenberg, Germany, in the months August and September, belonged to the special enterprises of EUROPT in 2006. In 2005-2006, EUROPT proposed EURO Working Groups “Operational Research for Development” and “Computational Biology, Bioinformatics and Medicine”; both were accepted by EURO Executive Committee, and with our friends and new leaders of the two groups we founded the two new groups at the occasion of EURO XXI 2006. Our support for Workshop on “Sustainable Living in Rural Areas of Turkey” held in March 2005 and April 2006, for the 1st Summer School “Achievements and Applications of Contemporary Informatics, Mathematics and Physics” in Kiev, Ukraine, August 2006, and for 5th Ballarat Workshop on Global and Nonsmooth Optimization: Theory, Methods and Applications, in Ballarat, Australia, November 2006, and further activities explained below complete the spectrum of our engagement. Now, at the end of March 2007, our group EUROPT has *more than 700 members*. Please find many interesting data, information and invitations at our EUROPT *homepage* <http://www.iam.metu.edu.tr/EUROPT/>. This report surveys what we did in 2006 (Section 2) and announces our activities in 2007 (Section 3).

2 Activities in 2006

In 2006, there was one big and one smaller highlight events which EUROPT coorganized:

- (a) *EURO XXI 2006, 21st European Conference on Operational Research*, Reykjavik, Iceland, July 2-5, 2006;

and two important own events

- (b) “*5th EUROPT Workshop on Advances in Continuous Optimization*”, Reykjavik, Iceland, June 30 – July 1, 2006;
- (c) *EURO Summer Institute “Optimization Challenges in Engineering: Methods, Software and Applications”*, Wittenberg, Germany, August 18 – September 2, 2006;

and, as a coorganizing and helping institution, a number of further engagements:

- (d) *Workshop on “Complex Societal Problems, Sustainable Living and Development”*, Ankara, Turkey, April 15-21, 2006;
- (e) *1st Summer School Achievements and Applications of Contemporary Informatics, Mathematics and Physics*, Kiev, Ukraine, August 4-20, 2007;
- (f) *5th Ballarat Workshop on Global and Nonlinear Optimization, Theory, Methods and Applications*, Ballarat, Australia, November 28-30, 2006; and
- (g) “*Seminar on Computational Biology and Medicine*” (weekly seminar) METU, Ankara;

also we supported

- (h) “*Workshop on Geometric Morphometry*”, Ankara, Turkey, June 12-16, 2006.

We just finalized one more special issue of European Journal of Operational Research, namely,

- (i) *EJOR Special Issue “Continuous Optimization in the Industry”*.

As further efforts, we maintain and give offers with

- (j) *EUROPT Homepage*,
- (k) *EUROPT Newsletter* by E-Mails and *New E-Newsletter*,
- (l) *New EURO Working Group “Operational Research for Development”*,
- (m) *New EURO Working Group “Operational Research in Computational Biology and Bioinformatics”*.

Furthermore,

(n) *EJOR Special Issue “Advances in Continuous Optimization”* and

(o) *EJOR Special Issue “Optimization in Data Mining”* appeared.

We work on the

(p) *CEJOR Special Issue “Advances in Continuous Optimization”*,

(q) *MMOR Special Issue “Special Issue of MMOR Devoted to ESI 2006”*.

We finally mention the change of our leadership structure towards and by

(e) *Management Board* of EUROPT.

and we introduced and for 2006 firstly appointed the

(s) *EUROPT Fellow*.

Let us present some details:

2.a EURO XXI 2006

EURO XXI 2006, 21st European Conference on Operational Research, took place in Reykjavik, Iceland, at July 2-5, 2006 (<http://www.euro2006.org/>). Stronger than at any EURO conference before, EUROPT contributed this time and, herewith, helped for the the wealth of the program and to the conference’s success.

Within the conference theme “*Operational Research for Better Management of Sustainable Development*” the organizers aimed to showcase how OR can improve the management of this important topic that touches everyone in the world.

***Invited Streams* and *Invited Papers*:**

EURO Working Group members and other people have taken a major role in the conference and are organising several streams; see the list of streams on the conference web site. EUROPT is by with contributing to the program by **20 *Invited Streams***, by a number of *special lectures* and many further *contributed talks* given by EUROPT members.

The ***Invited Streams*** prepared by **EUROPT** jointly with **POP** (*Pacific Optimization Research Activity Group*), our contact partner in POP being EUROPT member *Prof. Dr. Alexander Rubinov* (University of Ballarat, Australia), and the corresponding *stream organizers* (SOs) are:

Invited Stream: “*Computational Biology and Bioinformatics*”:

SOs: *Prof. Dr. Jacek Blazewicz* (Poznan University of Technology, Poland),
Prof. Dr. Metin Türkay (Koç University, Turkey)

Invited Stream: “*Convex Optimization Methods*” :

SO: *Prof. Dr. Marc Teboulle* (Tel-Aviv University, Israel),

Invited Stream: “*Data Mining*” :

SOs: *Prof. Dr. Emilio Carrizosa* (Universidad de Sevilla Infanta Mercedes, Spain),
Prof. Dr. Jacob Kogan (University of Maryland, USA),

Invited Stream: “*Dynamical and Anticipatory Systems*” :

SOs: *Prof. Dr. Marat U. Akhmet* (Middle East Technical University, Turkey),
Prof. Dr. Daniel Dubois (Université de Liège, Belgium),
Prof. Dr. Hakan Öktem (Middle East Technical University, Turkey),

Invited Stream: “*Generalized Newton Methods*” :

SO : *Prof. Dr. Liqun Qi* (Hong Kong Polytechnic University, China),

Invited Stream: “*Global and Local Derivative Free Optimization*” :

SOs: *Prof. Dr. Adil Bagirov* (University of Ballarat, Australia),
Prof. Dr. Alexander Rubinov (University of Ballarat, Australia),

Invited Stream: “*Global Optimization: Deterministic and Stochastic Methods*” :

SO: *Prof. Dr. Mirjam Dür* (Darmstadt University of Technology, Germany),

Invited Stream: “*Global Optimization: Software and Applications*” :

SO: *Prof. Dr. Janos Pinter* (PCs Inc. and University of Dalhousie, Halifax, Canada),

Invited Stream: “*Industrial Application of Nonlinear Programming Algorithms*” :

SO: *Prof. Dr. Klaus Schittkowski* (University of Bayreuth, Germany),

Invited Stream: “*Electricity Markets*” :

SOs: *Prof. Dr. Edward Anderson* (Australian Graduate School of Management, Australia),
Prof. Dr. Daniel Ralph (University of Cambridge, GB),
Prof. Dr. Heinz Stiegler (Karl Franzens University, Graz, Austria),

Invited Stream: “*Linear Optimzation*” :

SO: *Prof. Dr. Petra Huhn* (Clausthal University of Technology),

Invited Stream: “*Linear Semi-Infinite Optimization*” :

SOs: *Prof. Dr. Miquel Goberna* (University of Alicante, Spain),
Prof. Dr. Marco Lopez (University of Alicante, Spain),
Prof. Dr. Maxim Todorov (Universidad de las Americas, Mexico),

Invited Stream: “*Long Term Financial Decisions*” :

SO: *Prof. Dr. Thomas Burkhardt* (University of Koblenz-Landau, Germany),

Invited Stream: “*Mathematical Programming*” :

SOs: *Prof. Dr. Mustafa Pinar* (Bilkent University, Turkey),
Prof. Dr. Raphael Hauser (University of Cambridge, USA),
Prof. Dr. Sandor Nemeth (University of Birmingham, GB),

Invited Stream: “*Multiple Objective Optimization*” :

SOs: *Prof. Dr. Kathrin Klamroth* (University of Erlangen-Nuremberg, Germany),
Prof. Dr. Jose Figueira (University of Coimbra, Portugal),

Invited Stream: “*Nonlinear Semi-Infinite Optimization*” :

SOs: *Prof. Dr. Jan J. Rückmann* (Universidad de las Americas, Mexico),
PD Dr. Oliver Stein (RWTH Aachen University, Germany),

Invited Stream: “*Optimization in Financial Mathematics*” :

SOs: *Prof. Dr. Ralf Korn* (University of Kaiserslautern, Germany),
Prof. Dr. Mustafa Pinar (Bilkent University Turkey),

Invited Stream: “*OR in Developing Countries*” :

SOs: *Fernando Crespo* (Catholic University, Santiago, Chile),
Sethuraman Janardhanan (Indian Institute of Management Calcutta, India),
Dr. Eric Soubeiga (Hall Warden, Industrial Consultant, University of Nottingham, GB),
Prof. Dr. Leroy White (University of Bristol, GB),

Invited Stream: “*Semidefinite Programming*” :

SO: *Prof. Dr. Miguel Anjos* (University of Waterloo, Canada),

Invited Stream: “*Stochastic Programming*” :

SOs: *Prof. Dr. Georg Pflug* (University of Vienna, Austria),
Prof. Dr. Werner Römisch (Humboldt-University Berlin, Germany),
Prof. Dr. Alexander Shapiro (Georgia Institute of Technology, USA),

Invited Stream: “*Systems and Game Theory*” (with EURO WG E-CUBE):

SO: *Prof. Dr. Stefan W. Pickl* (Universitaet der Bundeswehr, München, Germany),
Prof. Dr. Ulrike Leopold Wildburger (Karl Franzens University, Graz, Austria),

For a complete list of all titles and speakers

- *Plenary and Semi-Plenary* Presentations,
- *Tutorials* and
- *Keynote* Lectures

we refer to the corresponding links under *Program* in <http://www.euro2006.org/>.

At EURO XXI 2006, three or more Plenaries was given, one of them - the IFORS Distinguished Lecture – by a member of EUROPT: *Prof. Dr. Saul Gass* (University of Maryland, USA).

From the *11 Semi-Plenaries*, 3 were given by members of EUROPT, namely, *Prof. Dr. Stefan W. Pickl* (Universitaet der Bundeswehr, Munich, Germany), *Prof. Dr. Janos Pinter* (PCS Inc. and Dalhousie University, Halifax, Canada) and *Prof. Dr. Tamás Terlaky* (McMaster University, Hamilton, Canada).

Moreover, from the *10 Tutorials*, 5 were proposed by streams related with EUROPT. Those tutorial presenters are: *Prof. Dr. Daniel Dubois* (HEC, University of Liege, Belgium), *Prof. Dr. Hubertus Th. Jongen* (RWTH Aachen, Germany), *Prof. Dr. Ralf Korn* (University of Kaiserslautern, Germany), *Prof. Dr. John-Shawe Taylor* (University of Southampton, GB) and *Prof. Dr. Yves Smeers* (Universite Catholique de Louvain, Belgium).

Furthermore, there are 5 **Keynotes**, 2 of them proposed by a stream related also with EUROPT: *Prof. Dr. Ralph Steuer* (University of Georgia, Athens, Georgia, USA) and by *Prof. Dr. William Ziemba* (University of British Columbia, Canada).

Also the other plenaries, semi-plenaries, tutorials keynotes and panels were close to our group EUROPT's interests.

Finally, there will be several **Panels** – 1 of them organized by a member of EUROPT: *Prof. Dr. Janos Pinter* (PCS Inc. and Dalhousie University, Halifax, Canada).

Discussion Sessions:

One of the streams consists of discussion sessions with contributed and invited presentations. All accepted discussion presentations may be candidates for the Best Poster Award. Among the Discussion Presentations, one is prepared by friends and members of EUROPT.

Programme Committee:

- T. Kinnunen (Finland Post Corp., *Chair*),
- G.-W. Weber (METU Ankara, Turkey, *Plenary chair*),
- R. Bisdorff (University of Luxembourg),
- J.-P. Brans (Vrije Universiteit Brussel, VUB, Belgium),
- U. Leopold-Wildburger (Karl-Franzens Universitat Graz, Austria),
- S. Olafsson (University of Iceland),
- M. Shutler (London School of Economics, United Kingdom),
- M. Widmer (University of Fribourg, Switzerland) and
- M. Zachariassen (University of Copenhagen, Denmark).

Organizing Committee:

- S. Olafsson (University of Iceland, *Chair*),
- G. Barbarosoğlu (Vice-President 1 of EURO),
- M.M. Halldorsson (University of Iceland),
- I. Hannibalsson (University of Iceland),
- T. Helgason (National Energy Authority),
- P. Jensson (University of Iceland),
- T. Kinnunen (Finland Post Corp.),
- I. Hannibalsson (University of Iceland),
- B.P. Kristinsdottir (Alcan Iceland),
- B. Kristjansson (Maximal Software),
- J. Krarup (University of Copenhagen) and
- H. Stefansson (Imperial College London).

Special Journal Issue:

Selected papers presented at the conference will be considered for publication in a special conference issue of the *European Journal of Operational Research (EJOR)* on “*OR for Better Management of Sustainable Development*”. Full texts must be submitted by November 1, 2006. Please find the Call for Papers under [http://www.iam.metu.edu.tr/EUROPT/EJOR%20special%20issue%20\(EURO%20XXI%202006\).pdf](http://www.iam.metu.edu.tr/EUROPT/EJOR%20special%20issue%20(EURO%20XXI%202006).pdf) .

New EURO Working Groups:

During the days of EURO XXI 2006, also two new working groups of EURO will be founded, namely *EURO Working Group “Operational Research for Development”* and *EURO Working Group “Operational Research in Computational Biology and Bioinformatics”* (cf. Subsection 2.1).

2.b “5th EUROPT Workshop on Advances in Continuous Optimization”

This international 5th *EUROPT Workshop on Advances in Continuous Optimization* has been organized by EUROPT in Reykjavik, Iceland, at June 30 – July 1, 2006; (<http://www.iam.metu.edu.tr/EUROPT/>) directly before the EURO XXI 2006 meeting. It continued in the line of EUROPT workshops held: 2000 in Budapest, 2001 in Rotterdam, 2003 in Istanbul and 2004 in Rhodes; EURO Summer Institutes and Mini Conferences, and our engagement during EURO conferences 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, operations 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.

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 (<http://www.euro2006.org/>) invited friends from all over the world to join and spend a precious, unforgettable time.

Topics

included 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.

Due to the paper submissions done by colleagues from all over the world until middle of March 2006 already, we could expect a very good participation at the workshop and allowed *parallel sessions* of contributed talks.

Our *Invited Speakers* were

- Adil Bagirov (University of Ballarat, Australia),
- Etienne de Klerk (Delft University of Technology, The Netherlands),
- Gianni Di Pillo (Universita di Roma "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,
- University of Twente, Enschede, Netherlands.

The following *Sponsors* are supporting us (and further ones may join):

- EURO,
- EUROPT,
- MAXIMAL Software, London, GB, and
- Pinter Consulting Services, Halifax, Canada.

The *Organizing Committee* has 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)

and our local representative and contact

- P. Jensson (University of Iceland).

The *Programme Committee* has 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 (Humboldt 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 Institute 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).

Special Issue: In preparation, there is a special issue “*Advances in Continuous Optimization*” of the *Central European Journal of Operations Research (CEJOR)*.

The **Guest Editors** are

- *Tamas Terlaky* (McMaster University, Hamilton, Canada),
- *Oliver Stein* (University of Karlsruhe, Germany),
- *Georg Still* (Twente University, Enschede The Netherlands),
- *Gerhard-Wilhelm Weber* (Middle East Technical University, Ankara, Turkey).

For closer information about the workshop please visit the

Report: [http://www.iam.metu.edu.tr/EUROPT/5thEUROPTWorkshop\(short\).pdf](http://www.iam.metu.edu.tr/EUROPT/5thEUROPTWorkshop(short).pdf) .

2.c EUROPT Summer Institute

“Optimization Challenges in Engineering: Methods, Software and Applications”

EURO Summer Institute “Optimization Challenges in Engineering: Methods, Software, and Applications” in Wittenberg, Germany, August 18 – September 2, 2006, proposed by *EUROPT* together with *GOR* (German Operations Research Society) and *Darmstadt University of Technology*, Germany, is the second ESI (after ESI 2004, Ankara, Turkey) which *EUROPT* got accepted by *EURO*, and the third one which we are serving as supporters (there was ESI 2004 in Neringa, Lithuania, also).

Homepage: <http://wwwopt.mathematik.tu-darmstadt.de/events/esi2006/>.

Our **Scientific Committee** consisted of:

- M. Dür (Darmstadt University of Technology, Germany),
- H.W. Hamacher (University of Kaiserslautern, Germany),
- P. Huhn (Clausthal University of Technology, Germany),
- F. Jarre (University of Düsseldorf, Germany),
- K. Klamroth (University of Erlangen-Nuremberg, Germany),
- M. Kočvara (Academy of Sciences of the Czech Republic, Prague, Czech Republic),
- C. Lemaréchal (INRIA, France),
- Y. Nesterov (Universite Catholique de Louvain, Belgium) and
- T.Terlaky (McMaster University, Hamilton, Canada).

The members of the **Organising Committee** are:

Local:

- M. Dür (Darmstadt University of Technology, Germany, *Chair*),
- P. Huhn (Clausthal University of Technology, Germany, *Co-Chair*),
- K. Klamroth (University of Erlangen-Nuremberg, Germany, *Co-Chair*) and
- Ch. Tammer (Martin Luther University Halle-Wittenberg, Germany, *Co-Chair*).

External:

- U. Leopold-Wildburger (Karl-Franzens University Graz, Austria),
- B. Karasözen (METU, Ankara, Turkey),
- G. Leugering (University of Erlangen-Nuremberg, Germany) and
- G.-W. Weber (METU, Ankara, Turkey).

Aims and Scope:

- Spanning the bridge between optimization theory and industrial applications is one of the big challenges for the operations research community.
- Continuous optimization and modern software implementations have become an indispensable resource in engineering sciences.
- This high demand in interdisciplinary collaboration is, however, not adequately covered in most of the current curricula programs in applied mathematics or engineering.
- Aim of this EURO Summer Institute has been to fill this gap and bring together young scientists with academic experts *and* professionals in engineering and software development.
- Based on two minicourses on continuous optimization methods and their algorithmic realizations, this ESI should combine tutorial lectures, short surveys and software presentations with student contributions and scientific discussions.
- It offers a unique opportunity for young scientists to acquaint themselves with state of the art optimization methodology and software, to enter the scientific community and to share their experience with young colleagues from all over Europe.
- Both students and lecturers should benefit from an international and interdisciplinary atmosphere in the beautiful and inspiring environment of the Renaissance city Wittenberg with its old university “Leucorea” where Martin Luther taught and made public his 95 theses.
- Planned excursions included trips to the German capital Berlin, the “Florence of the Elbe river” Dresden with the Semper Opera and the Church of our Lady (Frauenkirche), the national park of Saxon Switzerland with its romantic rocky landscape of Elb sandstone mountains, the flourishing city of Leipzig where Johann Sebastian Bach composed most of his famous work, and Halle, the cultural capital of Saxony-Anhalt.

Our ***Invited Speakers*** were:

- E. Anderson (Mosek, Denmark),
- H.-G. Bock (University of Heidelberg, Germany),
- A. Conn (IBM Research, USA),
- A. Griewank (Humboldt University, Berlin, Germany),
- M. Kočvara (Academy of Sciences of the Czech Republic, Prague, Czech Republic),
- A. Sartenaer (University of Namur, Belgium),

- T. Terlaky (McMaster University, Hamilton, Canada),
- L. Vandenberghe (UCLA, USA),
- A. Walther (Dresden University of Technology, Germany).

Funds are given by:

- EURO,
- EUROPT,
- GOR (German Operations Research Society),
- ILOG,
- Leucorea Foundation and the state of Saxony-Anhalt,
- Darmstadt University of Technology and
- Siemens.

Integration with other Activities:

From a scientific viewpoint, the ESI ideally complemented the EURO Mini Conference “Continuous Optimization in Industry” in Pécs, Hungary, in 2005 and the projected EUROPT workshop preceding EURO XXI in Reykjavik, Iceland, 2006.

In addition, the ESI is scheduled right before the annual meeting of the German Operations Research Society (GOR) in Karlsruhe (September 6 - 8, 2006, preceded by a tutorial on September 5) which will help decreasing costs by using synergy effects. GOR has offered free student registration for ESI participants.

Special Issue: There is a “*Special Issue of MMOR Devoted to ESI 2006*” in *MMOR (Mathematical Methods of Operations Research)* under preparation (cf. Subsection 2.q).

For closer information please visit the

Report: http://www.iam.metu.edu.tr/EUROPT/ESI2006_finalreport.pdf.

**2.d Workshop on
“Complex Societal Problems, Sustainable Living and Development”**

This workshop has taken place in Ankara, at IAM of METU during April 15-21, 2006, at the occasion of the third visit of *Dr. Dorien DeTombe* (University of Amsterdam), Chair of International and EURO Working Group on Complex Societal Problems, at Institute of Applied Mathematics of METU, and of EUROPT (April 14-24, 2006). It has been a joint contribution by

- Balaban Valley Group,
- Computational Biology and Medicine
(Seminar / Research Group; IAM and YUUP Biyotip Group, METU),
- General Seminar of IAM, METU,
- EURO Working Group on Complex Societal Problems,
- EURO Working Group “Operational Research for Development” (ORD) and
- EURO Working Group on Continuous Optimization (EUROPT);

EURO Working Group ORD will be officially founded during EURO XXI 2006 in Iceland (<http://www.euro2006.org/>).

This workshop has become attended by altogether *about 40 participants*.

The *Scientific Programme*:

The program has been consisting of various contributed and invited talks, of an excursion to Balaban Valley, by a seminar and an “open discussion”. For closer information please visit <http://www.iam.metu.edu.tr/EUROPT/Workshop%20on%20Complex%20Societal%20Problems.doc>.

Invited Speaker:

Dorien DeTombe (University of Amsterdam, The Netherlands).

The members of *Organizing Committee* have been:

- D. DeTombe (University of Amsterdam The Netherlands),
- A. Gökmen (Dept. of Chemistry, METU, Turkey),
- I. Gökmen (Dept. of Chemistry, METU, Turkey),
- B. Karasözen (IAM, METU, Turkey),
- S. Kayalığıl (Dept. of Industrial Engineering, METU, Turkey),
- H. Körezlioğlu (IAM, METU, Turkey) and
- G.-W. Weber (IAM, METU, Turkey).

Please find closer information under

<http://www.iam.metu.edu.tr/EUROPT/Workshop%20on%20Complex%20Societal%20Problems.doc>.

We emphasize that this workshop deepened the collaboration between the three contributing EURO working groups, it supported and attracted further founding members of the new *EURO Working Group “OR for Development”* (cf. Subsection 2.j), it organized and prepared future collaboration in Turkey and Europe, e.g., practically and scientifically for the people of Balaban Valley and entire Turkish rural countryside. In the weeks after the workshop, new project groups of Balaban Valley project were established and project group meetings held. Finally, during the workshop days, the Stream “*Complex Societal Problems*” at *EURO XXI 2006* became further developed and carefully planned, and common publication projects initiated.

2.e 1st Summer School Achievements and Applications of Contemporary Informatics, Mathematics and Physics

First Open Summer School-Seminar “Achievements and Applications of Contemporary Informatics, Mathematics and Physics” (AACIMP-2006) was held at National Technical University of Ukraine “Kyiv Polytechnic Institute” (NTUU “KPI”) during August 6th – 20th, 2006. It was organized by Students’ Science Association of NTUU “KPI” (SSA NTUU “KPI”).

People who work in perspective branches of modern science gathered there to share their knowledge and ideas with students and to communicate with colleagues. Extending knowledge of the youth, popularization of new technologies and ideas that are not studied in university and search for new contacts in the scientific world were the aims of Summer School.

Scientists from Holland, Turkey, Ukraine and further countries, namely, *G.-W. Weber, B. Goldengorin, R. Tikidgi-Hamburyan, I. Samoylenko, A. Makarenko, V. Melnyk*, and others, gave lectures about the most interesting achievements of contemporary science and their applications in the modern world for the listeners of Summer School. The main topics of the lectures dealt with applied mathematics, contemporary technical developments in information technologies and concepts of modern nature sciences. Here are some of them:

- Generalized Semi-infinite Optimization of Generic Networks,
- Optimal Control of Singular Perturbed Infinite Systems,
- Tolerances and Data Correcting Based Algorithms in Combinatorial Optimization,
- Attractors of Evolutional Equalizations without Only Decision,
- Problems of Theory of the Optimum Management Tasks Meanings,
- Quantum Mechanics,
- Synergetic Study of the Brain Dynamics, and
- Geoinformation Systems, High Performance Computing.

Students and post-graduates were highly interested in all the lectures, asked their questions and had a possibility to discuss them either in formal or in informal atmosphere. Except lectures and seminars, two round table discussions were conducted: during one of them students, post-graduates and scientists had an opportunity to discuss their last works, achievements and ideas; the other one was dedicated to Physical Cybernetics – the topic of the book written by academician of the National Academy of Science of Ukraine I. Samoylenko. SSA NTUU “KPI” also organized interesting cultural program for all participants.

Importance of Summer School-Seminar was confirmed by the sponsorship and lectures of such world famous companies working with information technologies as Microsoft, Intel, Siemens, Cisco Systems, Novell.

“AACIMP-2006” was one of the first steps in complementary technical education. The organizers – all of them young students! - are grateful to all participants of Summer School-Seminar “Achievements and Applications of Contemporary Informatics, Mathematics and Physics” and invite everyone who is interested in these topics to visit next Summer School that will be held in 2007.

During this summer school which may be regarded to be very important for the development and of the whole country of Ukraine, its education, development and democracy, many friends joined EUROPT and the two new EURO Working Groups.

Please find closer information under
and <http://www.iam.metu.edu.tr/EUROPT/2006SummerSchoolKievREPORT.pdf> .

2.f “5th Ballarat Workshop on Global and Nonlinear Optimization, Theory, Methods and Applications”

Aims: This workshop aims at bringing together experts from Australia, Pacific region and around world in the area of optimization theory, methods and applications to meet and exchange their recent research findings and to discuss possible joint projects.

Topics: The topics of the workshop include all areas of optimization, optimal control and their applications, however the emphasis of this workshop is on theory, numerical methods and applications of global and non-smooth optimization.

Homepage: <http://www.ballarat.edu.au/ard/itms/CIAO/Workshops/OTMA3.shtml>.

Workshop Program: The final draft of the workshop program is available at http://www.ballarat.edu.au/ard/itms/CIAO/Workshops/Programme_final-1.html.

Workshop Keynote Speakers (for the focussed meeting):

- Terry Rockafellar (University of Washington, USA) for the workshop;
- Bülent Karasozen (Middle East Technical University, Turkey)

Workshop Invited Speakers:

- Adil Bagirov (University of Ballarat, Australia),
- Gleb Beliakov (Deakin University, Australia),
- Leonid Churilov (Monash University, Australia),
- Bruce Craven (University of Melbourne, Australia),
- Regina Burachik (University of South Australia, Australia),
- Andrew Eberhard (RMIT, Australia),
- Jerzy Filar (University of South Australia, Australia),
- Masao Fukushima (Kyoto University, Japan),
- Vladimir Gaitsgory (University of South Australia, Australia),
- Phil Howlett (University of South Australia, Australia),
- Yalcin Kaya (University of South Australia, Australia),
- Alexander Kruger (University of Ballarat, Australia),
- Musa Mammadov (University of Ballarat, Australia),
- Juan Enrique Martinez Legaz (University Autònoma, Barcelona, Spain),
- Angelia Nedich (The University of Illinois at Urbana-Champaign, United States),
- Iradj Ouveysi (University of Ballarat, Australia),

- Asuman Ozdaglar (MIT, United States),
- Jiri Outrata (CAS, Czech Republic),
- Marimuthu Palaniswami (University of Melbourne, Australia),
- Diethard Pallaschke (Karlsruhe University, Germany),
- Xiaoling Sun (Shanghai University, China),
- Peter Taylor (University of Melbourne),
- Gerhard-Wilhelm Weber (Middle East Technical University, Ankara, Turkey),
- Zhiyou Wu (University of Ballarat, Australia),
- Xiaoqi Yang (Hong Kong Polytechnic University, China),
- David Yost (University of Ballarat, Australia),
- Alberto Zaffaroni (University of Lecce, Italy) and
- Liansheng Zhang (Shanghai University, China).

Organizer: Prof. Dr. Adil Bagirov (University of Ballarat).

We express our cordial gratitude to dear *Adil* and his wonderful local team!

Special Issues: Selected papers presented at the workshop will be published in special issues of *Journal of Industrial and Management Optimization* and *Optimization*.

Sponsors:

- Australian Mathematical Sciences Institute,
- IBM ARC Research and
- Network on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP)

EUROPT helped, e.g., in honouring *Prof. Dr. Alexander Rubinov* to whom this workshop is dedicated, in memoriam. He became appointed EUROPT Fellow 2006 – the first EUROPT Fellow in the history of our EURO Working Group. He passed away in 2006. Closer information about our Fellow and the condolences given to his family can be found under http://www.iam.metu.edu.tr/EUROPT/letter_09_06.htm and http://www.iam.metu.edu.tr/EUROPT/letter3_09_06.htm. This award became handed out to his widow *Dr. Zari Dzalilov* during the workshop. Please find a speech and the special plaque given at that extraordinary occasion under <http://www.iam.metu.edu.tr/EUROPT/speech%201%20Ballarat%20G.-W.%20Weber.pdf> and <http://www.iam.metu.edu.tr/EUROPT/Prof.%20Dr.%20Alexander%20Rubinov%20---%20Plate.pdf>.

2.g “Seminar on Computational Biology and Medicine”

“*Seminar on Computational Biology and Medicine*” is the weekly seminar of Research Group on Computational Biology and Medicine of *Institute of Applied Mathematics (IAM)* together *YUUP Biyotip Group “Bioinformatics”* of METU and with *EUROPT*. In fact, EUROPT is serving this group by various international contacts and scientific impulses, including information and encouragement for submitting papers in *European Journal of Operational Research (EJOR)*; please cf., e.g., Subsections 2.n and 2.o. Reversely, EUROPT and entire EURO is getting feedback in the form of valuable ideas and proposals, as will be indicated below.

The research in our group is mainly concerned with:

- *modeling and prediction of gene expression patterns,*
- *gene networks,*
- *computational human metabolism,*
- *modeling and prediction of the pro-peptide cleavage site of fungal extracellular proteins,*
- *brain research,*
- *heart research,*
- *population dynamics,*
- *gene dynamics,*
- *gene admixture and variation,*
- *classification of populations,*
- *geometrical morphometry,*
- *modeling of proximal femur geometry and bone mineral density,*
- *sustainable development and living* and
- *control of earth warming.*

Closer information about Computational Biology and Medicine by IAM can be found under <http://www.iam.metu.edu.tr/research/groups/compbio/index.html>. Finally, our group has been active by giving *seminars* and *talks*: At *Seminar on Computational Biology and Medicine* there were **34** presentations were given by our group.

In 2006, a number of new members joined Research Group on Computational Biology and Medicine: new students and teachers likewise. Please find closer information about our seminars under <http://www.iam.metu.edu.tr/research/groups/compbio/seminars.html>.

As another very important contribution, in 2006, this group served as a germ in the process of proposing and preparing a new *EURO Working Group “Operational Research in Computational Biology, Bioinformatics and Medicine”* which became approved by EURO Executive Committee in February 2006.

In early 2007, we changed the name of our seminar to “*Seminar on Computational Biology, Medicine, Environment and Development*”.

2.h “Workshop on Geometric Morphometrics”

Morphometrics is the study of shape variation in organisms and its covariation with other variables. During the last 15 years there have been great advances in development of the methods used for description and statistical analysis of shape variation. The aim of this

workshop has been to provide comprehensive introduction to both theory and methods in the shape analysis and its practical aspects. Traditional morphometric analyses are based on the measurements that generate sets of distances among objects being studied, while geometric morphometrics utilizes landmark coordinates to extract the shape of the objects. The main objective of the workshop has been to equip the students with knowledge to analyze shapes of the organisms in their study and carry out the statistical analyses of their data. The workshop wanted to be presented in a lecture and laboratory format where lectures are followed by practical sessions in data acquisition, use of shape analysis software, statistical analysis. Geometric morphometrics employs statistical learning and optimization; it is used in describing and comparing shapes of organisms or the shapes of particular structures. This method is applicable in studying geographical, developmental, genetic, and environmental variation in shape of the organisms. Thus it can be used by a broad category of students in the fields of ecology, evolution, systematics, genetics, medicine, etc.. Since it is applicable to many areas in biology, medicine, and anthropology, it is very useful in interdisciplinary research areas.

Closer information about the workshop is given on the homepage <http://www.metu.edu.tr/~aykut/>.

The workshop has been limited to 20 students. Participants were expected to work on their own example (small) data sets to facilitate understanding of the application of geometric morphometric methods, and each student is expected to present a brief summary of the analysis of her/his own data.

The Organizing and Supporting Institutions of this workshop were

- Department of Biology, METU,
- Scientific and Technical Research Council of Turkey,
- METU,
- EUROPT and
- The new EURO Working Group EURO WG CBBM.

The *Invited Speakers* were

- D.C. Adams (Iowa State University, USA),
- F.J. Rohlf (SUNY Stony Brook, USA) and
- D.E. Slice (University of Vienna, Austria).

2.i EJOR Special Issue “Continuous Optimization in the Industry”

The European Journal of Operational Research will publish a special issue on *Continuous Optimization in the Industry*. It became finalized at late 2006 and early 2007. One of the most important concerns of our societies is the ensuring and continuous improvement of living standard which is impossible without fast development in all aspects of life, technology and science. Nowadays, optimization is an enabling technology in innovation. To exchange and paper submission were welcoming practitioners of operations research from industry and economic practice together with researchers, software developers and those operations researchers who are doing consultancy for companies. Our EJOR special issue focuses on recent advances in large scale continuous optimization and their applications in industry. High performance optimization software and novel applications are

reviewed as well. Contributions of more a theoretical kind are welcome to our optimization issue also.

This special issue has been initiated by *EUROPT*, EURO Working Group on Continuous Optimization (www.iam.metu.edu.tr/EUROPT/), in close correspondence with *EJOR* and *EURO*. It aims at demonstrating the state-of-the-art of this exciting research field, to reflect its challenges and to invite to future research and collaboration among the countries of EURO and in the world. Furthermore, this special issue will provide a destination for papers presented during our 17th EURO MC which was organized by EUROPT, Hungarian OR Society, University of Pécs, and supported by EURO and German OR Society (please see http://www.cs.elte.hu/opres/Pecs05EUROmini/h_about.html).

The Guest Editors are:

- *Tibor Illes*, Eötvös Loránd University of Sciences, Budapest, Hungary,
- *Marco Lopez*, University of Alicante, Spain,
- *Jacques Teghem* (EJOR, Editor), Université Libre de Bruxelles, Belgium,
- *Tamás Terlaky*, McMaster University, Hamilton, Canada,
- *József Vörös* (University of Pécs, Pécs, Hungary) and
- *Gerhard-Wilhelm Weber*, METU, Ankara, Turkey.

2.j EUROPT Homepage

The EUROPT homepage <http://www.iam.metu.edu.tr/EUROPT/> is maintained at Institute of Applied Mathematics, METU, Ankara, since summer 2003; before it was hosted at Eötvös Loránd University in Budapest. Our webmasters are

- *Basak Akteke* (web admininstator),
- *Köksal Yücesoy* (database adminator) and
- *Aysun Tezel* (EUROPT side admin. at EURO homepage),

in collaboration with G.-W. Weber. **Cordial thanks** to the three ones for all their valuable service for our community, their efforts and devotion! This homepage collects and presents a lot of information about forthcoming scientific events, future plans in EUROPT, developments in EURO, job announcements, reports about events, scientific years and initiatives, the list of members, etc.. This is a service for the EUROPT members, for EURO and other organizations, scientific groups and, sometimes, companies. The EUROPT homepage is a medium closely interacting with the EUROPT newsletter:

2.k EUROPT Newsletter by E-Mails and New E-Newsletter

In average, once or twice in every week, EUROPT sends most recent information, announcements and invitations, sometimes reminders also. This newsletter goes out by e-mails from the address euopt-l@metu.edu.tr, it mutually interacts with the EUROPT

homepage and wants to inform “on-line”, to keep our members “updated” and to give valuable encouragement.

At EURO XXI 2006, EUROPT decided about a new leadership structure called Managing Board (cf. Subsection 2.r). **Prof. Dr. Kaisa Miettinen** became responsible for *Newsletter* and *Webpage*. As our new editor e-newsletter editor she served very valuably for shaping and channelizing the whole body of information concerning EUROPT, EURO, related organization and all of their activities. She is regularly assisted by *MSc. Başak Akteke-Öztürk* who with the above mentioned colleagues works for the internet sides, and Gerhard-Wilhelm Weber.

2.1 New EURO Working Group “Operational Research for Development”

In the year 2005, EUROPT submitted to EURO a proposal for a new *EURO Working Group “Operational Research for Development”*. This proposal became approved by Executive Committee of EURO at its meeting during IFORS 2005 (Hawaii, USA, July 11-15, 2005).

The aims of this new EURO Working Group are (1) to establish an open forum of exchange, scientific life and collaboration within EURO which integrates already existing groups, impulses and individuals from European and international Operational Research towards a common learning and service, despite of their differences in academic background or in origin of country; (2) to integrate scientists and practitioners in OR from both the developed and the developing countries to serve the peoples, especially, of the developing and threshold countries, and to overcome the challenges of world globalization. Herewith, embedded into and to the best of scientific landscape and calendar of EURO and its existing working groups, (3) this group looks for giving valuable contributions to development, friendship, freedom and peace in and among the nations and continents.

The foundation for a new EURO WG “Operational Research for Development” will be during the conference days of EURO XXI 2006 in Reykjavik, Iceland, July 2-5, 2006.

This initiative for *EURO WG “Operational Research for Development”*, in short, *EWG ORD*, or *EWG N-YORC* (according to *YORC* you will find in (ii); “*N*” could stand for “network” – and “new”) bases on the engagement, well understanding and common devotion of two groups:

- (i) **“OR for Developing Countries Study Group” of Operational Research Society of the United Kingdom**,
connected also with
“African Operational Research Network ” (AORN) and
- (ii) **“Young People for Operational Research in the Developing Countries” (YORC)**,
connected also with
“Babalan Valley Group” of METU, Ankara.

Other groups and individuals are already close to us, and more are cordially invited and welcome to join our impulse within of EURO, to become our partners and friends. From the beginning on, now and for the next steps, EUROPT is offering some starting help and organizational “sponsorship”. For example, a homepage for the new group is in preparation. Further information about the new EURO WG will be given later.

2m New EURO Working Group “Operational Research in Computational Biology and Bioinformatics”

Furthermore, in 2005, EUROPT submitted to EURO a proposal for a new *EURO Working Group “Operational Research in Computational Biology and Bioinformatics”*. By Executive Committee of EURO at its meeting in Bruxelles (February, 2006), this proposal became approved also.

The aims of this new EURO Working Group are (1) to establish an open forum of exchange, scientific life and collaboration using modern methods of OR within EURO, integrating already existing groups, impulses and individuals from European and international Operational Research in the emerging fields of biological problems and perspectives in data management, analysis and technologies; (2) to integrate researchers and practitioners in OR to overcome the scientific challenges in medicine, pharmacy, food production, conservation of genetic wealth, alternative energy generation and of development. Herewith, embedded into and for the best of the scientific landscape and calendar of EURO and its existing working groups and chapters, (3) this group looks for giving valuable contributions to building up our countries and their friendship, to welfare, freedom and peace in and among the nations and continents.

The foundation of the new EURO WG “Operational Research in Computational Biology and Bioinformatics” will be during the conference days of EURO XXI 2006 in Reykjavik, Iceland, July 2-5, 2006.

EURO WG “Operational Research in Computational Biology and Bioinformatics”, in short, “*Operational Research in Computational Biology and Bioinformatics*” and abbreviated by, e.g., *EWG CBI*, bases on some invitation for merging of two lines of modern biological research cultures and traditions, unified by and in the house of European *Operational Research*:

- (i) **“Computational Biology”**,
which encompasses the more mathematics based and aided investigations in biology, with special emphasis on methods of modeling, dynamical systems, networks, continuous optimization, numerical analysis, statistical learning and inverse problems, and
- (ii) **“Bioinformatics”**,
by which the more computer science and informatics based and aided investigations in biology are understood, with special emphasis on methods for data bases, algorithms or heuristics, complexity, discrete optimization and, in general, various fields of combinatorial and discrete mathematics applied.

By both lines, two of the streams which classically contribute to Operational Research (*OR*) are represented: applied mathematics and computer sciences. Moreover, the central stream

of OR coming from *management sciences* and *economy* is one more foundation of this new group in theory, methods and applications. In fact, OR based computational biology and bioinformatics is in a concerted way contributed by so many disciplines. Also for this new EURO WG, a homepage for the new group is in preparation, and further information will be given later on.

2.n EJOR Special Issue “Advances in Continuous Optimization”

On July 4-5, 2003, *EUROPT* celebrated its third annual workshop in Istanbul, Turkey (<http://www.iam.metu.edu.tr/contopt03/conf/index.html>), right before EURO/INFORMS Joint International Meeting (Istanbul, July 6-10, 2003). The organizing committee of the Workshop was composed of Ilkay Boduroğlu, Bülent Karasözen, Mustafa C. Pınar and Gerhard-Wilhelm Weber. The Workshop was high-lighted by the participation of six invited speakers: Tamas Terlaky (McMaster University), Farid Alizadeh (Rutgers University), Oliver Stein (Technical University of Aachen), Marc Teboulle (Tel-Aviv University), Jean-Louis Goffin (McGill University), Ivo Nowak (Humboldt University, Berlin). More than 40 participants made 14 contributed presentations in the Workshop. This event was made possible by the sponsorship and support of The Association of European Operational Research Societies, Middle East Technical University, Boğazici University and Bilkent University.

During the conference, the call was given by EJOR for a further special issue to be prepared by our EURO working group as proceedings to the workshop “Advances in Continuous Optimization”. Following the theme of this workshop, the title of the special issue became “*Advances in Continuous Optimization*”. From this time on, our invitations, entire organization and initiation of refereeing processes began, based on and continuing the high scientific level of the Istanbul workshop.

The present EJOR special issue is already the third one of our working group EUROPT which was founded in Budapest, Hungary, in 2000. Following both the workshop held there and the second one held in Rotterdam, The Netherlands, in 2001, two *EJOR special issues* (or *Feature Clusters*) were prepared and published. Today, we are glad to announce the finalization of this third EJOR special issue. There were *nine papers submitted* to us, four of them by participants of that workshop with their coauthors, and the other ones by EUROPT members and colleagues which then became new friends of EUROPT and EURO. The refereeing process consisted of the careful work of *eighteen referees*, specialists from all over the world. As a result of their rigor, devotion, and very constructive and fruitful work, all nine papers of this Feature Cluster fulfil the high standards of EJOR and reflect the “*Advances in Continuous Optimization*” by a very rich variety in state-of-the-art research and vision. We, guest editors, thank the participating referees very sincerely for their devoted efforts, and for their positive encouragement of the authors whenever needed.

The guest editors are convinced that each of these papers by content and style really fulfills the high EJOR standards and serves to represent continuous optimization as one of the core areas of modern OR. It is their hope in editing this Feature Cluster that readers of EJOR will appreciate the efforts of EURO as a European initiative for the advancement of science, and EJOR as a unique premium journal for scientific exchange.

The *Guest Editors* were

- *Bülent Karasözen*, Middle East Technical University, Ankara, Turkey,
- *Mustafa Ç. Pınar*, Bilkent University, Ankara, Turkey,
- *Tamas Terlaky* (EUROPT deputy at EJOR), McMaster University, Hamilton, Canada,
- *Gerhard-Wilhelm Weber*, Middle East Technical University, Ankara, Turkey.

This issue appeared as a feature cluster in *European Journal of Operational Research* 169, 3 (2006).

2.0 EJOR Special Issue “Optimization and Data Mining”

During July 9-25, 2004, XXII EURO Summer Institute took place at METU, Ankara, Turkey, on the subject “*Optimization and Data Mining*” (<http://www.iam.metu.edu.tr/esi04/index.html>). ESI XXII has been sponsored by *The Association of European Operational Research Societies* (EURO), *Turkish Scientific and Technological Research Council* (TUBITAK), and organized by EUROPT, by IAM (METU) and ORST. ESI XXII became a key events in the course of European collaboration on OR, supported and surrounded by Turkish hospitality, rich old culture and enthusiasm of its young scientific generation. Herewith, we tried to justify the great confidence and sympathy given to us by EURO and its national OR societies. The scientific atmosphere and challenge which could be felt and celebrated by our ESI XXII community during the 2-3 weeks in Ankara, based on the combination of its two parts, of two scientific research fields and traditions within of OR and EURO:

- ***data mining***, being widely accepted and appreciated today as a key application field in management sciences, natural sciences and engineering,
- ***optimization***, being a modern key technology prepared and offered by mathematics and related sciences.

The organizing committee of ESI XXII was composed of *Bülent Karasözen* (*Chairman of ESI 2004*), *Mirjam Dür*, *Tibor Illes*, *Sinan Kayalığıl*, *Stefan W. Pickl*, *Mustafa Pınar*, *Leonidas Sakalauskas* and *Gerhard-Wilhelm Weber* (*Co-Chairman of ESI 2004*). ESI XXII was high-lighted by the participation of six invited speakers, our ESI teachers: *Larry Biegler* (Chemical Engineering Department of Carnegie Mellon University, USA), *Şebnem Düzgün* (Geodetic and Geographic Information Technologies, Middle East Technical University, Ankara, Turkey), *Sjur Didrik Flåm* (Economics Department, Bergen University, Norway), *Michael Kohler* (Department of Mathematics, University of Stuttgart, Germany), *Jacob Kogan* (Department of Mathematics and Statistics and Department of Computer Science and Electrical Engineering UMBC, Baltimore, USA), *Boris Polyak* (Institute of Control Science, Moscow, Russia), *Jakob Krarup* (Department of Computer Science, University of Copenhagen, Denmark), *Alexander Rubinov* (School of Information Technology and Mathematical Sciences, University of Australia) and *Georg Still* (Department of Applied Mathematics, University of Twente, The Netherlands).

The total number of young participants turned out be **23**, and with the number **9** of our invited lecturers, thus the total number of all our guests became **32**. Our ESI 2004 participants travelled to us from **20** different countries: Australia, Brazil, Chile, Denmark, France, India, Italy, Germany, Hungary, Lithuania, The Netherlands, Norway, Poland, Portugal, Russia, Spain, Switzerland, Turkey, United Kingdom and USA.

This EJOR special issue is the fourth one of our working group EUROPT which was founded in Budapest, Hungary, in 2000. Proceeding the first workshop held there, the second one held in Rotterdam, The Netherlands, in 2001, and the third one celebrated in Istanbul, Turkey, in 2003, three *EJOR special issues* were prepared and published before. In the year 2005, we have been happy to announce this fourth EJOR special issue completed.

The refereeing process consisted of the careful work of fortyone referees, specialists from all over the world. As a result of their rigor, devotion, or their very fruitful and constructive work, seventeen of the submitted papers fulfill the high standards of EJOR and reflect the recent advances and modern contributions to "*Optimization in Data Mining*" by a rich variety in state-of-the-art research and vision. We, the guest editors, very cordially thank the participating referees for their engaged efforts, and for their positive encouragement of the authors whenever needed.

We are convinced that each of these papers by content and style really fulfills the high EJOR standards and serves to represent both modern OR as an excellent host of the emerging important area of data mining and optimization theory as one of the core areas of modern OR. In editing this Special Issue / Feature Cluster of EJOR, it is our hope that the readers will appreciate the efforts of EURO as a European initiative for advanced studies and EJOR as a unique journal for scientific communication and excellence.

The Guest Editors were:

- *B. Karasözen*, Middle East Technical University, Ankara, Turkey,
- *A. Rubinov*, University of Ballarat, Australia,
- *J. Teghem* (EJOR, Editor), Faculté Polytechnique de Mons, Belgium, and
- *G.-W. Weber*, Middle East Technical University, Ankara, Turkey.

This issue appeared as a feature cluster in *European Journal of Operational Research* 173, 3 (2006).

We initiated the project and started to prepare

2.p CEJOR Special Issue “Advances in Continuous Optimization”

The Central European Journal of Operations Research will publish a special issue on Advances in Continuous Optimization. This special issue is initiated by EUROPT, the EURO Working Group on Continuous Optimization (www.iam.metu.edu.tr/EUROPT), in close correspondence with EURO. It aims at demonstrating important recent contributions to the wide research field of modern continuous optimization, at pointing out its challenges and at inviting to future research and collaboration among the countries of EURO and beyond. Furthermore, this special issue will contain papers presented during our recent EUROPT Workshop in Reykjavik, Iceland (for details please see wwwhome.math.utwente.nl/stillgj/COPT06).

Guest editors:

- *Oliver Stein* (RWTH Aachen University, Germany),
- *Georg Still* (University of Twente, The Netherlands),
- *Tamás Terlaky* (McMaster University, Hamilton, Canada),

- *Gerhard-Wilhelm Weber* (METU, Ankara, Turkey).

Moreover, at the occasion of our ESI 2006 (please cf. 2.c) the following special issue was initialized.

2.q MMOR Special Issue “Special Issue of MMOR Devoted to ESI 2006”

The participants of EURO Summer Institute in Wittenberg were invited to submit to this special issue of *Mathematical Methods of Operations Research*.

The *Guest Editors* are

- *Mirjam Dür* (Darmstadt University of Technology, Germany),
- *Petra Huhn* (Clausthal University of Technology, Germany),
- *Kathrin Klamroth* (University of Erlangen-Nuremberg, Germany) and
- *Christiane Tammer* (Martin Luther University Halle-Wittenberg, Germany) .

2.r Management Board of EUROPT

Based on a thorough preparation and election procedure that took place in the weeks before the 5th EUROPT Workshop “Advances in Continuous Optimization”, at the occasion of our workshop, a new management structure of EUROPT could be announced to be approved. In fact, on July 1, 2006, EUROPT Honorary Coordinator Prof. Dr. Tamás Terlaky, informed about a six persons’ board with various scientific areas covered and tasks fulfilled and a with a new two years cycle as well. The following colleagues from EUROPT became those board members: Prof. Dr. Gerhard-Wilhelm Weber (Chair), Prof. Dr. Florian Jarre (Past Chair) whom we thank for his valuable service in the last three years, Prof. Dr. Marco A. Lopez-Cerda (General Vice Chair, Chair Elect) and the members Jun. 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 roles in the restructuring process and, with Cand. Dr. Zsolt Csizmadia, in having conducted the election procedure so well.

The distribution of tasks of the board members is the following):

I. Management-Tasks:

- *Florian Jarre*: Past Chair
- *Marco A. Lopez-Cerda*:
General Vice Chair, Chair Elect, Treasurer with F. Jarre and G.W.W.;
- *Mirjam Dür*: Events Coordinator with M.A. Lopez-Cerda and G.W.W.;
- *Kaisa Miettinen*: Newsletter-WEB-Page Editor with F.J. and G.W.W.;
- *Leonidas Sakalauskas*: Secretary with F.J. and G.W.W.;
- *Gerhard-Wilhelm Weber*: Chair.

II. Management- Scientific Areas:

- *Florian Jarre*: Linear and Cone-Linear Optimization;
- *Marco A. Lopez-Cerda*: Convex Analysis and Generalized Convexity;
- *Mirjam Dür*: Global Optimization;
- *Kaisa Miettinen*: Multi-Objective Optimization;
- *Leonidas Sakalauskas*: Stochastic Programming;
- *Gerhard-Wilhelm Weber*:
Nonlinear Optimization; and, with all board members, related topics.

2.s EUROPT Fellows

In the second half of 2007, by the decision of the Managing Board of EUROPT with its six members together with the two Honorary Coordinators of EUROPT and after recontact with EUROPT members, our EURO Working Group is introducing a novel beginning with this year: The honouring of one, or in some years two distinguished EUROPT members who have given extraordinary contributions in and with our EURO Working Group EUROPT, by EUROPT FELLOWSHIP FOR [YEAR]. This honouring will become expressed by a laudatio and a document, as we plan: in the form of a small plate – or certificate, as we later on also discussed, and represented at our EUROPT homepage. We hope that this introduction will esteem the fellows highly, that it will inspire members and friends to active participation in the scientific life of EUROPT, and help for a “branding of EUROPT”.

In 2006, we are appointing Prof. Dr. Alexander Rubinov (University of Ballarat, Australia) to become EUROPT FELLOW 2006. Please find closer information under Subsection 2.f.

At our EUROPT homepage (<http://www.iam.metu.edu.tr/EUROPT/>), the EUROPT Fellows are represented by the link *EUROPT Fellows*.

3 Forthcoming Activities in 2007

In 2007, there will be two great events which EUROPT contributes to very strongly:

- (a) *EURO XXII 2007, 22st European Conference on Operational Research*, Prague, Czech Republic, July 8-11, 2007;
- (b) *Joint EUROPT-OMS Conference - 2nd Conference on Optimization Methods & Software - 6th EUROPT Workshop “Advances in Continuous Optimization”*, Prague, Czech Republic, July 4–7, 2007;

for providing our friends well internationally, we also support the big conference

- (c) *INFORMS International Puerto Rico*, Puerto Rico, July 8–11, 2007;

and the event

- (d) *International Symposium on Health-Informatics and Bioinformatics*, Antalya, Turkey, April 30 – May 2, 2007;

and

- (e) “*Seminar on Computational Biology, Medicine, Environment and Development*” (weekly seminar) METU, Ankara;

there will appear the

- (f) *EJOR Special Issue “Challenges of Continuous Optimization”*;

we will finalize three more special issues, namely,

- (g) *CEJOR Special Issue “Advances in Continuous Optimization”*,
- (h) *MMOR Special Issue “Special Issue of MMOR Devoted to ESI 2006”*,
- (i) *Special Issue “Continuous Optimization in Finance” of the Journal Optimization*.

Furthermore, we give our best to support two special issues at the occasion of EURO XXI:

- (j) *EJOR Special Issue “OR for Better Management of Sustainable Development”* and the *CEJOR Special Issue at the Occasion of EURO XXI 2006*,

and we give help for

- (k) the two new *EURO Working Groups EURO CBBM and EURO ORD*, and their activities,

and

- (l) for the research areas *Continuous Optimization in Finance, Data Mining, Dynamical Systems, Inverse Problems and Optimal Control*.

We already began and continue with the

- (m) preparation of *EURO Mini Conference “Continuous Optimization and Knowledge-Based Technologies”*.

Finally, we spend care about

- (n) *EUROPT Homepage* and
- (o) *EUROPT E-Newletter*.

3.a EURO XXII 2007

The 22nd European Conference on Operational Research EURO XXII will be organized by the Czech Society for Operational Research in cooperation with the University of Economics, Prague. The Conference will be held in the campus of the University of Economics which is situated very close to the Prague historical centre.

Prague with its astonishing architecture, history and cultural heritage, numerous theatres, concerts, cosy restaurants and pubs attracts an increasing number of visitors every year. Here you can visit places where Mozart, Smetana, Dvořák composed and conducted their music, where writers like Kafka, Seifert and Kundera found an inspiration for their works.

The Programme and Organising Committees are preparing a high quality academic programme of the Conference. In addition to this you will have an excellent opportunity to exploit the hospitality of Prague, so-called Heart of Europe, during one of the most beautiful months of the year. Participation at the Conference will enhance you with an extraordinary experience, not only in the professional but in the cultural and social sense as well.

Homepage: <http://euro2007.vse.cz/>

Programme Committee:

- *Chair:* Ulrike Leopold-Wildburger, Austria,
- Rainer Burkard, Austria,
- Dimitris Despotis, Greece,
- Josef Jablonsky, Czech Republic,
- Tuula Kinnunen, Finland,
- Hans-Jakob Luethi, Switzerland,
- Gautam Mitra, UK,
- Roman Slowinski, Poland,
- Jacques Teghem, Belgium,
- Tamás Terlaky, Canada, and
- Gerhard Woeginger, The Netherlands.

Organizing Committee:

- *Chair:* Josef Jablonsky, Czech Republic,
- Gülay Barbarosoğlu, Turkey,
- Martin Dlouhy, Czech Republic,
- Jan Fabry, Czech Republic,
- Michal Fendek, Slovakia,
- Petr Fiala, Czech Republic,
- Jana Hanclova, Czech Republic,
- Luka Neralic, Croatia,
- Jan Pelikan, Czech Republic,
- Miroslav Singer, Czech Republic,
- Tomas Subrt, Czech Republic,
- Gerhard-Wilhelm Weber, Turkey, and
- Karel Zimmermann, Czech Republic

Conference Topics:

The organizers invite all researchers, academicians, practitioners, as well as students interested in all branches of operational research, mathematical modeling and economic

analyses to participate at the conference and to present their papers in the following areas:

- Continuous Optimisation & Control,
- DEA and Performance Measurement,
- Decision Analysis & Decision Support Systems,
- Combinatorial Optimization,
- Graphs & Networks, Scheduling & Location,
- Energy & Environment,
- Financial Modeling & Risk Management,
- Softcomputing & Artificial Intelligence,
- Game Theory & Mathematical Economics,
- Logistics & Transportation & Traffic,
- Metaheuristics,
- Multiple Criteria Decision Making and Optimization,
- OR Education, History & Ethics,
- OR in Health & Life Sciences,
- OR in Natural Resources,
- OR in Industries,
- Production Management & Supply Chain Management,
- Revenue Management,
- Simulation & Stochastic Programming and Modelling,
- Software for OR/Modelling Languages and
- Dynamic Systems.

Sessions:

Invited and contributed papers will be organised in parallel sessions of 90 minutes, with three or four papers in each session. Abstracts can be submitted via the Conference web page euro2007.vse.cz. Every participant can present no more than one paper at the Conference.

Invited and contributed sessions will generally be a part of Conference main streams. Their list together with two responsible organisers is presented on the Conference web page.

Prizes and Awards:

During the EURO XXII conference the following prizes will be awarded:

The EURO Gold Medal,
The EURO Excellence in Practice Award,
The EURO Management Science Strategic Innovation Prize and
The EURO Doctoral Dissertation Award.

Contribution of EUROPT:

This contribution consists of a *great number of streams, sessions, tutorials and semi-plenaries* prepared by EUROPT and his members. Indeed, there are **30-40 streams** in preparation by us and our friends, on areas of continuous optimization, optimal control, dynamical systems, data mining, finance, etc. – but also for the fields of computational biology, bioinformatics, medicine, represented by our two new EURO WGs. Also among the Main Stream Organizers, a number of EUROPT members can be found.

For closer information please cf. <http://euro2007.vse.cz/> and the *Newsletters & Letters* at our EUROPT homepage <http://www.iam.metu.edu.tr/EUROPT/>.

Satellite Events:

There are some scientific events in preparation already, organized by EURO Working Groups and their friends:

A 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

<http://cio.umh.es/europt-oms/>,

this event is supported by SIAM, SIAG/OPT, INFORMS, Optimization Society and other organizations and institutions,

PhD Workshop in OR for Development - EURO Working Group "OR for Development",
Prague, Czech Republic, July 7, 2007

<http://euro2007.vse.cz/wordc.doc>,

EURO-CBBM Workshop –

Workshop on OR in Computational Biology, Bioinformatics and Medicine,
Prague, Czech Republic, July 8, 2007

<http://euro2007.vse.cz/cbbm.pdf>.

3.b Joint EUROPT-OMS Conference – 2nd Conference on Optimization, Methods & Software and 6th EUROPT Workshop “Advances in Continuous Optimization”

The conference aims to review and discuss recent advances and promising research trends in continuous and discrete optimization theory, methods, applications and software development.

Homepage: <http://cio.umh.es/europt-oms/>.

Topics include

- Linear and Nonlinear Optimization,
- Integer and Combinatorial Optimization,
- Convex and Nonsmooth Optimization,
- Global Optimization,
- Semi-definite Programming,
- Semi-infinite Programming,
- Multi-objective Optimization,
- Stochastic Optimization,
- Complementarity and Variational Inequality Problems,
- Derivative-free Optimization,
- Network Optimization,
- Scheduling Problems,
- Optimization in Technological, Bio- and Social Systems,
- Financial Optimization,
- Optimal Control,
- Automatic Differentiation and
- Optimization Software.

This international conference is the first joint Meeting organized by the journal *Optimization Methods and Software (OMS)* <http://www.tandf.co.uk/journals/titles/10556788.html> and the Working Group on Continuous Optimization (EUROPT) <http://www.iam.metu.edu.tr/EUROPT/> of the Association of European Operational Research Societies (EURO). It is organized in cooperation with EURO, SIAM, SIAG/OPT and INFORMS Optimization Society. The EUROPT-OMS Conference will be held prior to the 22nd European Conference on Operational Research (EURO XXII) in Prague <http://euro2007.vse.cz/> and the 6th International Congress on Industrial and Applied Mathematics (ICIAM 2007) in Zurich <http://www.iciam07.ch/index>.

Invited Speakers:

- Frédéric Bonnans (France),
- Yury Evtushenko (Russia),
- Komei Fukuda (Switzerland),
- Dorit Hochbaum (USA),
- Tibor Illes (Hungary),
- Michal Kocvara (GB),
- Adrian Lewis (USA),
- Carlo Mannino (Italy),
- Alexander Martin (Germany),
- Florian Potra (USA),
- Liqun Qi (China),
- Philippe Toint (Belgium),
- Stefan Ulbrich (Germany),
- Stephen Wright (USA),
- Yinyu Ye (USA) and
- Ya-xiang Yuan (China).

Conference Organizers:

Conference Chairs:

- Oleg Burdakov (Linköping University, Sweden),
- Florian Jarre (University of Düsseldorf, Germany) and
- Karel Zimmermann (Charles University, Prague, Czech Republic).

Program Committee:

- *Chair:* Gerhard Wilhelm Weber (Middle East Technical University, Turkey), representative of SIAM and EUROPT,
- Mihai Anitescu (Argonne National Laboratory, USA),
- Adil Bagirov (University of Ballarat, Australia),
- Frédéric Bonnans (INRIA, France),

- Bruce Christianson (University of Hertfordshire, UK),
- Gustav Feichinger (Vienna University of Technology, Austria),
- Masao Fukushima (Kyoto University, Japan),
- Andreas Griewank (Humboldt University, Germany),
- Luigi Grippo (University of Rome, Italy),
- Johannes Jahn (University of Erlangen-Nuremberg, Germany),
- Joaquim Júdice (University of Coimbra, Portugal),
- Kathrin Klamroth (University of Erlangen-Nuremberg, Germany),
- Laszlo Ladanyi (IBM, USA),
- Berç Rustem (Imperial College, UK),
- Jan J. Rückmann (University of Birmingham, UK),
- Tamas Terlaky (McMaster University, Canada),
- Jie Sun (National University of Singapore, Singapore) and
- Michael Ulbrich (Munich University of Technology, Germany).

Organizing Committee:

- *Chair:* Marco A. López (Alicante University, Spain),
- Ömer Akin (TOBB University of Economics and Technology, Ankara, Turkey),
- María J. Cánovas (Universidad Miguel Hernández, Elche, Spain),
- Mirjam Dür (Darmstadt University of Technology, Germany),
- Bülent Karasözen (Middle East Technical University, Ankara, Turkey),
- Kaisa Miettinen (Helsinki School of Economics, Finland),
- Juan Parra (Universidad Miguel Hernández, Elche, Spain),
- Stefan W. Pickl (Universitaet der Bundeswehr, Munich, Germany),
- Leonidas Sakalauskas (Institute of Mathematics and Informatics, Vilnius, Lithuania),
- Oliver Stein (Technical University Aachen, Germany),
- F. Javier Toledo (Universidad Miguel Hernández, Elche, Spain), Webmaster,
- Metin Türkay (Koc University, Istanbul, Turkey),

- Aysun Tezel (Middle East Technical University, Ankara, Turkey),
- Emre Alper Yilderim (Bilkent University, Ankara, Turkey) and
- Jian-Zhong Zhang (Chinese University of Hong Kong, China).

Local Organizing Committee:

- *Chair:* Martin Gavalec (University of Hradec Kralove, Czech Republic),
- Libuse Bazantova (University of Hradec Kralove, Czech Republic),
- Pavel Cech (University of Hradec Kralove, Czech Republic),
- Jan Fabry (University of Economics, Czech Republic),
- David Havrlant (University of Economics, Czech Republic),
- Josef Jablonsky (University of Economics, Czech Republic),
- Karel Mls (University of Hradec Kralove, Czech Republic),
- Pavel Prazak (University of Hradec Kralove, Czech Republic),
- Hana Sramkova (University of Hradec Kralove, Czech Republic) and
- Veronika Skocdoplova (University of Economics, Czech Republic)

Conference Venue:

The conference will be hosted by the University of Economics, Prague. The University Campus is located within 15 minutes walking distance of the historical centre of Prague.

Conference Publications:

Details of the submission are available on the conference web site. Papers presented at the conference will be considered for peer-reviewed publication in a special issue of the journal Optimization Methods and Software.

Session Organization:

Proposals of organizing sessions on various topics are welcome (they can be sent to G.-W. Weber and M. Dür). These invited sessions will certainly enrich our conference very much.

Software Exhibition:

Optimization software developers are invited to participate in the software exhibition. The basic computer facility for software demonstration will be provided by the conference.

Sponsors and Partners:

EURO, Taylor & Francis, Pattern Analysis, Statistical Modelling and Computational Learning (PASCAL), SIAM, SIAG/OPT, INFORMS Optimization Society, University of Economics (Czech Republic), University of Hradec Kralove (Czech Republic), Alicante

University (Spain), Middle East Technical University (Turkey), Universidad Miguel Hernandez de Elche (Spain), TOBB University of Economics and Technology (Turkey).

3.c INFORMS International Puerto Rico 2007

INFORMS International Puerto Rico Conference will take place at July 8-11, 2007, in Rio Grande, Puerto Rico <http://meetings.informs.org/Puertorico2007/>. EUROPT and its members are supporting this renowned conference and by this contribute to providing many people in the world with OR, especially those, who cannot come to Prague. This international conference will showcase recent advances and promising trends in the theory, methods, applications, and software for operations research and the management sciences.

Homepage: <http://meetings.informs.org/Puertorico2007/>

Confirmed Topics include:

- Analysis for Nation Building,
- Artificial Intelligence,
- Auctions,
- Bellman Continuum,
- Combinatorial Optimization,
- Computational Biology and Informatics,
- CPMS, The Practice Section,
- Data Envelopment Analysis,
- Data Mining,
- Decision Analysis,
- Decision Support Using Weather Predictions,
- Educational Issues,
- Energy, Natural Resources, & and Environment,
- Financial Engineering,
- Health Applications,
- Honoring the Legacy of Peter Hammer,
- Industry-Research Interface,
- Information Systems,
- Life Sciences Facility Delivery Group Project,
- Location Analysis,
- Manufacturing and Service Operations Management,
- Marketing Science,
- Measurement, Analysis, & Improvement of Service Operations,
- Military Applications,
- Minority Issues,
- Optimization - Integer Programming,
- Optimization - Nonlinear Programming: Global & Local,
- Optimization - Stochastic Programming,
- Optimization in Marketing,
- OR and Computing,
- OR & IT Integration,
- OR in Public Health,
- OR in Practice,
- OR in the Americas,
- OR in the Forest Sector,

- OR in the Public Sector,
- OR on the Edge,
- OR in Medicine and Health Care,
- Project Management and Scheduling,
- Quality, Statistics, and Reliability,
- Risk Management,
- Scheduling,
- Services Research,
- Simulation,
- Social Networks,
- Stochastic Programming,
- Supply Chain Optimization and
- Transportation Science and Logistics.

The conference is organized by the Institute for Operations Research and the Management Sciences <http://www.informs.org/> in conjunction with the University of Puerto Rico <http://www.upr.edu/>.

Exhibits:

Operations research companies and vendors are invited to participate in the conference exhibit area. Benefits of exhibiting include table-top exhibit space located in the hub of the conference events and an opportunity to present in the Vendor Track of the conference program. For more details, visit <http://meetings.informs.org/Puertorico2007/>.

The homepage also informs about the ***Chairs and Committees***. There are a number of *EUROPT* member serving in the these committees or as organizers of invited or sponsored *cluster*. At this place we mention the General Chair of the Organizing Committee *Prof. Dr. Karla Hofman* (George Mason University, USA) and the Program Chair of the Program Committee *Prof. Dr. Robin Lougee-Heimer* (IBM, USA).

3.d International Symposium on Health Informatics and Bioinformatics, Turkey '07 – HIBIT'07

Aim of the HIBIT'07 is to bring together academicians from medical, biological, and IT fields with industry and government for creating synergy and supporting interdisciplinary research and development in the region on the subject. It is the second HIBIT conference, with expected participation from all around the world, as in the first one.

High quality research submissions are invited for technical papers describing original unpublished results of theoretical, empirical, conceptual, and experimental work.

Topics of interest include, but are not limited to:

Health Informatics:

- Electronics Health Records and Standards,
- Clinical Informatics and Hospital Information Systems,
- Telemedicine and Mobile Applications,
- Decision Support Systems and Computer Aided Diagnosis,

- Health Informatics (HI) Education,
- Security, Ethics, and Privacy,
- Data Mining and Knowledge Discovery in HI,
- Medical Signal/Image Analysis and Visualization,
- Medical Imaging and Instrumentation,
- Virtual Reality and Simulation and
- Medical Transaction Provision Systems;

Bioinformatics:

- Biomolecular Sequence Analysis,
- Comparative Genomics,
- Biomedical Genome Research,
- Microarray Informatics,
- Protein Expression and Modification,
- Protein Interactions,
- Protein Structure Prediction,
- Biomedical Proteome Research,
- Genetic Networks,
- Systems Biology,
- Text Mining and Information Extraction,
- Evolution and Phylogeny and
- Structural Bioinformatics.

About *Keynote Speakers*, *Tutorials* going to be given as well as *Sponsors* of HIBIT'07 please visit the

Homepage: <http://hibit.ii.metu.edu.tr/07/index.html>.

The homepage also informs about the *Conference Chair and Committees*. There are a number of *EUROPT* member serving in the these committees and as presenters.

3.e “Seminar on Computational Biology, Medicine, Environment and Development”

Please cf. Subsection 2.g. We note the change of the name of the seminar supported by us.

There will appear:

3.f EJOR Special Issue “Challenges of Continuous Optimization”

In *European Journal of Operational Research* 173, 3 (2006) we are looking forward to the special issue (or feature cluster) “Challenges of Continuous Optimization”.

On July 2-3, 2004, the *fourth annual Workshop of EURO Working Group on Continuous Optimization* (EUROPT) took place at Rhodos City, Greece, on the subject “*Challenges of Continuous Optimization in Theory and Applications*” (cf. <http://www.iam.metu.edu.tr/contopt04/index.html>). Likewise the previous annual meetings of EUROPT, this workshop was held and became celebrated in close timely neighbourhood and interaction with EURO XX Conference, Rhodes, Greece, July 4-7, 2004 (see <http://www.euro-rhodes2004.org/>). *Workshop on Challenges of Continuous Optimization in Theory and Applications* has been sponsored by *The Association of European Operational Research Societies* (EURO), *Gesellschaft für Operations Research e.V.* which is *German Operations Research Society* (GOR), and organized by EUROPT, by IAM (METU) and University of the Aegean. Together with its various contributions to EURO XX by sessions organized, a semi-plenary held, many session talks given and new EURO events initiated, *Workshop on Challenges of Continuous Optimization in Theory and Applications* became a worthwhile contribution to European collaboration on OR, surrounded by Greece long tradition in hospitality, its rich old culture, and with a happy looking forward to the future always among old and new friends who met.

Workshop on Challenges of Continuous Optimization in Theory and Applications aimed to bring together researchers from smooth and nonsmooth optimization, and from related fields of discrete optimization, operations 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 conference includes all aspects of smooth, nonsmooth and discrete optimization, from fundamental research to numerical methods and applications. The workshop’s rich **topics** ranged from linear and nonlinear programming, semidefinite and semi-infinite optimization, complementarity problems, derivative-free, global and stochastic optimization and nondifferentiable analysis to optimal control, optimization of technological, bio- and social systems and financial optimization.

The organizing committee of ESI XXII was composed of *Evgenios Avgerinos* (University of the Aegean, Greece), *Nikos Ampazis* (University of the Aegean, Greece), *Mirjam Dür* (Darmstadt University of Technology, Germany), *Azize Hayfavi* (METU, Ankara, Turkey), *Kathrin Klamroth* (Friedrich-Alexander University of Erlangen-Nuremberg, Germany), *Dimitrios Konstandinidis* (University of the Aegean, Greece) and *Gerhard-Wilhelm Weber* (METU, Ankara, Turkey).

Workshop on Challenges of Continuous Optimization in Theory and Applications was highlighted by the participation of six invited speakers: *Miguel Goberna* (University of Alicante, Spain), *Kathrin Klamroth* (Friedrich-Alexander University of Erlangen-Nuremberg, Germany), *Marco A. López* (University of Alicante, Spain), *Arkadi Nemirovski* (Israel Institute of Technology, Haifa, Israel), *Moshe Sniedovich* (University of Melbourne, Australia) and *Theodore Trafalis* (University of Oklahoma, Norman, USA).

The total number of workshop participants turned out be **33**, they travelled to Rhodes from **15** different countries: Australia, Brazil, Canada, Israel, Germany, Greece, Hungary, Lithuania, Mexico, The Netherlands, Norway, Portugal, Spain, Turkey and the USA.

This present EJOR special issue is already the fifth one of EUROPT, our working group which was founded in Budapest, Hungary, in 2000. Proceeding the first workshop held there, the second one held in Rotterdam, The Netherlands, in 2001, the third one celebrated in Istanbul, Turkey, in 2003, and EURO Summer School “Optimization and Data Mining” organized by us in Ankara, Turkey, 2004, four *EJOR special issues* were prepared and published already. We were glad to announce this fifth EJOR special issue finalized.

For the refereeing process *sixtysix referees* served by their careful work; each paper was in average by three, sometimes even more, specialists from all over the world evaluated. As the result of their devotion, rigor, their very constructive and fruitful part, *thirteen* of the submitted papers fulfill the high standards of EJOR and display the recent contributions advances to “*challenges of continuous optimization*” by a variety in state-of-the-art research and vision. As the guest editors, we cordially thank the participating referees for their engaged efforts, for their positive encouragement and support of the authors whenever needed.

We share the conviction that each of these papers fulfills the high EJOR standards by content and style, and serves to represent both modern OR as an excellent host of continuous optimization as one of the important and core areas of OR in theory, methods and applications. In editing this Special Issue / Feature Cluster of EJOR, it is our hope that the readers will appreciate the efforts of EURO being a European initiative for advanced studies, and of EJOR being a unique journal for scientific communication and excellence.

Guest Editors:

- *Mirjam Dür*, Darmstadt University of Technology, Germany,
- *Bülent Karasözen*, Middle East Technical University, Ankara, Turkey,
- *Tamás Terlaky* (EUROPT deputy at EJOR), McMaster University, Hamilton, Canada,
- *Gerhard-Wilhelm Weber*, Middle East Technical University, Ankara, Turkey,

Editor: *Jacques Teghem*, Faculté Polytechnique de Mons, Belgium.

We will finalize three more special issues, namely:

3.g CEJOR Special Issue “Advances in Continuous Optimization”

Please cf. 2.p.

3.h MMOR Special Issue “Special Issue of MMOR Devoted to ESI 2006”

Please cf. 2.q.

**3.i Special Issue “Continuous Optimization in Finance”
of the the Journal Optimization**

Optimization will publish a small special issue on *Continuous Optimization in Finance*, a topic that is also one of the new research areas which in these years ***EURO Working Group on Continuous Optimization (EUROPT)***; cf. <http://www.iam.metu.edu.tr/EUROPT/>) is strongly supporting. Indeed, continuous optimization has become a key technology in the

entire financial sector which, reversely, poses new problems and research projects to optimization.

The special issue will focus on topics that are equally important in both financial mathematics and optimization theory. It will (i) provide an overview of, and (ii) present some important recent developments in *continuous optimization* regarding the analysis and prediction of *financial* processes focusing on theory, methodology, and applications.

The topics of the special issue include: (i) Financial Risk Management with Continuous Optimization, (ii) Portfolio Optimization, (iii) Regression Problems in Finance, and (iv) Stochastic Optimization and Control in Finance.

All submissions must be focused on the topic of the special issue and belong to the general scope of Optimization. The main challenge and principal goal of this premium special issue is to contribute to the foundations and tools of continuous optimization in the financial world of tomorrow, concerning stock markets, banks, insurance companies, electricity markets, institutions for development, and further modern areas.

A very thorough process of refereeing will be guaranteed. This high scientific level will enable and inspire readers to pursue research projects in this field and its applications, thus serving -- and fostering a better and fruitful understanding between -- our people and our nations.

This special issue will be prepared in close collaboration with *Institute of Applied Mathematics, METU*, Ankara (<http://www.iam.metu.edu.tr/>).

Guest Editor: Gerhard-Wilhelm Weber.

Important Dates: Submission deadline of full papers: August 15, 2007.

Publication of the special issue: As the first issue of Optimization in 2009.

3.j Help for EJOR Special Issue “OR for Better Management of Sustainable Development” and CEJOR Special Issue at the Occasion of EURO XXI 2006 (in finalization)

For the *EJOR Special issue*, we refer to

[http://www.iam.metu.edu.tr/EUROPT/EJOR%20special%20issue%20\(EURO%20XXI%202006\).pdf](http://www.iam.metu.edu.tr/EUROPT/EJOR%20special%20issue%20(EURO%20XXI%202006).pdf) .

This issue contain 12 papers on papers presented at EURO 2006; the papers are carefully selected out of a greater number of submissions. Here, the guest editors are

- Ulrike Leopold-Wildburger (Karl-Franzens University Graz, Austria),
- Gerhard-Wilhelm Weber (METU, Ankara, Turkey) and
- Martin Zachariasen (University of Copenhagen, Denmark).

While the *EJOR* special issue will exclusively address the topic of sustainable development, the *CEJOR issue* will contain selected papers from EURO XXI 2006 to a wider spectrum of topics. The guest editors are

- Gerhard-Wilhelm Weber (METU, Ankara, Turkey),
- Martin Zachariasen (University of Copenhagen, Denmark) and
- Stefan W. Pickl (Bundeswehrhochschule München, Germany).

3.k Help for Two New EURO Working Groups EURO CBBM and EURO ORD, and their Activities

Both two working groups: *EURO WG OR in “Computational Biology, Bioinformatics and Medicine”*, and *EURO WG “OR for Development”* are advancing well and successfully! From the days of their early preparation and the submissions of their proposals to EURO on, EUROPT supported these two groups and continuous supporting. Indeed, both seem to be a very valuable enrichment of the EURO community. Please find closer information about the two new EURO Working Groups at their homepages:

- <http://euro-cbb.ku.edu.tr/> (for EURO WG CBBM),
- <http://www2.ing.puc.cl/~fcrespo/eurofdv/> (for EURO WG ORD).

Both groups will have satellite events neighbouring in time to EURO XXII 2007. Please cf. 3.a.

For these two new groups and their friends in charge we want to wish all the best, and we wish the success for the two new WGs, to their and our common future!

3.l Integration of the Further Research Areas in EUROPT

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, 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.

Among the fostered areas there is *Continuous Optimization in Finance*. We are happy to announce that the journal *Optimization* accepted our proposal for a Special Issue “Continuous Optimization in Finance” (cf. Subsection 3.i). Special thanks to our friend, member and editor of *Optimization*, *Professor Juan Enriques Martinez Legaz*, for his encouragement and support! We note that also our various stream organization in the financial sector at EURO XXII 2007 contributes to that area. EUROPT is decided to foster and develop the above mentioned scientific areas, in addition to more classical ones. but also, besides others, *Optimal Control*. In that area, as some kind of a small staff, several friends and members accepted to serve by taking an extra care: *Professor Yalcin Kaya*, supported by *Dr. Erik Kropat* and me, and *Professor Frédéric Bonnans* as a valuable advisor. Finally, concerning Data Mining, we refer to the EJOR special issue presented in 2.0 and the ESI referred to in that issue.

3.m Preparation of EURO Mini Conference

“Continuous Optimization and Knowledge-Based Technologies” (EurOPT-2008)

Our joint application for a EURO Mini Conference “*Continuous Optimization and Knowledge-Based Technologies*” May 20-23, 2008, Neringa, Lithuania, together with Litors, the Lithuanian Operational Research Society, has become accepted by EURO Executive Committee – without any complain. Since we had a “EURO MC” not long a time ago, just in 2005 when we met in Pécs, Hungary, that approval by EURO EC implies a valuable acknowledgement and great honour for us. Thanks to the leaders of EURO and a special gratitude to our friend and EUROPT Managing Board Member, *Professor Leonidas Sakalauskas*, for his great efforts in preparing our EURO MC application. Today, we may not forget about *Professor Chris Potts* who served EURO as a Vice President for many years and was at our side all the time, while EUROPT grew – thank you very much for all your help and friendship, dear Chris! Now, as he is leaving; we are looking forward to a very good collaboration also with his successor, *Professor Marc Sevaux*.

Optimization techniques pierced through many chapters of OR, because their utilization “facilitates the choice and the implementation of more effective solutions which, typically, may involve complex interactions among people, materials and money problems” (www.euro-online.org). The latter challenge stimulates a study of existing techniques as well as development of new concepts for optimization. Conference *EurOPT-2008* aims at a more exhaustive study of optimization and optimal decision making towards knowledge-based technologies.

The scope of the International conference “*Continuous Optimization and Knowledge-Based Technologies*” is to overview trends, to gain a common attitude towards latest challenges in continuous optimization and advanced applications for knowledge-based technologies, such as robust optimization, optimization in finance, supply chain management and data mining. We wish to contribute to education in Europe and the world, and to a deepening and initializing of scientific collaboration in the family of EURO and among our peoples.

The programme of our conference consists of tutorials, invited and contributed papers. We encourage those interested in the following topics to overview the trends and gain a common attitude towards:

- robust optimization;
- complexity and efficiency of optimization algorithms;
- stochastic optimization;
- supply chain management;
- large-scale methods in global search;
- optimization in data mining;
- optimization and dynamical systems jointly applied to processes of information and development;
- data visualization for optimal decisions;
- applications of continuous optimization to combinatorial problems;
- applications in industry and business;
- optimization in finance;
- analysis and engineering of algorithms and
- software development.

We encourage researchers, in particular young ones, who start or develop their research related with optimization, to present it for discussion and take part in the tutorials on the challenging topics of optimization theory and practice, held during the conference. The proceedings of the conference will be published by an international publisher and delivered during conference. The special issue of papers on the subject of the conference will be published in a top-rating journal (the organizers are in contact with *TOP*, the journal of the Spanish OR Society).

Here, we only mention that the Chair of the *OC* will be *Prof. Dr. Leonidas Sakalauskas* (Co-Chair *Prof. Dr. G.-W. Weber*) and the Chair of the *PC* will be *Prof. Dr. Tamas Terkaly* (Co-Chair *Prof. Dr. Boris Polyak*). The full boards, including the *Steering Committee*, will appear at the

Homepage (in preparation): <http://www.mii.lt/Europt-2008> .

We conclude with mentioning the

Organizing Institutions:

- European Association of Operational Research Societies (EURO);
- EURO Working Group on Continuous Optimization (EUROPT);
- Lithuanian Operational Research Society (Litors);
- German OR Society (GOR);
- Institute of Mathematics and Informatics, Vilnius, Lithuania, and
- Vilnius Gediminas Technical University, Vilnius, Lithuania;

Co-Organizing Institutions:

- European Chapter on Metaheuristics (EUME);
- European Chapter on Combinatorial Optimization (ECCO);
- Kaunas University of Technology, Lithuania, and
- Klaipeda University, Lithuania.

3.n EUROPT Homepage

Please see Subsection 2.j.

3.o EUROPT E-Newletter

Please see Subsection 2.k.

Acknowledgement: We cordially thank our two *Honorary Chairs* of EUROPT, *Prof. Dr. Tamás Terlaky* and *Prof. Dr. Tibor Illes*. There were always with us – at the occasion of our scientific events and, with their valuable advice, in many smaller and larger decisions which we had to do. Thank you very much, dear Tamás, thank you very much, dear Tibor!

To all friends who served so devotedly for our activities in 2006 and go on collaborating in our group's activities, we - EUROPT – are sending heartfelt thanks. With you we are going on serving for our peoples, their wealth, piece and friendship!

With best wishes, cordially yours,

Florian Jarre

Marco A. Lopez-Cerda

Mirjam Dür

Kaisa Miettinen

Leonidas Sakalauskas

and Gerhard-Wilhelm Weber

(the members of the EUROPT Managing Board)

April 1, 2007

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