



“... Hungary ... csók, csók!” –

Scientific Exchange and Future Impulses from the Heart of Europe

*Report on 17th EURO Mini Conference
“Continuous Optimization in the Industry”,
June 29 - July 1, 2005, Pécs, Hungary*

by
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Since there has been no EURO Conference in this year 2005 and, hence, no conference accompanying workshop of *EURO Working Group on Continuous Optimization (EUROPT, <http://www.iam.metu.edu.tr/EUROPT/>)*, we from EUROPT decided and applied at *Association of European Operational Research Societies (EURO, <http://www.euro-online.org/>)* for holding a mini conference, together with *Hungarian Operations Research Society (HORS, <http://www.hors.hu/>)* and *University of Pécs (<http://english.pte.hu/htmls/index.php>)*. That EURO responded to this application so very positively is a sign for confidence and a common vision. This board of organizing groups and institutions later on also *Gesellschaft für Operations Research e.V.* which is *German OR Society (GOR, <http://www.gor-ev.de/>)* joined. GOR has also been a friend and generous supporter of EUROPT over all the years. May this small report serve as an expression of gratitude and of hope with all its partners and, hereby, with EURO firstly!

This report is structured as follows: Firstly, a careful review about the conference preparation and the meeting itself are given. At the end, closer data and documents is given, namely,

- *Boards and Lists:* program committee, organizing committee, invited speakers, scientific program (link),
- *Announcements,*
- *EURO MC Poster.*

Our special EUROPT activities' geographical focus of the last two years 2003-2004 having been more in the direction of South East Europe – in Greece (Rhodes) and Turkey (Istanbul and Ankara), now, with our 17th EURO Mini Conference (EURO MC) “*Continuous Optimization in the Industry*“, June 29 - July 1, 2005, in Pécs, Hungary (http://www.cs.elte.hu/opres/Pecs05EUROmini/h_about.html) we went into the middle of Europe, a region connected with a changeful historical characteristic and experience and

promising a particular hospitality and charme. These promise became more than justified and fulfilled by the inviters! Hungary has been the host country of the millennium year 2000's EURO Conference; there, in Budapest, also the cradle of EUROPT stood. In this way, our EURO MC 2005 at the same time became the celebration of the 5th birthday of EUROPT – half a decade: a Cordial Congratulation! Since then our group grew strongly: today (November 26, 2005) we have *412 members* and nearly every day they are more ones joining!

Those charme and impulse aim at entire Europe, especially, the countries of the East and South East of our continent. The Magyars themselves became members of the occidental culture and peoples family about 1000 years ago. Hungary is a country of Middle Europe which experienced the ups but also the downs of occupation und loss of territories. All that means a heritage today, a potential for itself and its neighbours and refers itself and us to a coming time of collaboration and community. May I please mention my surprise and sentiment which I as a German had about the opportunity to communicate by my mother tongue in Pécs – once Pécs with its many German settlers was also called *Fünfkirchen*. In the way the city looks today (cf. Figure 1), also an Ottoman heritage can be found, for example, there is a former mosque which today serves as a Catholic church building.



Figure 1: Impressions from Pécs.

The mini conference took place in the pleasant atmosphere of medieval University of Pécs which in those three days hosted guests from all over the world (see Figure 2). The organizers were able to welcome 53 registered participants from 17 countries - from Europaen ones: Austria, Croatia, Denmark, Germany, Hungary, the Netherlands, Portugal, Romania, Spain, Turkey, and Israel and South Africa (both being EURO countries) as well as countries from overseas: Australia, Brazil, Canada, Singapore and the USA. For all these friends and for a better success of our EURO MC, in the 3/4 year before our event German OR entered the board of organizing institutions and groups – I would like to say: of the hosts! GOR became a sponsor of 17th EURO MC in Pécs. This collaboration and community became well represented and expressed by tags, by various speeches and sympathy addresses also. This sponsorship was not of a financial nature only but consisted in the membership of several GOR members in organizing committee (OC) or program committee (PC) and in the active participation of German colleagues. What is more: both national OR societies GOR and HORS at the occasion of this special events decided about a *partnership* which prepares a framework for further Hungarian-German – *international* and *EUROpean* - activities in future. A great compliment to GOR and HORS and to their executive committees, in particular to the presidents *Prof. Dr. Gerhard Waescher* and *Prof. Dr. László Szeidl!*



Figure 2: 17th EURO MC in Pécs and its participants.

After at the evening of June 28, the eve before the conference, there was a first informal getting together with meeting again and getting to know each other, at the morning of June 29, the official part began with different speeches: of the PC and OC chairs, *Prof. Dr. Tamás Terlaky* (McMaster University, Hamilton, Canada) and *Prof. Dr. Jozsef Vörös* (University of Pécs, Hungary), and of vice coordinator of EUROPT, *Prof. Dr. Gerhard-Wilhelm Weber* (Middle East Technical University, Ankara, Turkey) as well. The following introductory lecture as given by the first invited speaker, *Prof. Dr. Aharon Ben-Tal* (Industrial Engineering and Management, Technion, Haifa, Israel), one of the early and longtime advocate of industrial-technological applications of continuous optimization in the community of OR. Professor Ben-Tal who also has worked on the field of robust optimization, talked about the treatment of nonconvex problems. By the excellent interest in participation, the large number of high level presentations accepted by the committees and besides the invited lectures, during the three conference days there always were two parallel sessions of contributed talks from areas of *Applications*, *Stochastic Programming*, *Modelling* and *Mathematical Programming*. By this rich offer, application fields from, e.g., car industry, chemical engineering, biotechnology or production planning could be competently treated. At the conference, however, there also were more “classical“ contributions to optimization theory such as from linear and multi-objective optimization or from saddle point problems.

In his invited lecture, *Dr. Erling D. Andersen* (MOSEK APS, Copenhagen, Denmark) who with his brother is carrying on a company developing and offering a software package in continuous optimization, gave a valuable insight into practical industry applications, into their challenges and chances. By this and by a rich and illustrative review about *five years EUROPT* held by G.-W. Weber, the first conference day concluded ... but not completely: The reception in the nice and solemn atmosphere of town hall where representatives of University of Pécs honoured us and gave samples of the very good Hungarian kitchen and hospitality, will stay in the remembrance of all participants very long.

The next – our second conference day, was encompassed by invited lectures. On the one hand, *Prof. Dr. Hans Georg Bock* (IWR, University of Heidelberg, Germany), a German colleague renowned in the theme field of our EURO MC, taught about direct optimization methods for real-time computation in optimal “closed-loop“ control and on recent applications. On the other hand, with *Prof. Dr. Dick den Hertog* (Operations Research, University of Tilburg, The Netherlands) another friend of international OR talked. Indeed, in the year 2004 he was among the organizers of “*Operational Research 2004 – International Conference*“, common annual meeting of Dutch and German OR societies (September 1-3, 2004, Tilburg, The Netherlands). His presentation on simulation, approximation and optimization revealed a wealth of modern applications also.

Having learned the city of Pécs in the days before, at that evening then we went into the countryside of Pécs, a wonderful hilly and, as one says in Hungary, Mediterranean landscape – Croatia and Adriatic Sea are not so far - and there is winegrowing. By the way, also German settlers had their earnings in introduction and cultivation of those famous grapes. Tasting the “juice of vine” and learning the corresponding cuisine further was a main attraction at the destination of our excursion, a wine cellar (Figures 3). In this conference dinner with its special ambience, addresses were given which expressed what was touching everyone: gratefulness for the so carefully made preparations, attachment among the participants independently from their home countries, and a common hope! Then, it will also be possible in European family of peoples to overcome existing misunderstandings and, partially, to defuse discordances. Especially, our OR and EURO families can serve in a particular way. As an amusing example of a small misunderstanding the following event served at the banquet: In ESI 2004, *EURO Summer-Institute “Optimization and Data Mining”* (July 9-25, 2004, Ankara, Turkey), one of the young participants of the many participating countries, Marianna from Hungary, asked an organizer (me) what he means when so often saying „*dshook-dshook!*“. Actually, it were the words “*çok çok!*“ use for underlying something: the Turkish *çok* in English means *many, a lot of, or very*. After this small explanation, Marianna responded and told that in her Hungarian language, *csók* (spoken: *dshook*) means *kiss* in English... This small story gave rise to that the whole conference community was chorrussing a loud and multiple thankful “*csók, csók!*“ to its hosts, a linguistic hearty kiss which the latter ones accepted with pleasure. From that moment on, *csók, csók* became a special greeting and a dictum of the conference. And at this evening with a glass of red and white wine, we all were “Hungarians“.



Figures 3: Impressions from the conference dinner in a rural wine cellar near Pécs.

The third and last day concluded the concerence with further interesting presentations, in the parallel sessions and in the main lectures as well. Those special ones were held by the two invited speakers *Prof. Basil L. Joffe* (Aspen Technology, Inc., Houston, USA) and *Prof. Kathryn E. Stecke* (Operations Management, University of Texas at Dallas, USA). While Prof. Joffe reported about important applications of global optimization in refinery planning, Prof. Stecke draw a wide framework on mathematical modelling of modernen industrial problems.

All these instructive and inspiring presentations were so valuable, and likewise were the numerous conversations about the various opportunities, also about EUROPT, the common future projects including our collaboration with EURO, with GOR and HORS. Indeed, there is a possibility and readiness for a common annual meeting of the two national OR societies of Germany and Hungary. The closer decision depends on them and their scientific calendars. My joy about the great potential of bilateral collaboration within of EURO became even larger when I journeyed on to Szeged and participated at valuable *13th Summer School on*

Image Processing (June 30 – July 9, 2005, Szeged, Hungary; see also <http://www.inf.u-szeged.hu/~ssip/2005/index.html>), a scientific field which in these days also feels close to continuous optimization, to OR, its European family EURO and its working groups, e.g., EUROPT, and which sees perspectives for mutual exchange with them. A very special summer school will also be our *ESI 2006, EURO Summer Institute 2006 “Optimization Challenges in Engineering: Methods, Software and Applications”* (August 18 – September 2, 2006, Wittenberg, Germany). In the town of Martin Luther, GOR, EUROPT and EURO will work together (for closer information please visit the ESI 2006 homepage <http://wwwopt.mathematik.tu-darmstadt.de/events/esi2006/>).

There is one more recent good news: Our application for a special issue *Continuous Optimization in the Industry* by **EJOR**, *European Journal of Operational Research*, at the occasion of our 17th EURO MC became accepted by EJOR. This is a great honour for us! Sincere thanks to EJOR, especially, to *Prof. Dr. Jacques Teghem* (Université Libre de Bruxelles, Belgium; corresponding editor-in-chief), and to the guest-editors: *Prof. Dr. Tibor Illes* (Eötvös Loránd University of Sciences, Budapest, Hungary) who served very well for the conference preparations, *Prof. Dr. Marco Lopez* (University of Alicante, Spain), *Prof. Dr. Tamás Terlaky* (McMaster University, Hamilton, Canada), *Prof. Dr. Jozsef Vörös* (University of Pécs, Hungary) together with *G.-W. Weber*. Please find the Call for Papers under This will be our group EUROPT’s sixth special or feature issue. You are sincerely welcome!

A cordial thank also to all those friends who were not mentioned yet, especially, to the team of young people around Miss *Eszter Sandorfi* who guides us so carefully through the days of 17th EURO Mini Conference in Pécs.

“... Hungary, Germany, Europe ..., csók, csók!”

Photos: Thanks to *Prof. Dr. Vincent Giner* (Valencia University of Technology, Spain), *Prof. Dr. Kathrin Klamroth* (University of Erlangen-Nürnberg, Germany) and *Prof. Dr. Tamás Terlaky* (McMaster University, Hamilton, Canada)!
(For more impressions: http://www.iam.metu.edu.tr/EUROPT/h_photos.html.)

Conference Poster (please cf. below): Thanks to *Metin Tabalu* (METU, Ankara).

In Detail - Names and Numbers:

I. Boards and Lists

The **Program Committee** consisted of:

- **Chair:** T. Terlaky (McMaster University, Hamilton, Canada)
- F. Bonnas (INRIA, France)
- H. Frenk (Erasmus University, Rotterdam, The Netherlands)
- F. Friedler (University of Veszprém, Veszprém, Hungary)
- F. Gianessi (Pisa, Italy)
- F. Jarre (University of Düsseldorf, Germany)
- B. Karasözen (METU, Ankara, Turkey)
- J. Kolumbán (Babes-Bolyai University, Cluj, Romania)
- M. Lopez (Alicante, Spain)
- K. Madsen (T.U. Denmark, Denmark)

- A. Nemirovski (TECHNION, Haifa, Israel)
- T. Rapcsák (MTA SZTAKI, Budapest, Hungary)
- F. Rendl (Klagenfurt, Austria)
- J.-Ph. Vial (Geneva, Switzerland).

The members of *Organizing Committee* were:

- **Chair:** J. Vörös (University of Pécs, Hungary)
- Zs. Csizmadia (Eötvös University, Budapest, Hungary)
- T. Illés (Eötvös University, Budapest, Hungary)
- S. Komlósi (University of Pécs, Hungary)
- J. Pintér (PCS Inc & Dalhousie University, Halifax, Canada)
- T. Takács (Eötvös University, Budapest, Hungary)
- T. Szántai (BME, Budapest, Hungary)
- L. Szeidl (University of Pécs, Hungary)
- G.-W. Weber (METU, Ankara, Turkey).

Our *Invited Speakers* were:

- E.D. Andersen (MOSEK APS, Copenhagen, Denmark)
- A. Ben-Tal (Industrial Engineering and Management, Technion, Haifa, Israel)
- H.G. Bock (IWR, University of Heidelberg, Germany)
- D. den Hertog (Operations Research, University of Tilburg, The Netherlands)
- B.L. Joffe (Aspen Technology, Inc., Houston, USA)
- K.E. Stecke (Operations Management, University of Texas at Dallas, USA).

The *Scientific Program* can be found under:

http://www.cs.elte.hu/opres/Pecs05EUROmini/h_sprogram.html .

II. *Announcements*

- ❖ Announcements at EURO: EURO homepage:
 “Do not miss”
 (<http://www.euro-online.org/display.php?page=welcome>),
 “Calendar”
 (<http://www.euro-online.org/display.php?page=calendar>),
- ❖ Announcements by EUROPT e-mail list
 (repeatedly; <http://www.iam.metu.edu.tr/EUROPT/>),
 DMANET
 (<http://www.zaik.uni-koeln.de/AFS/publications/dmanet/>),
 Opt-Net (<http://optnet.itwm.fhg.de/opt-net/>),
 to Mathematical Programming Society,
 SIAM
 and other groups.

III. *EURO MC Poster* (prepared in 2004)



EUROPT Magyar Operációkutatási Társaság

**EURO Working Group on Continuous Optimization
Hungarian Operational Research Society**

EURO Mini Conference

Continuous Optimization in the Industry

- Organising Committee:*
- Zs. Csizmadia (Eötvös University, Budapest, Hungary)
 - T. Illés (Eötvös University, Budapest, Hungary)
 - S. Komlósi (University of Pécs, Hungary)
 - T. Takács (Eötvös University, Budapest, Hungary)
 - T. Szántai (MRE, Budapest, Hungary)
 - J. Vörös (University of Pécs, Hungary, chair)
 - G. W. Weber (BETU, Ankara, Turkey)

Pécs, Hungary, June 29 - July 1, 2005



design by Metin Tabalu