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EURO XVI - 16th European conference on operational research Belgium, Brussels, 12-15 July 98

23 years after EURO-I, the EURO conference came back to Brussels, an enjoyable town with... an unpredictable weather. 650 participants attended EURO XVI: among them, many participants from Eastern European countries, proofs of the opening of Europe.

The plenary sessions

The general theme of the conference was Innovation and quality of life; in an opening lecture, Dr. Norman S. Sadeh, from the European Commission DG III (Industry) presented the perspectives of the EC on the conference theme and gave interesting information about the fifth research programme of the EC.

Two events took place during the opening session: Prof. Paolo Toth, from Italy, received the EURO Gold Medal in recognition of his outstanding contribution to O.R. and of his efficient participation to EURO



Paolo Toth receiving the EURO gold Medal from Jan Weglarz

It was announced that the three Editors of EJOR, A. Mercer, B. Tilanus and H.J. Zimmermann decided to retire from January 1999. They founded EJOR and made it the largest OR journal in the world. For their great contribution to the O.R. Community, they were congratulated by the EURO-president, prof. Jan Weglarz who gave them a new EURO-award called EURO Pass.



Hans Zimmermann, Bernarhd Tilanus and Alan Mercer, the present editors of EJOR



Benedetto Matarazzo and Jacques Teghem (chairpersons of EURO XVI) with Jan Weglarz (president of EURO)

"OR/www: the interface" was the title of the lecture given by M. Sniedovitch, guest speaker of the closing session; through selected examples he demonstrated how the Internet has changed our O.R. work.

The award "Best applied paper" EURO competition was attributed during this closing session: the laureate were C. Arondel and Ph. Girardin, from France, for their paper "Sorting cropping systems on the basis of their impact on groundwater quality" (see elsewhere in the present issue).

The scientific programme

A large place was given to semi-plenary lectures: four slots of time were devoted to 21 tutorials or research reviews in various fields of O.R. All these sessions obtained a very large audience (the booklet with texts of these semi-plenary lectures is available at the price of 1000 BEF (belgian francs). Contact the EURO XVI Secretariat: euro@mathro.fpms.ac.be).

190 sessions covering a wide range of O.R. fields were scheduled in 33 streams: 8 devoted to mathematical programming and combinatorial optimization; 5 to production and scheduling; 5 to O.R. applications; 3 to MCDA; ... Overhalf of these sessions were invited contributions. The EURO working groups (EWG) were particularly active organizing 28 sessions.

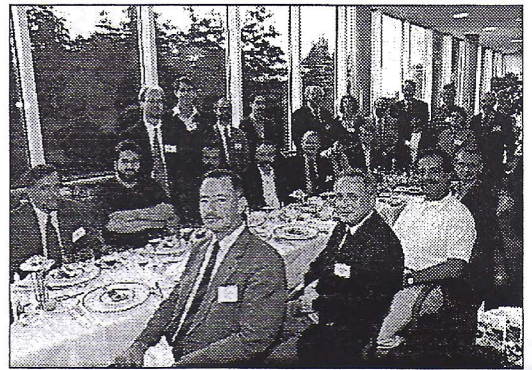


The lunch of the EWG coordinators with Raymond Bisdorff, vice-president of EURO

Let us also mention 7 sessions organized by SICUP (Special Interest research group on Cutting and bin Packing problems), 4 by some INTAS projects (International Association for the promotion of cooperation with scientists from the new independent states of the former Soviet Union), 4 by IFORS, ...

Two interesting panels were also held during EURO XVI: a special EURO session devoted to the rela-

tions between EURO and O.R. National Societies (see the paper devoted on this subject in the present issue) and an "Ethics and O.R." panel.



The good relations between EURO Executive Committee and the O.R. National Societies presidents

The social programme

As usual at EURO-k conference, a large social programme offered various opportunities to have pleasant time together. Each day has had its event ! During the get-together party, organized Sunday at the conference centre, the "Saul Gass 10 km Race" took place on the campus itself.



The runners of the Saul Gass Race. Where are you Valerie ?

The participants enjoyed the official reception organized Monday at the "Comic Strip Art Museum" an original and typical Belgian place.

Tuesday, 325 participants attended the Conference Banquet: a fine dinner in the incredible "Auto-World Museum", one of the largest car museum in the world; and each one enjoyed the jazz orchestra at the end of this warm evening.



The "top-table" at the conference dinner

able to see on the web site all relevant information including names and addresses of participants, abstracts of submitted papers, the conference programme; they could also register and book hotels. Daily, at the lunch time, each participant received the Conference Bulletin published by the Organizing Committee.

This bulletin contained relevant information on the programme, headline of the day, pictures and a daily puzzle. Such initiative was really appreciated by the participants.

Last but not least, on Wednesday evening, the participants had the opportunity to say good bye to their friends while drinking Belgian beer in one of the famous cafe of the wonderful Brussels Grand-Place.

The web site of EURO XVI can still be visited at <http://image.fpms.ac.be/euro16.html> with a special post-conference page.

Innovation and quality of life

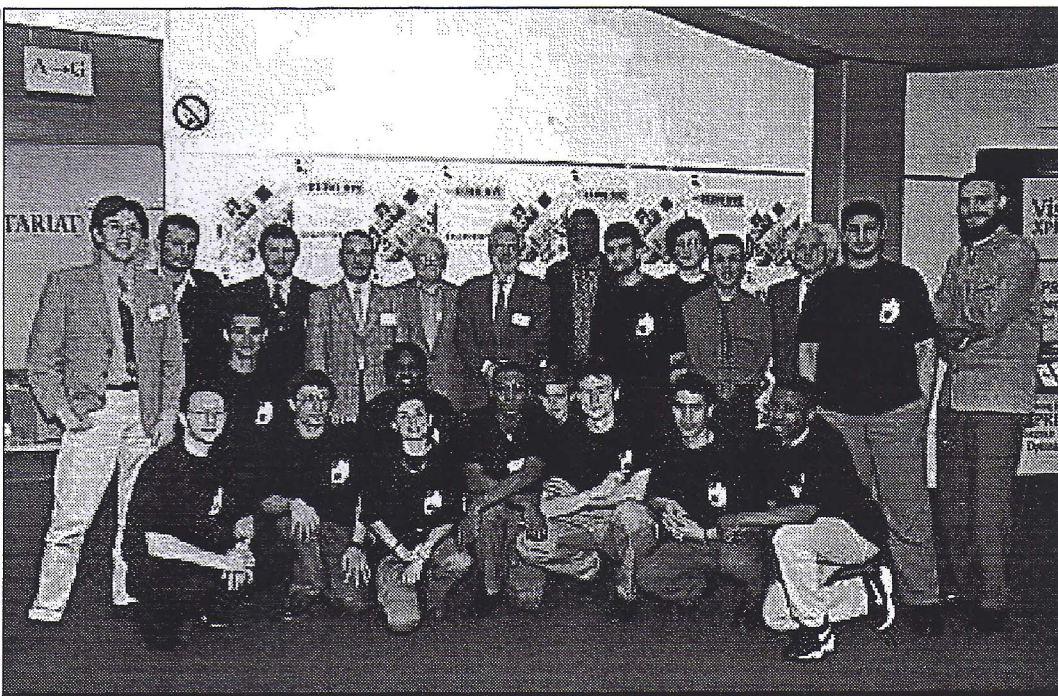
Two innovations were introduced in the organization of EURO XVI.

For the first time, the INTERNET possibilities were intensively used to prepare the meeting: participants, as well as other interested persons, were

Thank you to all of my colleagues who made EURO XVI a successful conference.

Jacques Teghem
Chairman of the Organizing
Committee of EURO XVI

The organizing committee



Competition for the Best Applied Paper EURO XVI - July 1998

This year's Best Applied Paper Competition produced only one paper as a finalist, but it was an excellent one. The title was Sorting farming systems on the basis of their impact on groundwater quality and the authors were Cécile Arondel and Philippe Girardin from LAMSADE and INRA, France respectively. The jury commented that it presented a very interesting and original case study concerning the use of multi-criteria analysis of farming systems from the viewpoint of their impact on the environment. The situation modelled also contained a large number of actors, which is always a very difficult one to model. Perhaps because of that, the work described in the paper has already led to further practical applications. In sum the paper well deserved the prize and it has now been passed to the editor of the Special Conference Issue of EJOR.

Of course, the jury regretted that there were no other finalists and we wish our successors in 2000 better luck in finding more for that year. Perhaps coming from the UK I can say that I find it surprising that given the vast number of practical applications of OR in that country, there was no applicant thence for the prize. In the case of all potential contestants it may be that more incentives are required. Free registration at the conference is a sine qua non, but perhaps assistance with the not inconsiderable travel costs to Hungary might be considered by EURO as well. If the incentives produce at least one paper as good as that by Arondel and Girardin, they will have been worth while.

Maurice Shutler
Chairman of the Jury

From left to right: Maurice Shutler, Cécile Arondel, Philippe Girardin and Jan Weglarz



EURO Veterans Club

Beyond the Hamiltonian. The four people on this picture constitute EURO's Veterans Club. They toured Europe participating in all EURO K conferences, K = 1, ..., XVI, starting in Brussels in 1975,

and now heading for a second tour starting in Brussels 1998. From left to right: Dominique de Werra, Jean-Pierre Brans, Birger Rapp and Bernhard Tilanus.



Promoting OR in Europe A personal account of the "EURO Session" in Brussels (from AIROnews 3/98)

Following the initiative of AIRO to open a debate on the respective roles of EURO and the National OR Societies, a "EURO session" was organised in Brussels with the aim of openly discussing the many issues raised in the series of editorials published in AIRO-News.

This session was widely announced in the Programme of EURO XVI was open to everyone although Presidents and Representatives of the National OR Societies were specially welcomed. It gathered around 35 persons (most of them being either Presidents or EURO representatives of their National Societies). The discussion was open and lively. Rather than trying to produce rather dry "minutes" of this session, I shall try to give here a personal account of the main issues that were raised. This account is in no way "official" and does not necessarily reflect the position of the Executive Committee of EURO.

Is there a need for National OR Societies in Europe ?

For years it seemed more or less obvious that scientific societies should be organised on a national basis. This idea has shaped the present organisation of OR in Europe. Indeed IFORS and EURO have always made many efforts to encourage the creation of OR Societies in newly created countries or in countries without one.

Marc Pirlot observed that such an organisation may now be questionable. Some National OR Societies are in a difficult situation. People involved in them spend much energy trying to keep them alive and the return on investment seems to be low. Taking the example of the Belgian OR Society, he observed that it was more and more difficult to involve young operational researchers in the activities of National Societies, that national journals consume much money and energy without reaching a large audience, that most researchers are more attracted to large international conferences

than to national conferences and that information bulletins are not read. This situation clearly questions the necessity of the existence of the National OR Societies. Travelling within Europe is getting cheaper every day; communication has never been so easy. Why not envisage a different organisation of our scientific associations ?

Although the difficult situation of some National OR Societies is a fact, most of the participants to the "EURO session" agreed that the present organisation of our Societies will not and should not be drastically altered in the near future. There presently seems to be a real need for National OR Societies. Among the many arguments that were put forward the following seem to be the most important ones:

- In the present organisation of Europe, "nations" still play a very important role. National OR Societies are instrumental in promoting OR given the importance of public research funds allocated on a national basis, the many particularities of the academic systems throughout Europe and the importance of "nations" in the present organisation of the European Union (EU) and the allocation of its research funds.

- There is much variance in the present situation of National OR Societies; some of them do not experience the difficulties mentioned by Marc Pirlot and might not be in favour of a complete reorganisation.

- EURO is presently an association of associations and has no individual members. This situation is not likely to change in the near future given the present organisation of OR at an international level (IFORS) and the variety of the situation of the various members of EURO. It is not clear whether such an evolution is indeed desirable.

- National OR Societies can organise events which are close to their members and at which they can speak their own language. Young operational researchers need such events before going (and having the funds to go) to larger international conferences.

– Being active on a local level seems to be the most useful way to involve people from industry in scientific associations.

I fully share the view that National OR Societies should not disappear and I do hope that IFORS and EURO will continue to promote the creation of new ones (Russia may be the next one on the list). However, if a national organisation of OR in Europe is to be maintained, something should be done to revitalise National OR Societies experiencing the problems described by Marc Pirlot. This is all the more true that INFORMS and the most active European OR Societies might well get some National OR Societies "out of the market".

Offering "good value for money"

Many useful suggestions in order for National OR Societies to offer "good value for money" to their members were put forward in the series of editorials of AIRO-News and during the "EURO session". The importance of "imitation" of successful initiatives of other Societies and the necessary quest for synergies cannot be overemphasised. I recall below some of the suggestions that were made.

– Scientific meetings should not be restricted to national conferences. Specialised workshops, tutorials, working groups, "information days" on various topics in OR are useful ways to promote OR and to keep contact with members.

– National Societies should cooperate in the edition of their newsletters in order to make them richer and more attractive. The joint publication of a journal may also solve the problem of the time and energy consumed in the maintaining of small publications having little audience.

– Attracting young operational researchers is vital for National OR Societies. Organising PhD prizes, publicising abstracts of PhD dissertations, setting up placement services, promoting OR in high schools, giving incentives of various kinds might be good ways to do so.

– An intensive use of new information technologies (e-mail, WWW, video-conferencing, etc.) can be very helpful in allowing to reduce the fixed costs of running a National Society. Furthermore a good use of these new technologies may highly contribute to the promotion of OR.

– National Societies cannot live while gathering only academics. Efforts should be made to attract people in industry: seminars, tutorials, placement services. National Societies should strive to become indispensable "go-betweens" in the projects oriented towards the EU.

– National Societies should exchange ideas, technologies (the idea of a common structure of Web pages was suggested) and information. They should have common projects, e.g. the organisation of international problem-solving contests.

EURO may and should help the National Societies in all these respects. The EURO WWW pages should continue to develop so as to become the inevitable entry point for finding information on OR in Europe. They should offer an easy access to the pages of the National OR Societies and contribute to the diffusion of information on their activities (e.g. including the programmes of national conferences and workshops, publicising the table of contents of national OR journals). Creating a "EURO electronic discussion list" could well improve the "networking" role of EURO. The preparation of a directory of operational researchers in Europe should soon follow the development of the directory of OR/MS courses and of OR research units. Similarly, the EURO Bulletin should develop with the objective of becoming a "must read" for anyone interested in OR in Europe: hopefully operational researchers in Europe will soon come to read it before OR/MS Today. National OR Societies and their members should be heavily involved in these developments; a "network" is useless if it not regularly fed !

What about EURO ?

Without doubt the existence of EURO interferes with the activities of National OR Societies. It could thus be tempting to blame EURO for the poor situation of some of its members. Hopefully it seems that the existence of EURO in its present form was favourably considered by all participants to the "EURO Session". Before discussing the role of EURO, it might be worth recalling its main characteristics.

– EURO is an "association of associations" and has no individual members. EURO communicates with its members through the EURO representatives of

each of its members. Their task is vital to EURO. If they do not keep EURO informed of the activities of their Societies and do not inform the members of their Societies of the activities of EURO, there is a risk for EURO of being considered as a remote bureaucratic organisation which have few links with the "members of its members".

– In most of the instruments of EURO, the National OR Societies are heavily involved: they organise EURO-k Conferences, they nominate candidates for the EURO Gold Medal, they select candidates for the EURO Summer and Winter Institutes, they govern EURO through their votes at the EURO Council.

– The main source of revenue of EURO is linked to its agreement with Elsevier, the publisher of EJOR. More than 80% of the resources of EURO come from this agreement. If EJOR were to disappear or if the agreement would cease, the resources of EURO would decrease to a point that would threaten the existence of many of its instruments. EURO has thus a vital interest in maintaining the present status of EJOR: it always promotes EJOR as the normal publication media of its activities (Mini-EURO Conferences, EURO Summer and Winter Institutes, EURO Working Groups) and encourages its members not to take actions that could be detrimental to EJOR. EJOR is now one of the top-ranked journals in OR and that it is very unlikely given the present state of the market that another journal could reach that level within a foreseeable future.

EURO has a vital interest in maintaining healthy and lively National OR Societies: an association cannot exist without members ! It is also crucial that National OR Societies consider EURO as THEIR association. Without their active involvement most of the EURO instruments would simply cease to exist. The idea of "subsidiarity" is central to EURO: it does not want to replace National OR Societies and its only function is to offer its members a number of instruments that can be more conveniently organised on an international level. This "win-win" relationship will hopefully continue to govern the life of OR in Europe in the future.

Where do we go from there ?

EURO cannot live without its members and has no intention of competing with them. Does it offer good service to its members however ? I do think that most of the instruments of EURO are useful and their existence have greatly contributed to the promotion of OR throughout Europe. EURO-k Conferences, EURO Summer and Winter Institutes, EURO Working Groups are certainly among the most useful instruments that were set up; some other instruments EURO, most notably the EURO Prime Conferences or the Best Applied Paper Prize, were somewhat less successful and the Executive Committee of EURO is working hard to improve them. Major developments of the EURO Web pages and the EURO Bulletin are expected in the near future. EJOR is one of the rare example of a truly European journal which competes with the top-ranked international journals. Its very success has however transformed it a very large "library journal" which is not affordable to most individuals. Hopefully the advent of electronic publishing will facilitate the individual access to EJOR while keeping intact the resources of EURO.

Many things remain to be done however. At the occasion of EURO 2000 in Budapest, EURO will celebrate its 25th anniversary. This might be a good occasion to reflect on what has been achieved and to propose new directions for future developments. I list some of them below.

Relations with the European Union

In spite of its many previous efforts, EURO has been unable to develop really fruitful contact with the EU. The word "OR" is probably still unknown to most EU officials. The importance of developing education in OR at a European level is still not recognised. The EURO Summer and Winter Institutes were never directly funded by the EU in spite of their importance for the future of our community in Europe. EURO was never asked for any advice by the EU. I strongly believe that this is the most urgent direction in which we should try to move forward. EURO has the responsibility of promoting OR at the European level and having good contacts with the EU seems indispensable to reach that goal. Needless to say that these contacts should not be detrimental to the National OR Societies representing countries that are not members of the EU.

Relation to the National OR Societies

In 1995, at the occasion of the 20th anniversary of EURO, Costas Pappis edited a special issue of EJOR that was partly devoted to the situation of OR in Europe (Vol. 87, #3). This should certainly be continued. EURO should keep closer contact with its members and offer everyone a clear and regularly updated view of the situation of OR in Europe. Why not start in 2000 ? Conversely, as proposed by APDIO, this same year could well be the occasion for EURO to reflect on its objectives and instruments. The "EURO Session" in Brussels was certainly a first step in that direction. However we should try to collect opinions from a much wider group of operational researchers in Europe: advice and opinion from people who are little involved in their National Societies and seldom participate to the EURO Council would be welcomed.

Promotion of OR

Most Europeans more or less know what Geometry, Biology or Chemistry are about. Unfortunately the situation seems to be different for our field ! Widely promoting OR should be a vital task for EURO. The very word of "OR" - and, possibly, its content ! - should become known by most Europeans. Much work has to be done to achieve this objective; we certainly have many things to offer Europe but it seems that very few people in firms or in governments are aware of the fact ! Developing education and training, lobbying, setting up advisory committees and widely publicised prizes, establishing strong links with scientific association in closely related fields (Computer Science, Artificial Intelligence, Economics, Applied Maths, Management) seem to be important tasks for the near future. We should make sure that within ten

years the word "EURO" will mean to many people something else than just the name of currency.

Information technologies

Promoting OR also means investing in new information technologies. Well-organised WWW pages, educational softwares, on-line directories, electronic publishing, attractive promotion material made widely available on the Web, video tapes on successful applications, information on commercial softwares, etc., appear to be good means to attract students as well as practitioners.

On the verge of retiring from the position of Secretary of EURO and leaving the Executive Committee of EURO, I have the impression that EURO offers a lot to its members but that the road ahead is still long and exciting.

Being the Secretary of an association having only 27 members may appear as a trivial task. The particular nature of EURO makes it very challenging and exciting. I recommend it. I would like to wish much success to the new Executive Committee that will manage EURO starting January 1999. It is my hope that, with the help and in agreement with the Member Societies of EURO, it will be able to work towards an even more active association.

Denis Bouyssou

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What have pandas and bears got in common ? The panda principle

On a visit to Kalispell, Montana, I met a man who organised a senior citizen's walking club called the "Over-the-Hillers". The sole object of the club is to go walking in the nearby Glacier State Park. He told me that as you grow old, three significant biological changes take place. First you start to lose your memory, and then... unfortunately he couldn't remember what the other two changes were !

So what has this to do with the Panda Principle ? Well my friend in Kalispell also knew a lot about bears. We are all familiar with Darwin's theory of evolution based upon the survival of the fittest, but in practice species can survive perfectly well even though other species could occupy their niche more effectively. The fact that the Glacier State Park is populated by black bears means that over the years that species has managed to both live and defend its particular niche against intruders, even though some of these may have been superior. The Panda Principle states that:

Once a creature or entity is ensconced in a local situation it can resist being replaced, even by a better creature or entity.

Thus animals will develop to fill special niches and use these local positions of strength to fight off other animals which might be considered superior to themselves. They effectively prevent any competitor from gaining a foothold. The survivor is in fact a local optimum in creature space; it need not be a global optimum.

The Panda Principle is biological in origin and was first reported in S.J. Gould's book "The Panda's Thumb"; it originated from the inferiority of one of the Panda's thumbs.

The Panda Principle has universal application...

Once you have grasped the general idea you will begin to see that the Panda Principle operates everywhere.

One broad category of applications is in the marketing and sale of products. Cohen and Stewart in their book "Collapse of Chaos" use the example of the QWERTY keyboard to demonstrate the Panda Principle. The claim is that the early acceptance of this keyboard throughout industry, coupled with an extensive training program of operatives, effectively prevented new keyboards getting a foothold in that lucrative market, even though they may have been better.

You will be able to think of many more examples of the Panda Principle operating in marketing; its full of them.

Application of LP to refinery planning on a knife-edge...

Another class of examples of the Panda Principle is found in the introduction of new working practices. The early introduction of linear programming into refinery planning was one such case.

Refinery planning for a single refinery using a desk calculating machine is not too arduous. The final balanced monthly plan can always be achieved by appropriately sizing the final stack-burn. Throughout the oil industry thousands of refinery engineers had learnt these techniques, and many were unwilling to change their non-linear method for one based upon linear procedures.

The in situ staff formed a powerful lobby within the refineries and it was several years before their resistance to the new methods was overcome. Even then the true value of the LP formulation was only realised when it was used to study multi-refinery problems using extreme point analysis.

The results of most operational research will cause a change in the way people work; a new distribution planning procedure, a new way of choosing service stations and many other new systems, will all find the Panda Principle operating against their introduction.

To conclude...

The Panda Principle offers a way of:

- Predicting the outcome of possible changes and preparing to deal with any expected resistance.
- Studying aspects of restricted competition.

The black bears in the Glacier State Park have found their own survival niche. To protect themselves from bear-attack the walkers carry a can of anti-personnel spray !

That's a fact worth knowing.

E. A. Field

CALL FOR PAPERS

Full details at:
<http://mis.ucd.ie/staff/cbrugha/deccconf.html>

The Michael Smurfit Graduate School of Business,
 University College Dublin and
 The Management Science Society of Ireland in
 association with EURO,
 The Association of European Operational Research
 Societies

are hosting a specialist conference on:
 "Decision Modelling and Management Philosophy:
 Bridging Cultures East and West for the 21st
 Century"

It will be held on

January 7-10, 1999

At the Michael Smurfit Graduate School of
 Business, University College Dublin, Blackrock,
 Dublin, Ireland

This is a focused-subject conference. Its primary
 purpose is to draw together the many approaches
 to modelling decision making which are used in
 management. The commonality may be found on
 a philosophical level. The main interest group is
 the O.R. / Management Science / Systems commu-
 nity, particularly those who are interested in quali-
 tative structures in decisions.

Deadlines leading up to conference

October 1st

Statement of intention to participate in the con-
 ference sent by e-mail to cathal.brugha@ucd.ie

October 26th

A 300-word abstract or, preferably, a 6-page paper
 sent by e-mail.

November 23rd

Papers reviewed and responses back to the
 authors.

November 30th

Early bookings and payments.

December 7th

Final version of paper to be returned by e-mail.

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CALL FOR PAPERS

MAPSP '99

Fourth Workshop on Models and Algorithms for Planning and Scheduling Problems

First announcement and call for papers

Following three successful workshops at Lake Como, Italy, in 1993, in Wernigerode, Germany, in 1995, and in Cambridge, England, in 1997, the Fourth Workshop on Models and Algorithms for Planning and Scheduling Problems is to be held in Renesse, The Netherlands, June 14-18, 1999. The conference hotel "De Zeeuwsche Stromen" is located in the dunes of Renesse, a beach resort in the province of Zeeland.

The workshop aims to provide a forum for scientific exchange and cooperation in the field of planning, scheduling, and related areas. To maintain the informality of the previous workshops and to encourage discussion and cooperation, there will be a limit of 100 participants and a single stream of presentations.

Contributions on any aspect of scheduling and related fields are welcome.

Conference organizers

- Emile Aarts,
Philips Research Laboratories, Eindhoven
- Han Hoogeveen,
Eindhoven University of Technology
- Cor Hurkens,
Eindhoven University of Technology
- Jan Karel Lenstra,
Eindhoven University of Technology
- Leen Stougie,
Eindhoven University of Technology
- Steef van de Velde,
Erasmus University, Rotterdam

Invited speakers

- Michel Goemans,
CORE, Louvain-la-Neuve, Belgium
- Martin Groetschel,
ZIB, Berlin, Germany
- Michael Pinedo,
New York University, New York, USA
- Lex Schrijver,
CWI, Amsterdam, The Netherlands
- Eric Taillard,
IDSIA, Lugano, Switzerland
- Richard Weber,
Cambridge University, Cambridge, England
- Joel Wein,
Polytechnic University, Brooklyn, USA
- Gerhard Woeginger,
Technische Universitaet Graz, Austria

Preregistration

If you are interested in participating, please send an e-mail to mapsp99@win.tue.nl. You will be included in our e-mail list for further notifications. Preregistration does not bear any obligations, but helps us to plan the schedule and keep you informed. In your e-mail please include:

- Last name, first name
- Affiliation
- E-mail address
- Whether or not you intend to give a talk

Presentations will be selected on the basis of a one-page abstract to be submitted no later than March 31, 1999.

Important dates**July 1, 1998**

Announcement and first call for papers

November 1, 1998

Second announcement

March 1, 1999

Deadline for abstract submission

April 1, 1999

Last date of notification of acceptance

May 1, 1999

Last date for early registration

June 14-18, 1999

MAPSP '99

REGISTRATION COSTS include fee and accommodation, based on double room occupancy. Prices mentioned are tentative.

Early registration fee: NLG 800

Late registration fee: NLG 900

Supplement for single room: NLG 125

Beach party: to be announced

The deadline for early registration is May 1, 1999.

To register, please consult the conference Web page.

Information sources

For up to date information, consult the conference Web page: <http://www.win.tue.nl/~mapsp99>.

CALL FOR PAPERS

9th International Conference on Flexible Automation & Intelligent Manufacturing (FAIM'99)

Website: center.kub.nl/faim99

June 23 - 25, 1999

Center for Economic Research (CentER)
Faculty of Economics & Business Administration
Tilburg University, Tilburg, The Netherlands

Affiliated Organizations
Industrial and Systems Engineering Department
Virginia Polytechnic Institute and State University,
USA

European Process Industries Competitive Centre
(EPICC)
University of Teesside, UK

Conference objectives

Manufacturing companies throughout the world are rapidly changing in order to survive in today's highly competitive market environments. Some examples of coping with changing environments are manufacturing globalization, automated and intelligent manufacturing, virtual manufacturing and agile manufacturing. The objective of this movement in manufacturing is to improve flexibility, reliability and productivity, and to achieve competition-based technology development. The ultimate goal is to improve profitability of operations. Accordingly, the main focus of this conference is on the developments in flexible automation and intelligent manufacturing systems.

Conference location

The conference will be held on the campus of Tilburg University. The city of Tilburg is 200 years old and with its 200,000 residents, it is now the

seventh largest city in The Netherlands. Tilburg has a central function in the region of "Middle-Brabant", which has about 500,000 inhabitants. In spite of the relatively young age of the city, Tilburg has gone through a quite striking development. From the beginning of 20th century, Tilburg has changed from a primarily agricultural city to an industrial city. Especially the textile industry, which grew out of a "cottage industry", defined the image of Tilburg for many years.

Given its geographical location, other major European cities in a radius of 150 km can be reached from Tilburg; for example Amsterdam, Maastricht, Rotterdam, Brussels, Antwerp, Aachen. Therefore, Tilburg today is known as the "Just-in Time" city of the Netherlands due to many Logistical Hubs located around the city. There are also several large international companies near the city, such as Fuji, Ericsson, PLM, Coca Cola, Banner Pharmacaps, Philips among many others.

Tilburg University (Katholieke Universiteit Brabant), located in the periphery of Tilburg city, was founded in 1927, as originally a School of Economics. It is now a fully accredited government-financed university with over 9,000 students. The Faculty of Economics and Business Administration is its largest faculty, and has about 40% of the university's student population. Center for Economic Research (CentER's) was founded in 1988 as a research institute of the faculty. Today CentER has a Graduate Program in Economics (GPE) and a Graduate Program in Management (GPM). Over the years, CentER has become a broad and modern, internationally oriented institute with about 100 faculty members, and 80 Ph.D. students.

Conference themes

FAIM seeks papers on the following topics:

Next Generation in Manufacturing

- Global/Virtual Manufacturing
- Lean/Agile Manufacturing
- Fractal Manufacturing
- Bionic Manufacturing

Concurrent and Simultaneous Enterprise (Re-)Engineering

- Computer-Aided Analysis and Intelligent Design (CAD)
- CAM, Robotics and Mechatronics
- Rapid Prototyping
- Design for Manufacturing
- Computer Based Enterprise Resource Modeling

Intelligent Manufacturing Systems

- Modular Robot Controlling Systems
- Man-Machine Interfaces for Robot Control
- Artificial Neural Network/Fuzzy Logic/Genetic Algorithm
- Sensor Development, Machine Vision Algorithms, and Applications
- Information Modeling and Manufacturing Execution Systems

Simulation Modeling and Applications

- Object Oriented Manufacturing Modeling Methodology
- Sensitivity Analysis and Optimization in Automation Simulation * Simulation-Based Real-Time Scheduling * Knowledge-Based Simulation Model Design * Flexible Modeling and Analysis of FMS, AGV Systems

Reliability and Maintenance Management in Automated Factory

- Total Productive Maintenance (TPM)
- Reliability Centered Maintenance (RCM)
- Maintenance Modeling
- Computerized Maintenance Management Systems (CMMS)

Automation Technology & Economics of Automation

- Information Technology (EDI, Database and Data Capture Systems) * Robotics & Measurement Technology * Assembly Automation Technology *

Economics of Automation/Integration * Process Automation and Optimization

- Cell Control and Shop Floor Logistics Management

Call for papers

Papers are invited on the topics listed and others within the general theme of the conference. Abstracts should clearly state the purpose, results, and conclusions of the work to be described in the final paper. All papers will be refereed, and at least one author must register in order to include the paper in the proceedings. The proceedings will be published in book form.

Time schedule

The calendar of events is as follows:

September 30, 1998

Abstract submission deadline (400 words)

October 30, 1998

Notification of acceptance

January 15, 1999

Deadline for receiving full papers

March 8, 1999

Final acceptance

Conference exhibitions

Booth spaces will be provided for tabletop displays of products related to the conference theme.

For further information visit the FAIM'99 home page at: <http://cwis.kub.nl/~few5/center/staff/ashayeri/faim99.htm>

or send an e-mail to the Conference Secretariat, Mrs. Petra Van der Ham at: P.H.M.vdrHam@kub.nl.

FAIM'99 Conference Secretary Desk

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Fax: +31-13-466 32 80

WE HOPE TO MEET YOU IN TILBURG!

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University of Nottingham UK PhD Studentships in Planning and Scheduling

Research groups in the Department of Manufacturing Engineering and Operations Management and the Department of Computer Science are investigating planning and scheduling in a wide range of application domains across business, industry and the public sector. Applications are sought for two fully funded 3 year PhD studentships:

(1) Case Based reasoning in Scheduling. This research will investigate the potential for the application of case-based approaches for decision support in scheduling across a range of application domains and will develop innovative schemes for problem representation and for reasoning. The studentship will be based in Computer Science under the supervision of Dr Edmund Burke (e-mail: ekb@cs.nott.ac.uk) and Dr Bart MacCarthy.

(2) New Models and Algorithms for Single Machine Scheduling with Setups. This is an important class of scheduling problem that arises in many real applications. The research will investigate techniques for modelling and solving problems using both heuristic and optimisation techniques. The studentship will be based in Manufacturing Engineering and Operations Management under the supervision of Dr Peter Cowling (e-mail: Peter.Cowling@nottingham.ac.uk) and Dr Bart MacCarthy.

Applicants should have a good honours degree (or be expected to obtain a good honours degree this year) in either Computer Science, Manufacturing Engineering, Mathematics, Operational Research or related disciplines in Science, Engineering or Management. Applicants with relevant Master degrees will also be considered. For each studentship applicants should have strong analytical and problem solving skills. A background in combinatorial optimisation and/or software engineering may also be valuable.

Applicants, including a full CV and stating suitability for either studentship may be sent to:

Dr B. L. MacCarthy
Department of Manufacturing Engineering and
Operations Management
University of Nottingham
University Park
Nottingham
NG7 2RD
Phone: 0115 9514025 or 0115 9514143
E-mail: bart.maccarthy@nottingham.ac.uk
or
Peter.Cowling@nottingham.ac.uk

EURO events calendar

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- 9-11/09/98 EWG Transportation: Goteborg, Sweden
 mipat@math.chalmers.se
-
- 24-25/09/98 EWG 48th Meeting of MCAD: Quebec, Canada
 Jean-Marc.Martel@fsa.ulaval.ca
-
- 8-10/10/98 EWG Financial Modelling: Krakow, Poland
 Molenaar@few.eur.nl
-
- 26/02/99 ESWI Protection and Exploitation of Renewable Resources: Ilomantsi, Finland
 14/03/99 Tuula.Kinnunen@tukkk.fi
-
- 5-6/03/99 EWG HOP, Hierarchical Organisational Planning: Mannheim, Germany
 schneeweiss@bwl.uni-mannheim.de
-
- Spring 99 EWG Financial Modelling: Valencia, Spain
 Molenaar@few.eur.nl
-
- 25-28/05/99 EWG EUROFUSE, Fuzzy sets: Joint EUROFUSE - International Conference:
 Joint Meeting of the EURO Working Group on Fuzzy Sets and Second
 International Conference on Soft and Intelligent Computing,
 Budapest, Hungary
 Bernard.DeBaets@rug.ac.be
 jfodor@mszi.gau.hu
-
- 23-29/06/99 EWG Locational Analysis: ISOLDE VIII, Coimbra/Estoril, Portugal
 coutinho@inescc.pt
 antunes@dec.uc.pt
<http://www.dec.uc.pt/isolde8>
-
- 2-3/08/99 EWG Transportation: 7th meeting, Espoo, Finland
 bielli@iasi.rm.cnr.it
-

EURO events calendar

2-6/08/99	Mini EURO	Mini EURO Conference on Artificial Intelligence in Transportation and Science, Espoo, Finland jarkko.niittymaki@hut.fi
22-24/09/99	Mini EURO	10th Mini EURO Conference - Human Centered Processes - HCP'99: Brest, France
XY/09/00	EWG	Transportation: Rome, Italy bielli@iasi.rm.cnr.it http://www.iasi.rm.cnr.it/~ewgt/index.htm
16-19/07/00	Euro XVII	Budapest, Hungary

If you want to add any EURO event, please contact the EURO Office (euro@ulb.ac.be)

ESWI: EURO Summer & Winter Institute
EURO-k: EURO Conference
EWG: EURO Working Group Meeting
Mini EURO: Mini EURO Conference