

EURO Bulletin

Bulletin of the Association of European Operational Research Societies (EURO) distributed quarterly through the National Societies and on INTERNET (EURO WWW server of the Université Libre de Bruxelles, URL = "http://www.ulb.ac.be/" and anonymous ftp server "ftp.ulb.ac.be" in the directory "/pub/projects/euro". Societies or individual members having news for the EURO Bulletin are requested to E-mail their information to the EURO Bulletin editor: EURO@ULB.AC.BE. Copy deadline for next issue: 15 September 1995.

from Graham K. Rand, Chairman of the Jury

EURO GOLD MEDAL 1995

Ladies and Gentlemen, my
Operational Research Friends

May I first respond to our welcome to Jerusalem. This is the first EURO Conference to be held outside Europe. I am sure that we are all delighted to be here. Many of us will regard it as a pilgrimage. On a personal note it is my first visit, and one that I have been looking forward to for a considerable time. It was great to be able to say last year: 'Next year in Jerusalem', it is even better to be here. Shalom.

This is EURO's 20th anniversary. It is also the 10th anniversary of the presentation of the first gold medal: to Hans Jurgen Zimmerman in Bologna on June 17th 1985 during

EURO VII. The Gold Medal is conferred on a prominent person either for a remarkable role in the promotion of OR or for an outstanding contribution to OR Science. The establishment and this award, a solid gold medal and the opportunity for a lifetime's free attendance at EURO Conferences, was largely the initiative of Jean Pierre Brans, and it was very fitting that he should be awarded the Gold Medal last year in them to you today as it has been a pleasure working with them. They made my task so much easier. My intention when asking them to join the Jury was to get a range of expertise and a wide geographical spread. I would be surprised if you didn't think that I had achieved that.

Silvano Martello from the University of Bologna is widely recognised for his work in combinatorial optimisation. I first met him at the second EURO conference, but my first, held in Stockholm in 1976, where he gave a paper with Paolo Toth, EURO's present President.

Carlos Romero from the Universidad Politecnica de Madrid is well known for his work in Goal Programming.

Paul Fatti from the University of Witwatersrand in South Africa is known to me as a very serious climber of very serious mountains. He was especially welcome as a member of the committee as an expression of South Africa's recent affiliation to EURO. He is an expert on statistical analysis and multicriteria decision making.

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Pekka Korhonen from Helsinki School of Economics also has particularly appropriate expertise in multicriteria decision making.

Eric Jacquet-Lagreze, currently past president of AFCET, the French OR Society, and director of the consultancy company, Euro-Decision. He also is an expert in multicriteria decision making as well as Mathematical Programming.

we considered the contribution to the wider intellectual community, with a weight of 10%. We agreed that for each of the three criteria each of us would allocate 100 points between the four candidates. These results, with any comments received, were circulated to the Jury, and the process repeated. At this point this procedure produced a unanimous decision from the jury.

All about the Decision Process

You may be interested to know the process we adopted to choose between the four nominations we received from the national societies in EURO. Initially, we agreed that the following criteria would be used to choose between the candidates. First, scientific contribution, which we weighted 60%. By this we meant such measures as the number of articles, citations, books, journal editorships and prizes. To help us in our thinking, though not to replace it, we collected statistics from various databases, including BIDS and International Abstracts in Operations Research. Secondly, we considered the contribution to the OR Community, which we weighted 30%. This included such activities as involvement in National Societies/EURO/IFORS, conference organisation, editing proceedings and number of PhD students. Finally,

Gold Medallist ? 10 clues

Traditionally, the identification of the Gold Medallist is kept secret until this moment. Very few people should know, and I suspect that very few people do know. To keep you waiting a little longer, I propose to give you ten clues. I wonder how quickly you can guess the name of the Medallist.

1. The medallist was born on November 26. Under certain assumptions I have made, namely 600 people in the room, there is an 80% chance that at least one of you will now be surprised, and will hurriedly be preparing an acceptance speech. I hope that isn't the Gold Medallist. Even when adding the information that the year was 1942, there is still a 4% chance that someone else shares the birthday. But let me assure you that the secrecy does not extend to the Laureate, so those of you whose heart suddenly beat more quickly,

EURO Gold Medal 1995

can now return to a state of slumber.

2. Our Medallist has been a Visiting Professor at the Universities of Waterloo in Canada, Copenhagen, Bologna and Pisa, and also Rutgers University in the USA.

3. He has presented over 180 conference papers. Note that I have given two clues there, but I will only count it as one.

4. He has published approximately 140 journal articles.

5. One of these articles was concerned with identifying mythological scenes on Greek vases so that "a woman who is wearing a long cloth and carrying an aegis can be identified immediately as Athena".

6. Another article investigated the burrow system of the fossorial form of the water vole. This contains the half-sentence "The burrow systems of pocket gophers are inhabited either by a male or a female."

7 A third article was entitled "Everything you always wanted to know about S.Ex". No, our Medallist is not Woody Allen, and unfortunately it is about Scheduling EXams.

8. He has received honorary degrees from the University of Paris-Dauphine and the Technical University of Poznan.

9. He introduced a previous EURO conference with the sounds of Swiss cows and their bells.

10. He is a former President of EURO.

EURO Gold Medal 1995 Dominique de Werra

It is clear from the various clues that have been given that Dominique de Werra is a most worthy recipient of our Gold Medal. The range of applications to which he has brought his considerable technical expertise in graph theory, networks and combinatorial optimisation is most impressive. In addition to his remarkable contribution to OR, he has also made a considerable contribution to the OR profession, in Switzerland and in Europe, in all sorts of ways. The most obvious of these are his presidency of EURO and the chairmanship of the Organising Committee of the EURO Conference in Lausanne in 1982. Above all, he has made his contribution in a style which I am sure is widely appreciated. On a personal note I know that if I attend one of Dominique's presentations, I will be both informed and entertained. It is with great pleasure that I, on behalf of EURO, confer on Dominique de Werra the EURO Gold Medal.

Graham K. Rand
Chairman of the Jury

from L. Van Wassenhove, Chairman of the Jury

EURO Prize for the best Applied Paper

The EURO XIV conference in Jerusalem (July 3-6) also saw the first edition of the EURO Prize for the best Applied Paper. A jury consisting of J. Pliskin, S. Martello, G. Mitchell, C. van Rijn, M. Salomon and L. Van Wassenhove (chair) had selected 3 finalists out of 15 submissions. The finalists presented their paper in a special session. The jury announced the winner at the closing session of the conference.

The winner is "AMOS - A probability-driven, customer-oriented decision support system for target marketing of solo mailings" by Nissan Levin, Jacob Zahavi and Morris Olitsky.

The two runners-up are "An algorithm for large scale 0-1 integer programming with application to airline crew scheduling" by Dag Wedelin, and "An application of multi-

objective programming technique to construction accuracy control of cable stayed bridge" by Hirotaka Nakayama, Kazayoshi Kaneshige, Shinji Takemoto and Yasuo Watada.

According to the jury, the three finalists papers testify to the following important messages respectively :

-Using clever combinations of proven techniques, Operations Research has a lot to offer in high-potential new business applications like direct marketing.

-Large and extremely hard combinatorial optimisation problems may finally come within our reach by combining state-of-the-art computer science techniques, heuristic search methods and fast machines.

-Many exciting decision problems will continue to emerge in the ever evolving engineering disciplines.

The jury would like to congratulate the finalists.

L. Van Wassenhove, Chair.

from B. Tilanus

EURO-K-AWARD

The Veterans EURO-K Jury, consisting of Jean-Pierre Brans, Birger Rapp, Bernhard Tilanus and Dominique de Werra, met in Jerusalem for the EURO XIV conference and welcomed its honorary member Germain Kreweras. They carefully evaluated and compared each and every EURO K, K = I, ..., XIV, and decided that EURO XIV was the best ever EURO conference.

There were four glorious evenings - at Renaissance Hotel's swimming pool, in the ruins of King David's Tower, at the seaside in old Jaffa, in the hanging gardens of the Shrine of the Dead Sea Scrolls - with optimal temperatures, and optimal (= .5) moonshine; there was maximum (= full) sunshine; there were minimum disturbances (white wine served with red meat at EJOR's lunch); there was the best scientific programme ever, with a notable involvement of the European Working Groups in the form of

sessions, streams of sessions, semi-plenary presentations, and meetings.

The only complaint of the Jury was that they had to wander fourteen conferences to arrive at Jerusalem; but, after all, the Jews had to wander forty years to arrive at the promised land.

It is the Jury's pleasure, therefore, to bestow the EURO-K AWARD onto Zilla Sinuany-Stern and her Organising Committee and Roman Slowinsky and his Programme Committee for the EURO XIV Conference, Jerusalem, 3-6 July 1995.

For the Veterans EURO-K Jury,
Bernhard Tilanus,
Honorary Secretary.

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EURO Council Election, Jerusalem July 1995

President Elect Jan Weglarz

Jan Weglarz was born on September 24, 1947 in Poznan. He graduated from the Adam Mickiewicz University (Mathematics, 1969) and from the Poznan University of Technology (PUT) (Automatics, 1971), where he also made his Ph. D. (Control Systems, 1974), and Habilitation (Operations Management, 1977). Since 1983 he has been Professor at PUT, since 1987 Director of the Institute (formerly of Control Engineering, at present of Computing Science). His research interest concerns scheduling problems (project, machine, production) especially under (discrete and continuous) resource constraints. He is author or co-author of 8 monographs and over 120 papers in major professional journals and conference proceedings. From among 12 of his Ph.D's, 6 are professors (among others, Jacek Blazewicz and Roman Slowinski). In 1991 elected a member of the Polish Academy of Sciences and a member of the State Committee for Scientific Research (re-elected in 1994). Co-laureat of the EURO Gold Medal in 1991 (with J. Blazewicz and R. Slowin-

ski). Since 1987 Principal Editor of the Foundations of Computing and Decision Sciences (formerly Foundations of Control Engineering).

Member of Editorial Boards of many journals, among others EJOR (since 1985) and Internat. Trans. in Operational Research (since the beginning). Representative of Poland in EURO Council (since 1982) and on the Board of Representatives of IFORS (since 1990).

Vice President 1 Elect Valerie Belton

Valerie Belton's career in Operational Research began in 1977 when, after graduating from the University of Durham with a first class degree in Mathematics, she went on to do a Masters Degree in Operational Research at the University of Lancaster. Her first job was an OR analyst at the Civil Aviation Authority, working on a large scale social survey to investigate the effects of aircraft noise at night on residents around Heathrow and Gatwick airports, and statistical modelling of the safety of the trans-Atlantic track systems. During this time

EURO Council Election

she became involved with the UK OR Society as assistant editor of the LASEORS (London and South East OR Society) newsletter and became the first woman to be elected to the Council of the OR Society. Her interest in multiple criteria decision analysis, kindled as a student at Lancaster, continued throughout the time at CAA and she left there to return to full time study as a PhD student with Stephen Watson at Cambridge University. On leaving Cambridge she became a lecturer at the University of Kent at Canterbury, moving on to the University of Strathclyde in 1988. The subject of her PhD was "A comparative study of methods for multiple criteria decision aid", with a particular emphasis on their use to support managerial decision making. This has remained a strong focus of her research interest; over the past 15 years she has worked with many organisations, on a wide range of decision problems, researching ways in which the models, the process and the software for multiple criteria analysis can be developed to provide better support. She has taken a particular interest in the integration of multiple criteria analysis with other approaches, with the aim of enriching both; for example, expert systems, data envelopment anal-

ysis, scheduling methods, and problem structuring methods. She has published many articles on her work in this area and was at the forefront of the development of visual interactive software for multicriteria analysis. Her software package V•I•S•A, developed in 1987, is used worldwide for decision support and for teaching. Her interest in visual interactive modelling extends to its use in teaching, which led to the MENTOR project, which she currently co-directs with Mark Elder. The MENTOR project, awarded a grant of £500,000 by the UK government, is producing multimedia materials for teaching OR.

Involvement in the OR Society has continued over the years, as Council member, Chair of the Conferences Committee, National Conference Chair and organiser of an ESI on Decision Making in an Uncertain World in 1986, Chair of a mini-EURO Conference on Visual Interactive Modelling in 1988, and Chair of the Organising Committee of EURO XIII in 1994.

Valerie's idea of relaxation is being out in the mountains or orienteering. She was awarded a half-blue for orienteering at Cambridge and now orienteers for Scotland (in the veterans team!).

Anita Tenenbaum on the European Information Technology Programme

What's new within the EC's RDT programmes in connection with OR?

An event in the world of Information Technologies - the ESPRIT IV Conference

The «ESPRIT IV» programme, now renamed «European Information Technology» Programme (EIT) remains one of the most important funding actions within the IVth Framework Programme.

ESPRIT is dedicated to the funding of European R&D projects covering most IT applications:

- Software Technologies (ST)
- Technologies for IT components and subsystems (TCS)
- Multimedia Systems (MS)
- Long - term research (LTR)
- Open microprocessor system initiative (OMI)
- High - performance computing and networking (HPCN)
- Technologies for business process (TBP)
- Integration in manufacturing (IIM)

Every year or two, a European Conference is organised by the ESPRIT Directorate-general, bringing together most European «actors» of the Information Technology world. This year's ESPRIT Conference (EITC Conference) will be held in Brussels, on 27-29 November '95.

During these three days, the latest developments in Information Technologies will be displayed and discussed.

Parallel sessions will offer the opportunity for presentations and panel discussions covering applications such as Intelligent Interfaces, Protecting Citizens, Multimedia, Transforming the Enterprise...

Main themes covered by these sessions:

- Challenges for Individuals
- Challenges for Public Sector
- Challenges for Enterprises
- Components or Best Practices driving the Change

The Conference will finally provide panel discussions involving politicians and business leaders on two wide-range issues underlying the Information Society: the «Effect of the Information Society on the structure of employment and job creation» and the «Impact of the accessibility of information and knowledge to everybody, everywhere, at any time».

An Exhibition, open throughout the Conference, will display the latest developments in Information Technologies - thus offering a brilliant shop window for Europe's IT.

Interested in joining the Conference? For further information, please contact: European Commission, DG III EITC '95 Conference Secretariat (Fax +32-2-296 99 30). For Registration, see insert «Registration and Accommodation form».

from Anita Tenenbaum

Are you looking for EEC funding for your RDT pro- jects ?

Here is a selection of Calls for tenders proposed by the Commission (period 1995 -1996) - which might be of interest for OR research activities .

FOURTH FRAMEWORK PROGRAMME (1994-1998) CALLS FOR PROPOSALS

Information and Communication Technologies

-1. Telematics Applications Programme-Third call (61 ECU million) / (Contact person: Mr André VIS - DG XIII/C - fax: +32-2-296 83 98), Dates : 15.09.95-15.01.96

Areas : Telematics for knowledge (Education and Training), Telematics for improving employment and the quality of life (Disabled and elderly people Healthcare)

-2. Communication Technologies (Advanced Communication Technologies and Services - ACTS) - Second call (120 ECU million) / (Contact person : Ms Ruth NUGENT - DG XIII/B -fax : + 32 2 295 06 54)
Dates : 15.09.95 - 01.03.96

Areas : Interactive digital multimedia services, Photonic technologies, High-speed networking, Mobility and personal communications networks, Intelligence in networks and service engineering, Quality , security and safety of communication services and systems.

Horizontal actions: Co-ordination and concertation activities, Preparatory accompanying and support measures.

-3. Information Technologies (ESPRIT 4) - (Contact person : Mrs Gerda COLLING - DGIII -

Fax : + 32 2 2968388) , Dates : Closing date for open call for proposals : 15.02.96, Dates for Fifth Call : 15.12.95 - 15.03.96

Areas : Software technologies (ST), Technologies for IT components and subsystems (TCS), Multimedia systems (MS), Long-term research (LTR), Open microprocessor systems initiative (OMI), High performance computing and networking (HPCN), Technologies for business processes (TBP).

Industrial Technologies

Industrial Materials and Technologies (BRITE/EURAM 3) - Second call (475 ECU million) -

(Contact person : Mr Nicholas HARTLEY - DG XII/C-1 -fax. + 32 2 295 80 46) , Dates: 15.09.95 - 31.01.96

Areas:

-1. Production technologies:

Incorporation of new technologies into production systems, Development of clean production technologies, Rational management of raw materials, Safety and reliability of production systems, Human and organisational factors within production systems.

-2. Materials and technologies for product innovation:

Materials engineering, New methodologies for product design and manufacture, Reliability and quality of materials and products, Technologies for recovering products at the end of their life cycle

-3. Technologies for transport means:

Aircraft design and systems integration -Aircraft production - Technologies for improved aircraft efficiency/safety/ operation, Environmental technologies, Design of vehicles and systems integration, Vehicle production, Technologies for improved vehicle efficiency, Environmental technologies, Technologies for vehicle safety/ operation.

Transport

Second call (45 ECU million) - (Transport Programme Help line DGVII -fax. + 32 2 295 43 49), Dates : 15.09.95 - 15.12.95, Open call for accompanying measures - closing date : 1998

Areas: Strategic research for a trans-European multimodal network, Network optimisation, Rail transport, Integrated transport chains, Air transport/Urban transport/Maritime transport and inland waterways/Road transport.

from E. A. Field, EURO Treasurer 1985 - 1990

Food for Thought

OR needs to concentrate on its practitioners

The Bulletin, volume 4.2, had a report on its conference seminar "Why is Operations Research not very popular in practise?". This was an important meeting and I am sure that those present will have developed a practical plan for improving the popularity of OR. However, I would like to suggest that it is not only the subject of OR that we should be concerned with, but also its individual practitioners.

The following story was recounted by one of my associates who was retiring after a career in computing. On being asked how he had come to move from accounting to computing, he said :-

"One day a notice appeared in the accounting department inviting anyone interested to take a computer programming aptitude test. Many of the young accountants applied for, and took the test. I was one of those that passed. Soon afterwards I was transferred to the computer unit".

Someone asked him what had happened to the people who had failed the test.

"Oh, he said, "they went on to become senior managers!".

The moral to this story is that if specialists, including OR practitioners, want to improve their status in the organisation, they should work hard at becoming organisation persons.

To some extent OR has become a "Flag of Convenience". The subject now includes amongst other subjects, the products of social science and advanced mathematics. The essentially simple approach that was adopted at the birth of OR has been replaced by more complex methods. It is not surprising that the OR practitioners are having a difficult time selling their services to managers and being understood by their prospective clients.

Core requirements for a successful career in industry

Anyone who has spent time recruiting staff will know that there are three simple criteria that new recruits must meet :

- a) They must have the technical ability to handle the immediate job?
- b) They should have the personal qualities to work effectively with people already in the company?
- c) They must be able to climb the company's promotion ladder to become senior managers?

OR people that meet these three requirements do not present a risk to management for they can easily be re-deployed to non-OR work. Managers may not be able to

from E. A. Field

understand the detail of OR work, but they pride themselves upon their ability to judge people. They can also recognise a good solution when they see it.

Clearly items b) and c) have nothing to do with operational research. They are primarily concerned with the application of inter-personal skills. OR practitioners should spend more of their time trying to develop such skills. They should regard this as a necessary requirement for their career development.

A principle as old as the Umbrian hills

On a recent tour of Umbria I visited Urbino. The city is well known for its university but not for one of its earlier rulers, Lorenzo De' Medici. This was the Duke to whom Niccolo Machiavelli gave his book, "The Prince". His advice to the Duke on selecting his staff can be summarised as :

"Only choose those people whose competence you can recognise and whose loyalty will ensure that your ambitions, not theirs, determines their actions".

It is important for OR people to understand that if they are to be chosen to work for a manager they must be able to demonstrate that they meet the Machiavellian criteria. Selling OR to an organisation's management is more about selling yourself than it is about selling OR

methodology.

Thus any attempt to improve the popularity of OR must consider the whole problem; not just the techniques and applications.

The way forward

In summary I list the following points for your consideration.

1. Managers are interested in the person who applies the techniques, more than they are in the techniques themselves.
2. Good OR is achieved by good practitioners, not by good techniques.
3. OR practitioners form a fuzzy set with a membership function depending upon a host of personal and professional attributes. This variation in "quality" is a real problem for clients.
4. There are already plenty of OR techniques. Practitioners need to spend more time becoming good organisation people.
5. A practical step for helping OR to become more popular would be for the EURO Council to adopt EURO-Start as a new EURO Instrument. This would provide the necessary re-entry opportunities into industrial applications of OR. I recommend that the EURO Council should re-consider the detailed proposal I have provided.

from E. A. Field,
EURO Treasurer 1985 - 1990

from Costas Pappis Vice President of EURO

EURO Summer Institutes: a most successful instrument of EURO

EURO Summer Institutes (ESI) have proven to be one of the most important instruments established by EURO. In a recent survey of EURO member OR societies ESI were ranked by all societies as one of the two or three of EURO's most successful instruments.

An ESI is addressed to promising young Management Science / Operations Research scientists. A limited number of them, working in a specific scientific field, gather in a University campus or similar place in Europe for about 2 weeks and present and discuss their work in the presence of senior scientists, leading figures in the relevant topic. During the meeting, participants and tutors have the opportunity to establish

good social and working relations.

Up to three ESI may be organised every 2 years. Each ESI is organised by one national OR society, member of EURO, and covers a different theme so that as many young scientists as possible have the opportunity to participate in one ESI once in their career. Participants are authors of at least one good unpublished paper. The applicants submit their CV together with their papers to their national Society. The Society selects its candidates and passes them to the Scientific Committee of the ESI, which makes the final selection. No fee is requested from the participants for accommodation, the social activities and the scientific programme, which are offered free of charge. Travel expenses from the country of origin of the participants to the location of the ESI are not covered. A special issue of the European Journal of Operational Research is devoted to the ESI by including good papers presented during the ESI.

from Costas Pappis

Twelve ESI have been organised so far, two of which took place this year. The first one, ESI XI, was organised by Salford University in Greater Manchester, UK, from 18 to 28 of last April. The theme of the Institute has been "OR Models in Maintenance". The organiser was also host to the 2nd International Conference on Mathematical Modelling in Industrial Maintenance. Part of the first week's ESI programme was spent by the participants attending this conference. 12 young scientists (3 UK, 6 The Netherlands, 2 Sweden, 1 Yugoslavia) and 7 tutors participated in the ESI.

The second of this year's ESI, ESI XII, was organised by La Laguna University, Tenerife, Spain, from 17 to 30 of last June. An Institute with the same subject (Locational Analysis) has been the first to be organised by EURO in 1984. The programme included lectures from 20 participants and 13 tutors. It also included 13 workshops chaired by the invited lecturers and members of the Scientific Committee.

Two ESI have been planned for the next year. The first one, on Stochastic Optimisation, will be the first EURO Institute to take place in winter, hence it has been called a EURO Winter Institute. It will be organised by the University of Vienna and will take place (combined with skiing!) in Semmering, a recreation centre of the Austrian trade unions, from 7 to 18 of next January.

The second of next year's ESI (ESI XIV) on Environmental Planning will be organised by the University of Piraeus in Piraeus, Greece, from 7 to 21 of next June. Apart from the scientific programme, swimming sessions as well as cruises to some of the Aegian islands are also planned!

EURO member societies wishing to organise an ESI should contact the EURO Office in order to obtain the ESI guidelines and the application form.

Costas Pappis
Vice President of EURO

from Prof. G. Ch. Pflug EURO Winter School Organiser

**EURO WINTER
SCHOOL on
STOCHASTIC OP-
TIMISATION**
January, 7th - 18th,
1996
Semmering, Aus-
tria

Organiser: G. Ch. Pflug, Uni-
versity of Vienna, Austria

IIASA-Coorganiser: A.
Ruszezynski, IIASA Laxen-
burg, Austria

EURO-Coorganiser: C. Pap-
pis, University of Piraeus,
Greece

Invited speakers : M. Demp-
ster (UK), R. T. Rockafellar
(USA), A. Gaivoronski (Italy),
R. Rubinstein (Israel), P. Kall
(Switzerland), R. Wets (USA),
W. Römisch (Germany)

SCIENTIFIC SCOPE

The purpose of this winter

school is to discuss new re-
sults on stochastic optimisa-
tion, like optimality conditions,
approximation techniques,
statistical properties, algo-
rithmic methods, etc. The
Winter School will not only
treat stochastic decision mod-
els, their properties and solu-
tion algorithms, but also put
some emphasis on software
and in particular on integrating
simulation and optimisation
procedures.

THE PROGRAMME

The invited speakers will give
expository lectures. Each of
the participants is invited to
give a shorter presentation.
Sufficient time will be provided
for informal discussions.

**LOCATION AND ACCOMMO-
DATION**

The venue ("Haus Semmering"
der GPA, A-8685 Steinhaus
am Semmering Tel : (+43)
3853-8104) is a recreation
centre of the Austrian trade
unions. It contains an indoor

from Prof. G. Ch. Pflug

swimming pool, Finnish bath, TV-rooms, table tennis rooms and a cafeteria. The small skiing area of Steinhaus (3 lifts) is in walking distance. The larger ski areas of Semmering/Hirschenkogel and Spittal/Stuhleck are at a distance of not more than 3 km. Sport equipment can be rented.

PUBLICATION

It is planned to prepare a special issue of the European Journal of Operations Research from the contributions of the participants.

PARTICIPATION

Participation including accommodation is free. There is an age limit of 35 years. Applicants should submit their CV, a list of publications and an unpublished paper which is related to the topic of the Winter School to their national OR society by November 1, 1995.

The societies will select and rank the candidates and submit their applications to the organisers not later than December 1, 1995.

INFORMATION

e-mail : euro@smc.univie.ac.at
 WWW:
<http://www.smc.univie.ac.at/>

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Conferences

Symposium on Combinatorial Optimisation CO96

Conference Theme: Combinatorial Optimisation: Recent Advances in Theory and Practice

An international biennial conference to be hosted by Imperial College of Science, Technology and Medicine, London, 27-29 March, 1996

Conference Organisers: John Beasley, Imperial College, UK, Yazid Sharaiha, Imperial College, UK.

Conference Programme Lectures on the current state of the art in combinatorial optimisation will be delivered by the following invited speakers Nicos Christofides, Imperial College, London "Optimal design of telecommunication networks", Bruce Golden, University of Maryland, USA "Neural networks and combinatorial optimisation", Paolo Toth, University of Bologna, Italy "Exact algorithms for routing problems".

Paper Contributions are invited on the following and related areas of study: Logistics and routing Scheduling, Network optimisation, Computer vision, Financial modelling; Polyhedral combinatorics, Location analysis.

For further information:
- e-mail to co96@ic.ac.uk
- by normal mail to either of the conference organisers at The Management School, Imperial College, 53 Prince's Gate, London SW7 2PG, UK
- homepage on <http://mscmga.ms.ic.ac.uk/co96.html>

2d International Conference on the Design of Cooperative Systems COOP'96

The purpose of the conference is to help to solve the problems arisen from the construction of cooperative systems, by: a better understanding of human-human or human-computer cooperation, the proposition of models of cooperation, the proposition of new functions for cooperative systems and of suitable design methodologies.

Location: The conference itself will take place in Juan-les-Pins, 12 - 14 June, 1996. The organising body for the conference is INRIA.

Programme Committee Chairman: Manuel Zacklad, CNET-COOP Group, FR.

Researchers in cognitive psychology and ergonomics, computer-supported collaborative work, distributed artificial intelligence, group decision support systems, knowledge engineering, management, organisation sciences ... are invited to send their paper contributions before 20 December 1995 to:

Madame Monique Simonetti, INRIA, COOP'96, Bureau des relations extérieures, 2004 route des Lucioles, BP 93, F-06 902 Sophia-Antipolis Cedex, France (tel.: +33 - 93 65 78 64, fax: +33 - 93 65 79 55, e-mail: simoneti@sophia.inria.fr)