

EURO Bulletin

Bulletin of the Association of European Operational Research Societies (EURO) distributed 4 times a year (Spring, Summer, Fall, Winter) through the National Societies. National Societies or individual members having news for the bulletin are requested to send their information to the editor: Ph. Van Asbroeck, 108 av. Slegelx, B-1030 Brussels, Belgium (tel. & fax.: +32 2 245 60 69).



Season's Greetings



Season's Greetings



Season's Greetings



FROM THE PRESIDENT-ELECT

Dear O.R. Friends of Europe,

In the previous issues of the Bulletin, ably I may say edited by Phillipe Van Asbroeck, there have been a number of leading articles by my colleagues. I am continuing in this vein, but in a sense beginning anew, because this is the first of a series of regular spots in which each of the new officers of EURO will talk about those enterprises which she or he is undertaking on behalf of the member societies of EURO. I just happen to be first in the series.

This time I would like to start by quoting a former president of IFORS, Heiner Mueller-Merbach who guest-edited OR Insight of March-June last year. He said, 'We prefer to offer algorithms for mathematically appealing structures instead of sitting with the problem owners and considering their real concerns'. He very kindly notes that one country is different. However even this country is not immune from the

question-posing reported in yet another country in the April 1992 issue of OR/MS Today, 'what role should OR and MS play in a changing world'.

It appears that in the USA as in European countries these are tough times for O.R. employment in both industry and academia, and it is not unnatural that the perennial question of 'synergy between academia and industry' is raised again. To many it is an important one, in particular to those who believe that OR and MS are a priori about practice; the first label includes 'operations' the second 'management'. 'We are not', they say, 'just acting as a branch of applied mathematics'. Bernard Roy said this strongly too in his speech at Helsinki on accepting EURO's Gold Medal. He said that to call OR a branch of mathematics is reductionist and cuts off OR from the milieu which nourishes it. I must say that I agree with him and from the emotional point of view we know the extreme personal satisfaction that solving a real-life problem can bring and with it the hope that this solution can help other people to repeat it in the future. As a demonstration of past successes one need look no further than to inventory control and the fact that computers in companies buying goods now talk directly to computers in companies selling the goods to them, thereby linking production schedules as they link forecasts and payments. This is something which 25 years ago leaders of the automotive industry among others declared to be impossible! It was possible then as it is practical today.

INSIDE

- 1 from the President-elect
- 2 IFORS SPC-K
- 3 EURO Summer Institute
- 4 EWG MCDA Newsletter
- 5 European Chapter ECCO VI

(continued in page 3)

EURO - Officers

President: Jaap Spronk, Erasmus University, P.O. Box 1738, 3000 DR Rotterdam, Netherlands (+tel. 31 10 408 1282, fax +31 10 411 7558, spronk@hroeur5);

Past-President & IFORS Vice-President: Jakob Krarup, DIKU Univ. of Copenhagen, Universitetsparken 1, DK-2100 Copenhagen O, Denmark (tel. +45 35 32 14 50, fax +45 35 32 14 01, krarup@diku.dk);

President-elect: F. Shutler, Monopolies and Mergers Commission, New Court, 48 Carey Street, London WC2A 2JT, UK (tel. +44 71 324 1315, fax +44 71 324 1400);

Vice-President: Isabel Hall Themido, Lisbon Technical University, CESUR, Av. Rovisco Pais, P-1000 Lisbon, Portugal (tel. +351 1 809 705 or +351 1 809 580, fax +351 1 809 884);

Secretary: Catherine Roucairol, Université Paris 6 et INRIA, Domaine de Voluceau, B.P. 105, Rocquencourt, F-78153 Le Chesnay, France (tel. +33 1 39 63 51 79, fax +33 1 39 63 53 30, roucairol@seti.inria.fr);

Treasurer: Jean Bovet, M.A.D., Route d'Oron 100, CH-1000 Lausanne, Switzerland (tel. +41 21 784 36 35, fax +41 21 784 36 55);

Past Presidents: H. Zimmermann, B. Rapp, R. Tomlinson, J. Brans, D. de Werra, J. Krarup.

EURO - Members

Austria: Österreichische Gesellschaft für Operations Research (ÖGOR), c/o Institut für Ökonometrie, OR und Systemtheorie (Prof. G. Feichtinger), Technische Universität Wien, Argentinierstrasse 8, A-1040 Wien;

Belgium: Société Belge pour les Applications des Méthodes Scientifiques de Gestion / Belgische Vereniging voor Toepassing van Wetenschappelijke Methoden in het Bedrijfsbeheer (SOGESCI / BVWB), Renaissancelaan 30 Av. de la Renaissance, B-1040 Brussels, (tel. +2 735 5152, fax +2 735 2421);

Czechoslovakia: CSORS, Czech and Slovak Operational Research Society, Department of Operations Research and Econometrics, The School of Economics, Odbojarov 10, CS-832 20 Bratislava;

Denmark: Danish Operations Research Society (DORS), c/o Spadille Congress Service, P.O. Box 9, DK-3100 Hornbaek, (tel. +45 42 20 24 96);

Egypt: Operations Research Society of Egypt (ORSE), c/o Nasser Wahba, Centre for Middle East Management Studies, The American University in Cairo, P.O. Box 2511, Cairo;

Finland: Finnish Operation Research Society (FORS), P.O. Box 702, SF-00101 Helsinki 10;

France: Association Française pour la Cybernétique Economique et Technique (AFCEET), 156 Boulevard Péreire, F-75017 Paris, (tel. 01-47662419);

Germany: Deutsche Gesellschaft für Operations Research (DGOR), Am Steinknapp 14b, D-4630 Bochum 1, (tel. +49 234 462246, fax +49 234 462245);

Greece: Hellenic Operational Research Society (HELORS), Solomou 20, G-11682 Athens, (tel.: 01-3619892, 01-3607532);

Hungary: Committee of OR at the Hungarian Academy of Sciences, Kende u. 13-17, P.O. Box 63, H-1502 Budapest, (Associate Member);

Iceland: Icelandic Operations Research Society (ICORS), University of Iceland, Faculty of Economics and Business Administration, IS-101 Reykjavik;

Ireland: Operations Research and Management Society of Ireland (ORMSI), c/o

Stokes Kennedy Crowley, 1 Stokes Place, St. Stephen's Green, Dublin 2 (tel. 735566);

Israel: Operational Research Society of Israel (ORSIS), c/o Faculty of Industrial Engineering and Management, Technion, Haifa, (tel. 04-292239);

Italy: Associazione Italiana di Ricerca Operativa (AIRO), c/o Signora Agnese Martinoli - Bagnasco, Via Serretto 1/4, I-16131 Genova, (tel. 39 10-3777703);

Netherlands: Netherlands Society for Operations Research (NSOR), c/o Dr. P. van Laarhoven, c/o McKinsey & Company, Amstel 344, NL-1017 AS Amsterdam, The Netherlands;

Norway: Norwegian Operations Research Society (NORS), c/o Polyteknisk Forening, Rosenkrantzgt. 7, N-0159 Oslo 1, (tel. 02-330741);

Poland: Polish Cybernetical Society, Technical University of Poznan, Inst. Automatyki, Piotrowu 3A, PL-60-965 Poznan, or ASPORS, IBS Pan, Newelska 6, PL-01-447 Warszawa;

Portugal: Associacao Portuguesa para o Desenvolvimento da Investigacao Operacional (APDIO), Cesur-Instituto Superior Tecnico, Av. Rovisco Pais, P-1000 Lisboa, (tel. 807455 / 882992, fax 809884);

Spain: Sociedad de Estadística e Investigación Operativa, Hortaleza 104 - 2 izda, E-28004 Madrid;

Sweden: Swedish Operations Research Association (SORA), FOA, S-172 90 Sundbyberg;

Switzerland: Schweizerische Vereinigung für Operations Research / Association Suisse de Recherche Operationnelle (SVOR / ASRO), c/o Ms T. Häring, Grossmattstrasse 38, CH-4133 Pratteln (tel. +41 61 821 4145);

Turkey: Operations Research Society of Turkey (ORST), Middle East Technical University, TR-06531 Ankara;

United Kingdom: Operational Research Society (ORS), Neville House, Waterloo Street, Birmingham B2 5tx, (tel. 021-6430236);

Yugoslavia: Yugoslav Society for Electronics, Telecommunications, Automation and Nuclear Engineering (ETAN), Kneza Milosa 9, P.O. Box 356, Belgrade.

ITALIC CHARACTERS DENOTE NEW INFORMATION

FROM THE PRESIDENT-ELECT (continued from page 1)

However I think that Heiner was right in his formulation. Many of us do prefer the appeal of algorithm, or so one must judge from the vast bulk of the papers that appear at EURO-K conferences. Organisers of all OR conferences and editors of all OR journals would be delighted to accept more papers on practice, but their appeals tend to fall on deaf ears.



So what to do? You the readers may not believe that this is a real problem. If that is your view, why not write in to the Editor, Phillipe Van Asbroeck to say so. If you do agree that there is a problem, please write too. It is not the job of EURO to perform the functions of its members, but it is one of its jobs to pass knowledge of OR and MS across the borders of members, and we can pass on your views via the medium of the Bulletin.



There were two solutions proposed at EURO XII in Helsinki to the problem of getting more practical papers. (This indeed was a conference which had much more than the normal number of practical papers). The first was to have more tutorial streams as in EURO XII and invited papers in organized sessions. This will be done for EURO '94 in Glasgow. It has been done before. It will, I am sure, be successful. The second is to complement the activities of our working groups by constructing more networks on the analogy of the practitioners' network funded by the trio of Fortuin, Van Beek and Van Wassenhove. I wrote about these in my last letter to this Bulletin, and that issue of the Bulletin contained an article by Ernest Field, immediate, past-Treasurer of EURO, on his experiences with networks in the 1950s.

A third and different solution also came up at Helsinki; and this was the idea of support in the form of travel grants for academics in one country to visit an OR group in the private or public sector in another. This is something which has yet to be considered by the Executive Committee, but if we really believe in the possibility of cross-border transfer of OR practice, either we must do it ourselves, or we must use EC funds so to do. One can also mention the initiative of Jan Telgen President of the Netherlands OR Society in promoting training to develop OR consultancy skills. Such courses are also popular in the UK (a notice of the next one appears in this issue of the Bulletin in page 8) and there is no reason why EURO itself should not promote the same things internationally and on the Continent of Europe, through the kind offices of its members.



EURO exists to facilitate the wishes of its members. We have the funds to do more. The EURO Executive will make proposals, but these are most effective only if they are in response to the proclaimed needs of you our members and you the members of our members; Let us hear from you.



Best wishes for good O.R. applications in 1993.

Maurice Shutler

from the EURO Vice President of IFORS

IFORS SPECIALIZED CONFERENCE, SPC-K

As a formal framework for international cooperation within OR, IFORS was founded in 1959 by Operational Research Society (UK), Operations Research Society of America, and Société de Recherche Operationelle. Since then, the main activity of IFORS has been the organization of triennial, international conferences addressing the world community of operational researchers. IFORS is in addition publishing the International Abstracts in OR and a periodic Bulletin.

In the early 70's, however, there was in Europe an increasing awareness of numerous ongoing OR activities on one side and, on the other, rather weak means for promoting communication and cooperation among European operational researchers. Some national societies did (and do still) cooperate on an ad hoc basis but not to an extent to satisfy the general need for "something" between IFORS and the national societies. As the result of the deliberations made, EURO, The Association of European OR Societies within IFORS, was eventually founded in 1975. Throughout, IFORS itself has supported the idea of such Regional Groupings, and three more, covering almost all of the remaining part of the IFORS world, have materialized to date: ALIO, Asociacion Latino-Ibero. Americana de Investi-

gacion Operativa (founded in 1982), APORS, Association of Asian-Pacific OR Societies within IFORS (founded in 1985), and NORAM, The Association of North-American OR Societies within IFORS (founded in 1987).

The statutes of IFORS were revised in conjunction with IFORS '87 in Buenos Aires. Among the amendments is a paragraph stating that "... to further co-operation between the Regional Groupings and IFORS, each such Regional Grouping (...) shall have the right to elect one Vice-President."

J.P. Brans was appointed EURO Vice-President of IFORS for the three year period 1989-1991. Realizing that the basic IFORS instrument for promoting OR is the triennial conferences and hence that IFORS is only visible in some specific part of the world (as defined by the Regional Groupings) every 12 years on the average, J. P. Brans suggested that IFORS should organize each year (possibly with the exception of those where a triennial conference is being held) at least one so-called Specialized Conference on rich and promising OR topics: "The requested features are: particularly attractive for practitioners, new technologies involved. low organizational costs, audiences of 200 to 300 spe-

from EURO Vice President

cialists, no proceedings but special issues in prominent journals, attractive locations, reasonable fees allowing to raise some additional money for IFORS, ...".

Following his own concept, the first conference in this new series, IFORS SPC-1: Decision Support Systems, was organized by J.P. Brans in Bruges, Belgium, in 1991. A selection of the papers presented has recently been made available in a special issue of European Journal of Operational Research (EJOR 61, Nos. 1 -2 1992), guest-edited by J.P. Brans and T. Jelassi. Transition to Advanced Market Economies was the very timely subject of IFORS SPC-2, organized earlier this year in Warsaw by A. Straszak.

It is an honour - and a challenge - to have succeeded J.P. Brans as EURO Vice President of IFORS with particular responsibility for the SPC series. For the moment, the viability of this new IFORS instrument can hardly be questioned. SPC-1+2 managed to attract considerable interest and also to generate inquiries from potential organizers of future SPC-Ks. Furthermore, I have been encouraged by the IFORS Administrative Committee to be in charge of an SPC-K on Combinatorial Optimization. Where to start? No other meeting has made a greater impression upon me or have had a greater impact on my professional career than DO'77 (Discrete Optimization, Vancouver, 1977),

conceived and enthusiastically directed by P.L. Hammer, RUTCOR, Rutgers University, New Jersey. Based on 24 invited surveys, the scope of discrete (or combinatorial) optimization as an established field was to some extent defined at that event, cf. the two volumes of Annals of Discrete Optimization that appeared afterwards.

The opening sentence of the Preface to the first volume reads: "Discrete optimization has experienced a tremendous growth during the last several decades". Still today, this is as true as ever before. Much significant research has been carried out on many frontiers in the intervening 15 years and a wide variety of new applications have been reported on in the literature. In view of the theoretical developments, the documented ability to solve realistic problems, and the wealth of open questions that still remain, it is conceivable that we have reached a stage where a second set of similar invited reviews seems well called for, not in the least for the benefit of the next generation of researchers. Could that be the main aim of an IFORS SPC-K.?

To become successful, however, such a venture demands the devotion of many. As a first, modest step ahead, let me hereby issue this "Call for ideas and comments".

Jakob Krarup

Risk management in complex production and transportation system

EURO SUMMER INSTITUTE ESI VIII, Rosersberg, Sweden

As always this year's ESI was a great success. The topic was borderline to our usual interests, most of the laureates and lecturers attending had little contacts with O.R. but, in my opinion, that was not a handicap, rather a factor for success.

Those who were new to O.R. and/or EURO were well impressed by this very generous activity and there is no doubt in my mind after having attended the Scientific Programme, that O.R. has been, and will continue to be a crucial tool (both methodology and techniques) in addressing this very important problem of our society - Risk Management in Transportation, Industry and civil Protection. I am sure that after this year's ESI forms of cooperation will be established with the European Risk Management Association and that more papers on this topic will be presented at our conferences and published in EJOR.

At the top of the varied Scientific Programme, the organization and the social programme were first class. I was truly impressed by the efficiency of our Swedish colleagues. They were able to canvass a lot of sponsorship for the event, found an ideal location in the setting of the grounds of an old castle, turned school of the National Rescue Centre, where the fire brigade is trained, and dedicated a full two weeks of their professional

and private lives to the ESI and its participants. Sven-Eric Andersson, Anders Eriksson and Peter and Maria Wulff will certainly remain in the memories of all those which were lucky enough to have spent a few Spring days at Rosersberg, Sweden.

FORTHCOMING EURO SUMMER INSTITUTES (ESI) (for further information please contact the organizers)

1993 ESI IX: University of Mannheim, Germany, July 24 - August 7, Theme : Hierarchical Planning Organizer: Prof. Dr. Ch. Schneeweiss University of Mannheim, Schloss, D-6800 Mannheim - Germany (Fax: 621 292 1270);

1994 ESI X: Ecole des Hautes Etudes Commerciales, HEC, Jouy en Josas, France, July 13 - 28, Theme: Combinatorial Optimization, Organizer. Prof. Catherine Roucairol Univ. Versailles - INRIA Domaine de Voluceau, BP 105 Rocquencourt F-78153 Le Chesnay Cedex - France (Fax: +1 39635330);

1995 ESI XI: Salford University, United Kingdom, Date to be decided. Theme: Maintenance, Replacement and Reliability Modelling, Organizer: Prof. A.H. Christer, University of Salford, Salford M5 4 WT United Kingdom (Fax: +61 7 455999).

Isabel Hall Themido

EWG on MCDA

Newsletter of the EWG on MCDA

It is with great pleasure and the hope of being able to carry out a useful task to the members of the group that I am replacing Prof. Michel Prévôt as editor of the European Working Group «Multicriteria Aid for Decision» newsletter, as a result of his retirement.

In this new phase of its life, the newsletter will include several sections for which it is essential the help of all of you. Among those sections to be included for which it is of great importance your collaboration, I would like to put in evidence the following: Information about books recently published, Information about Conference Proceedings, Information about future Conferences related to MCDA, Information about seminars programmed in relation to the research groups activities, Relevant information about the multicriteria community, Information about journal articles recently published, as well as other papers.

The core of the sections concerning new articles is prepared by the permanent collaborators of the newsletter. Even so, your help is crucial!

The newsletter will also try to contribute to a greater mutual knowledge of the various research groups the work of which is related to MCDA.

So, we initiate in this issue a series of articles which describe the activities of various groups, by presenting the work of the group of Chania, Crete, Greece. We also plan to include from the next issue onwards, an opinion paper focusing on different topics such as new trends in MCDA, discussion of a new book.

As everybody knows this group meets twice a year (in October and March). A section of each issue will be dedicated to the last meeting, that will be written by the corresponding organizer. This is initiated in this issue with the Luxembourg meeting. It is also our intention promoting an active cooperation with the newsletter of the International Society of MCDA and extending the divulgation of our work as far as possible to anyone interested.

Last but not the least we would like to mention the deadlines for collecting the information to be included in each issue. The newsletter will appear twice a year, in Nov./Dec. and in April/May. Therefore for the Fall issue information will be received until the 31st of October and for the Spring issue until the 31st of March.

The hope of being able to potentiate an increasing participation of the MCDA community from the Atlantic Sea to the Ural Mountains in the activities of the group is the best reward for the newsletter team of collaborators.

Editors: Joao Climaco; **Permanent Collaborators:** M. Joao Alves, C. Henggeler Antunes, J. Paulo Costa, M. Paulo Melo.

contributions should be sent to:
E-WG on MCDA Newsletter,
INESC,
Rua Antero de Quental, 231
cv;
P-3000 Coimbra;
Portugal
(fax: +351 39 24 692)

ORS professional skills workshop, 15-16 March 93, York, UK

INTRODUCTION TO CONSULTANCY SKILLS

A

workshop for the younger OR specialist to practise the skills needed for effective consultancy work within an organisation.

This workshop aims to develop in participants those communications and interpersonal skills needed to perform a consultancy or problem-solving job effectively.

The Workshop is designed for the OR practitioner who has had little or no formal training in these aspects of consultancy work, but who has had a minimum of six months experience of OR work.

Most of the time the emphasis will be on skill-building activity - small group exercises, role-play, etc - providing direct feedback to participants. This will be supported by short formal input and focused group discussion

TRAINER: Bill Evers has devised and tutored the successful consultancy skills workshops over several years. Before becoming a full-time training consultant he worked in industry in a variety of consultancy roles, initially in market research and later in personnel and management development.

COURSE TEXTS / MATERIALS: All session notes, etc. will be issued as a workbook.

LOCATION: 15-16 March 1993, Abbey Park Hotel, York, UK.

INCLUSIVE RESIDENTIAL FEES: ORS Members £490 + VAT, Non-Members £540 + VAT.

INFORMATION: Operational Research Society, Neville House, Waterloo Street, Birmingham B2 5TX, UK (tel: +21 643 0236, fax: +21 631 3485).

PROGRAMME

DAY ONE

10.00 Introductions and discussion of participants objectives and expectations of the programme;

Consultancy within an organisation;
Consultancy processes;
Consultancy roles;

13.00 Lunch;

14.00 Consultancy skills;

18.00 End of Day One;

Evening Some preparation for Day Two - otherwise free;

DAY TWO

09.00 Writing for Effect;
Learning Styles Analysis;
Problems and Difficulties for Internal Consultants;
- in dealing with Resistance;

13.00 Lunch;

14.00 - in maintaining Self Esteem;
- in Problem Solving/Influencing;

Planning for return to work;

16.00 Close.

ANNOUNCEMENTS

JORBEL special issue on production management

Production Management has now become an extremely important chapter of OR. The subject is rich in difficult problems able to attract the theoretician as well as being of interest for the practitioner.

After a first Special Issue on Combinatorial Optimization in Applications, JORBEL, the Belgian Journal of Operations Research, Statistics and Computer Science will dedicate its next Special Issue to «Production Management». The authors are invited to submit a paper on any aspect of the subject such as: architecture of manufacturing systems, sequencing and scheduling problems in all types of workshops, inventory problems, cutting stock problems. The above list is not limitative.

According to JORBEL Editorial Policy, the emphasis is on applications. Technical papers directly motivated by practical problems will be favoured. Papers reporting on applications of existing or new methods in Industry are especially welcome as well as tutorials and reviews.

The authors should express their interest by sending a short abstract before March 1, 1993. The full paper should then be submitted before May 1, 1993. The proposed contributions will follow the usual refereeing procedure. The selected papers should

appear by the end of 1993.

All abstracts and papers are to be sent to: Dr. J. LEYSEN, Koninklijke Militaire School, Dept. Wiskunde en Informatica, Renaissancelaan 30; B-1040 Brussel, BELGIUM (fax: +32 2 735 24 21). All additional information and in particular prescriptions about the formal presentation of the contributions can be obtained from Dr. J. LEYSEN.

ECCO VI Conference of the European Chapter on Combinatorial Optimization April 26-28, 1993

The 6th meeting of the European Chapter on Combinatorial Optimization (ECCO) will take place in Brussels from Monday, April 26 until Wednesday, April 28, 1993. The conference will be hosted by the Center for Mathematical Economy and Econometrics, Free University of Brussels, and organized in collaboration with the European Institute for Advanced Studies in Management.

There will be no conference fee, but participants are expected to cover their own travel, accommodation and living expenses. The deadline for submitting an abstract is January 31, 1993.

For further information please contact: Dr. Martine LABBE, CEME CP 139, Université Libre de Bruxelles, 50 avenue F. D. Roosevelt, B-1050 Brussels; Belgium (tel.: +32 2 650 3836, fax: +32 2 650 4012, email: mlabbe@ulb.ac.be).

EVENTS

Present section was closed on 31 December, 1992, «*» denotes information featured previously.

January 19, 1993

LAMSADE Seminar on «Learning from Multiple Criteria Analysis» with Valerie Belton, Paris, France;
Information: Université Paris Dauphine, LAMSADE, Place du Maréchal De Lattre de Tassigny, F-75775 Paris CEDEX 16, France (tel. +33 1 45 05 1410, fax +33 1 47 55 44 22);

January 21-22, 1993

*** 7th National Conference on Quantitative Methods for Decision Making ORBEL 7**, Brussels, Belgium;
Information: Bertrand Mareschal, Université Libre de Bruxelles, Institut de Statistique, Bld. du Triomphe CP210, B-1050 Bussels, Belgium (tel. +2 650 58 84, fax +2 650 58 99);

January 28, 1993

Joint Meeting with the Royal Statistical Society on «Neural Nets in Forecasting», Birmingham, UK;
Information: John Hallett (tel.: +902 323 964);

* January - February, 1993

*** IFIP Conference on Computational Techniques of Stochastic Programming**, Seregelyes, Hungary;
Information: Dr. Istan Deak, Deputy Head of the O.R. Dept., Computer and Automation Institute, Kende u. 13-17, H-1111 Budapest XI, Hungary;

February 2, 1993

*** LAMSADE Seminar on «méthodes d'exploitation de relations de préférence valuées»** with D. Bouyssou, Paris, France;
Information: Université Paris Dauphine, LAMSADE, Place du Maréchal De Lattre de Tassigny, F-75775 Paris CEDEX 16, France (tel. +33 1 45 05 1410, fax +33 1 47 55 44 22);

February 2-3, 1993

*** Seminars on Software Architecture for Parallel Computing: Tools and Applications**, London, UK;
Information: UNICOM Seminars, Brunel Science Park, Cleveland Rd, Uxbridge, Middlesex, UB8 3PH, UK, (tel. 0895 256484, fax 0895 813095);

February 3, 1993

LAMSADE Seminar on «analyse probabiliste de l'algorithme de Karmarkar» with M. Minoux, Paris, France;
Information: Université Paris Dauphine, LAMSADE, Place du Maréchal De Lattre de Tassigny, F-75775 Paris CEDEX 16, France (tel. +33 1 45 05 1410, fax +33 1 47 55 44 22);

February 3-4, 1993

*** Seminars on High Performance DB's: Evaluation and Measurement of Performance**, London, UK;
Information: UNICOM Seminars, Brunel Science Park, Cleveland Rd, Uxbridge, Middlesex, UB8 3PH, UK, (tel. 0895 256484, fax 0895 813095);

February 10, 1993

ORS Meeting on «an economic appraisal of population screening for cystic fibrosis», London, UK;
Information: Lesley Swindley (tel.: +71 242 9050 ext. 3530);

March 2, 1993

LAMSADE SEMINAR on «procédures de modélisation et validation dans une approche multicritère» with Maria Franca Norese, Paris, France;
Information: Université Paris Dauphine, LAMSADE, Place du Maréchal De Lattre de Tassigny, F-75775 Paris CEDEX 16, France (tel. +33 1 45 05 1410, fax +33 1 47 55 44 22);

March 9-10, 1993

Wirtschaftsinformatik '93 conference, Münster, Germany;
Information: Dipl. -Inform. Jürgen Priemer, Universität Münster, Grevenor Str. 91, D-4400 Münster, Germany (tel.: +251 839 751, fax: +251 839 754);

March 9-11, 1993

*** International Symposium on Systems Analysis and Management Decision in Forestry**, Chile;
Information: A. Weintraub, Department Engineering, Industrial University of Chile, PO box 2777, Santiago, Chile, (tel.: +56 2 68 99403, fax: +56 2 68 97895);

March 11-12 or 18-19, 1993

*** 37th Meeting of EWG "Multicriteria Aid for Decisions"**, Liège, Belgium;
Information: G. Colson, Université de Liège, FEGSS, Bâtiment B.31, Bte.50, B-4000 Liège, Belgium;

March 15-16, 1993

Workshop on Consultancy Skills, York, UK;
Information: OR Society, Neville House, Waterloo Street, Birmingham B2 5TX, UK (tel.: +21 643 0236, fax: +21 631 3485);

March 15-17, 1993

4th Symposium on «Simulation als betriebliche Entscheidungshilfe», Braunlage Harz, Germany;
Information: Frau B. Hollenbach, Institut für Wirtschaftsinformatik, Georg August Universität, Göttingen, Platz der Göttinger Sieben 7, D-3400 Göttingen, Germany (tel.: +551 394 440, fax: +551 399 679);

March 16-19, 1993

Workshop of the DGOR Workgroup on «Entscheidungstheorie und Anwendungen», Schwangau, statt, Germany;
Information: Prof. Dr. W. Habenicht, Universität Hohenheim (510A), Postfach 70 05 62, D-7000 Karlsruhe 70, Germany (fax: +711 459 3232);

March 22-26, 1993

*** 2nd International Conference on Interface to Real and Virtual Worlds**, Montpellier, France;
Information: Le Corum, Secretariat of INFORMATIQUE '93, EC2, 269 rue de la Garenne, F-92024 Nanterre Cedex, France;

March 24, 1993

LAMSADE Seminar on «résultats de dualité et résolution proximale du problème de Huber» with C. Michelot, Paris, France;
Information: Université Paris Dauphine, LAMSADE, Place du Maréchal De Lattre de Tassigny, F-75775 Paris CEDEX 16, France (tel. +33 1 45 05 1410, fax +33 1 47 55 44 22);

March 29 - 30, 1993

*** 1st European Conference on Information Systems**, Henley on Thames, UK;
Information: Prof. G. I. Doukidis, Athens University of Economics and Business, Informatics Dept., 76 Patission Street, GR-10434 Athens, Greece (tel.: 30 1 823 3523, Fax: 30 1 822 6204);

March 30, 1993

LAMSADE Seminar on «MINORA: évolution du système et applications récentes» with Yannis Siskos, Paris, France;
Information: Université Paris Dauphine, LAMSADE, Place du Maréchal De Lattre de Tassigny, F-75775 Paris CEDEX 16, France (tel. +33 1 45 05 1410, fax +33 1 47 55 44 22);

April 3-4, 1993

Community OR Conference, Barnsley, UK;
Information: Charles Ritchie, Community OR Unit, Northern College, Wentworth Castle, Barnsley S75 3ET, UK (tel.: +226 285 426);

April 20-23, 1993

*** International Conference on Integrated Broadband Communication Networks and**

EVENTS

Services, Copenhagen, Denmark;
Information: Conference Secretariat,
IBC&S, Spadille Congress Service, Post-
boks 9, DK-3100 Hornbaek, Denmark (tel.
+45 42 20 24 96, fax +45 42 20 01 60);

April 26-28, 1993
ECCO VI Conference of the European
Chapter on Combinatorial Optimization,
Brussels, Belgium;
Information: Dr. Martine Labbé, CEME CP
B9, Université Libre de Bruxelles, 50 av. F.
D. Roosevelt, B-1050 Brussels, Belgium
(tel.: +32 2 650 3836, fax: +32 2 650
4012, email: MLABBE@BBRBFU60);

May 3-6, 1993
* 6th International Symposium on Applied
Stochastic Models and Data Analysis,
Chania, Crete, Greece;
Information: J. Janssen, CADEPS-ULB,
Ecole de Commerce Solvay, 50 av. F.D.
Roosevelt cp 194/7, B-1050 Brussels,
Belgium, (tel.: 32-2-6503883, fax: 32-2-
6502785) or C. H. Skiadas, Department of
Production Engineering and Management,
Technical University of Crete, 73132 Cha-
nia, Crete, Greece, (tel.: 30-821-59627,
fax: 30-821-42176);

May 4, 1993
LAMSADE Seminar on «the effect of at-
tribute ranges on weights in multi-attribute
utility measurements» with Martin Weber,
Paris, France;
Information: Université Paris Dauphine,
LAMSADE, Place du Maréchal De Lattre de
Tassigny, F-75775 Paris CEDEX 16, France
(tel. +33 1 45 05 1410, fax +33 1 47 55
44 22);

May 5, 1993
LAMSADE Seminar on «méthodes primales-
duales de point intérieur en programmation
linéaire» with C. Gonzaga, Paris, France;
Information: Université Paris Dauphine,
LAMSADE, Place du Maréchal De Lattre de
Tassigny, F-75775 Paris CEDEX 16, France
(tel. +33 1 45 05 1410, fax +33 1 47 55
44 22);

May 10-13, 1993
* XXV CIOSTA-CIGR V Congress
(Commission internationale de l'Organisa-
tion scientifique du Travail en Agriculture -
Commission internationale du Génie Rural
5ème Section), Wageningen, The Nether-
lands;
Information: IAC-Section OCC, PO box 88,
NL-6700 AB Wageningen, The Netherlands
(tel. +8370 90 111, fax +8370 18 552);

May 17-21, 1993
* 12th International Conference on Elec-
tricity Distribution (CIRED), Birmingham,
U.K.;
Information: CIRED General Secretariat,
Galerie Ravenstein 4 Bte, B-100 Brussels,
Belgium (tel.: +32 25 11 1970, fax: +32
25 11 2938, telex: 62409 UEBVE B);

May 25-27, 1993
* CORS 93 SCRO Conference, Halifax,
Canada;
Information: J. Pemberton Cyrus, Depart-
ment of Industrial Engineering, TUNS, PO
box 1000, Halifax, N.S. B3J 2X4, Canada
(fax +1 902 420 7858);

June 2-4, 1993
* Industrial Conference on Industrial Engi-
neering and Production Management,
Mons, Belgium;
Information: Conference Secretariat, FU-
CaM, Ch. de Binche 151, B-7000 Mons,
Belgium (tel. +32 65 32 32 17, fax +32
65 31 56 91);

June 2-5, 1993
Colloquium on «Decision Making: Towards
the 21st Century», Madrid, Spain;
Information: Sixto Rios (fax: +34 1 532
5716, email: DMXXI@FI.UPM.ES);

June 8-10, 1993
* AFCET'93 Congress, Versailles, France;
Information: AFCET, 156 bld. Péreire, F-
75017 Paris, France (tel.: (1) 47 66 24 19,
fax: (1) 42 67 93 12);

June 9-12, 1993
13th International Symposium on Forecast-
ing, Pittsburgh, PA, USA;
Information: Dr. A. B. Koehler, Dept. of
Decision Sciences, Miami Univ., Oxford,
OH 45056, USA (fax: +513 529 6992,
email: ISF93@MIAMI.ACS.MUOHIO.EDU);

June 15-18, 1993
15th International Conference on Informa-
tion Technology Interfaces, Pula, Croatia;
Information: Branka Radic, University Com-
puting Centre, J. Marohnica bb, 41000
Zagreb, Croatia (tel.: +38 41 518 656,
fax: +38 41 518 451);

June 15-18, 1993
* 3rd International IMACS Workshop on
Qualitative Reasoning and Decision Tech-
nologies, Barcelona, Spain;
Information: Prof. Nuria Puera, Universitat
Politecnica de Catalunya, Departament de
Matemàtica Aplicada II, c/ Pau Gargallo 6,
E-08028 Barcelona, Spain;

June 16-18, 1993
* Conference on Applied Probability in En-

gineering, Computer and Communication
Sciences, Paris, France;
Information: François Baccelli, INRIA Sophia
Antipolis, 2004 route des Lucioles B.P. 93,
F-06902 Sophia Antipolis Cedex, France
(tel. +33 93 65 77 99, fax +33 93 65 78
58, email baccelli@sophia.inria.fr)

June 21-24, 1993
* EuroPIA '93 Conference on the Applica-
tion of Artificial Intelligence, Robotics and
Image Processing to Civil Engineering,
Building Engineering, Architecture, Urban
Design and Urban Planning, Delft, The
Netherlands;
Information: EuroPIA '93 Conference Sec-
retariat, Poo - k.2.24 Faculty of Civil Engi-
neering, Delft University of Technology,
Stevinweg 1, NL-2628 Delft, The Nether-
lands (tel. +31 15 78 48 93, fax +31 15
78 52 63);

June 22-24, 1993
* 23th International Symposium on Fault
Tolerant Computing, Toulouse, France;
Information: Marie Thérèse Ippolito, LAAS
CNRS, 7 Avenue du Colonel Roche, F-
31077 Toulouse, France (fax +33 61 55
35 77);

July 6-9, 1993
* 6th International Workshop on Computed
Aided Scheduling of Public Transport, Lis-
boa, Portugal;
Information: 6th Workshop, DEIO Facul-
dade de Ciências, Universidade de Lisboa,
Bloco C/2 Campo Grande, Cidade Univer-
sitária, P-1700 Lisboa, Portugal (tel. +1
397 8313, fax +1 397 8308, email
paixao@UL.PT);

July 9-11, 1993
* 4th Meeting of EWG "Decision Support
Systems", Lisboa, Portugal;
Information: A. Rodriguez, Centro de
Estática e Aplicações da Universidade de
Lisboa, Av. 24 Julho 134 /5, P-1300 Lis-
boa, Portugal;

July 12-16, 1993
* IFORS XIII on OR: Expanding Horizons,
Lisboa, Portugal;
Information: IFORS '93 Secretariat, Fac-
uldade de Economia, Universidade Nova de
Lisboa, Travessa Estevao Pinto, P-1000
Lisboa, Portugal (fax +351 1 387 1105);

July 19-23, 1993
* International Federation of Automatic
Control World Congress, Sidney, Australia;
Information: IFAC Congress Technical Sec-
retariat '93, c/o Department of Electrical
and Computer Engineering, University of
Newcastle, University Drive, Callaghan
NSW 2308, Australia (tel.: (+61 +49) 21
6025, fax: (+61 +49) 60 1712, E-mail:

EVENTS

eegcg @ cc. newcastle . edu . au);

July 21-25, 1993

22nd Conference on Statistics Processes and their Applications, Amsterdam, The Netherlands;

Information: SPA'92 c/o CWI, P.O. Box 4079, NL-1009 AB Amsterdam, The Netherlands;

July 24 -August 7, 1993

* **9th EURO Summer Institute on Hierarchical Planning**, Mannheim, Germany; Information: Prof. Dr. Ch. Schneeweiss, University of Mannheim, Schloss, D-6800 Mannheim, Germany (tel. +621 292 5413, fax +621 292 1270);

August 23- 27, 1993

* **XIII World conference of World Futures Studies Federation on Coherence and Chaos in our Uncommon Futures, Visions, Means, Actions**, Turku, Finland;

Information: Prof. Pentti Malaska, WFSF Secretariat, Turku School of Economics, Rehtorinpellonkatu 3, SF-20500 Turku, Finland (tel. +358 21 638 3310 or 638 3360, fax +358 21 330 755, email pmalaska@utu.fi);

August 24-27, 1993

* **2nd International Conference on Systems Science and Systems Engineering**, Beijing, China;

Information: Prof. W. M. Zheng, ICSSSE '93 Secretariat, School of Economics and Management, Tsinghua University, Beijing 100084, China;

August 25-27, 1993

DGOR-NSOR joint annual Conference, main topic: **International distribution and logistics**, Amsterdam, The Netherlands;

Information: DGOR Office, An Steinknapp 14b, D-4630 Bochum 1, Germany (tel +49 234 462 246, fax: +49 234 462 245) or Prof. Dr. Henk C. Tijms, Faculty of Economics, Vrije Universiteit, De Boelelaan 1105, NL-1081 HV Amsterdam, The Netherlands;

August 25-27, 1993

* **3rd IFAC International Workshop on Artificial Intelligence in Economics and Management**, Portland, Oregon;

Information: Prof. R. Krishnan, School of Urban and Public Affairs, Carnegie Mellon University, Pittsburgh, Penn. 15312, USA;

August 30 - September 2, 1993

* **IFCS'93 - Conference of The International Federation of Classification Societies**, Paris, France;

Information: AFCET, 156 bld. Péreire, F-75017 Paris, France (tel.: (1) 47 66 24 19, fax: (1) 42 67 93 12);

September 1-3, 1993

18th Symposium über Operations Research, Köln, Germany;

Information: SOR 93, Institut für Informatik, Universität zu Köln, Pohligstr. 1, D-5000 Köln, Germany (fax: +49 221 3671 117, email: SOR93@INFORMATIK.UNI-KOELN.DE);

September 7-10, 1993

* **1st European Congress on Fuzzy and Intelligent Technologies**, Aachen, Germany;

Information: ELITE Foundation, Prof. Dr. h.c. H.-J. Zimmermann, Scientific Director, Korneliuscenter, Promenade 9, D-Aachen, Germany (tel. +49 24 08 69 69, fax +49 24 08 9 45 82);

September 13-17, 1993

4th European Software Engineering Conference, Garmisch, Germany;

Information: Prof. Dr. M. Paul, Institut für Informatik, Technische Universität München, Orleansstr. 34, D-8000 München 80, Germany (fax: +49 89 4809 5160);

September 29-30, 1993

CIRP-IFORS International Workshop on Designing Innovations in Industrial Logistics, Capri, Italy;

Information: Dr. M. Bielli, National Research Council, Viale Manzoni 30, I-00185 Roma, Italy (tel.: +39 6 771 61, fax: +39 6 771 6461);

September 29 -October 1, 1993

* **Annual Conference of the Associazione Italiana di Ricerca Operativa on Innovation Management in Transportation and Logistic Systems**, (Models, Algorithms, Tools), Capri, Italy;

Information: AIRO '93 Secretariat, Dipt. di Informatica e Sistemistica, Università di Napoli «Federico II», Via Claudio 21, I-80125 Napoli, Italy (tel. & fax +39 81 768 3376, fax +39 81 768 3186);

October 17-20, 1993

* **International Conference on Systems, Man and Cybernetics, Systems Engineering in Service of Humans**, Le Touquet, France;

Information: IEEE, SMC '93 Conference, Ecole Centrale de Lille, Boulevard Paul Langevin BP 48, F-59651 Villeneuve d'Ascq Cedex, France;

1994

* **EURO XIII Conference**, Glasgow, UK; Information: EURO Secretariat;

July, 1994

Association Latino-Ibero-America de Inves-

tigacion Operativa Conference, Santiago, Chile;

Information: Dr. Maximo Bosch, Departamento de Ingenieria Industrial, Universidad de Chile, Casilla 2777, Santiago, Chile (fax: +56 2 689 7896);

July 13-28, 1994

* **10th EURO Summer Institute on Combinatorial Optimization**, Jouy-en Josas, France;

Information: Prof. Catherine Roucairol, Univ. Versailles - INRIA, Domaine de Voluceau, BP 105 Rocquencourt, F-78153 Le Chesnay Cedex, France (fax: +33 1 3963 5330);

July 26-29, 1994

Association of Asian-Pacific Operational Research Societies Conference, Fukuoka, Japan;

Information: Prof. Maso Iri, University of Tokyo, Tokyo, Japan;

August, 1994

* **11th International Conference on Multiple Criteria Decision Making**, Coimbra, Portugal;

Information: J. Climaco, INESC, Rua Antero de Quental 231-CV, P-3000 Coimbra, Portugal;

August, 1994

* **IFAC Symposium on Identification and System Parameter Estimation**, Lyngby, Denmark;

Information: Prof. Mogens Blanke, Aalborg University, department of Control Engineering, Institute for Electronic Systems, Fredrik Bajers Vej. 7, DK-9220 Aalborg, Denmark;

1995

* **11th EURO Summer Institute on Maintenance Replacement and Reliability Modelling**, UK;

Information: Prof. A. H. Christer, University of Salford, Salford M5 4 WT, UK (fax: +61 7 455 999);

1995

* **EURO XIV Conference '95**, Israel; Information: EURO Secretariat;

National Societies or individual members having news for the EURO Bulletin are requested to send their information to the editor: Ph. Van Asbroeck, 108 av. Slegckx, B-1030 Brussels, Belgium (tel. and fax +32 2 245 60 69).