EURO
THE ASSOCIATION OF EUROPEAN OPERATIONAL RESEARCH SOCIETIES

Bulletin

Inside

Editorial

EURO 2003 Conference in Istanbul was great and shall be the subject of a special article soon. Several awards were conferred during this conference: the EURO Gold Medal, the Management Science Strategic Innovation Prize and the Excellence in Practice Award. Since that time a lot of things have moved for EURO, a lively young lady in the twenty.

First of all, EURO has a new Member Society, the Lithuanian Operational Research Society (LitORS), congratulations and welcome to our Lithuanian friends. If you want to have more information about, please have a look at the EURO website space devoted to LitORS [1]

Moreover, two new EURO Working Groups are born and have already filled their devoted space in the EURO web site [2]:

- ESICUP, EURO Special Interest Group on Cutting and Packing.

- OR in Agriculture and Forest Management.

Ethics seems to be on the wave: a EWG on ethics, a possible EURO Summer/ Winter Institute on Ethics and the proposal to devote one day to ethics during every ESWS. It is the reason why a previous article on ethics by Professor Christoph Schneeweis is part of the present EURO Bulletin.

At the EURO Council meeting during the EURO 2003 Conference, the new EURO statutes have been adopted, this implies some changes in the Executive Committee composition. From 1 January 2004, the composition of the Executive Committee will be:

President:	Laureano Escudero.
President Elect:	Alexis Tsoukias.
Vice President 1:	Gülay Barbarosoglu.
Vice President 2:	Chris Potts.
Vice President 3:	Jo van Nunen.
Legal Secretary:	Xavier Gandibleux.

Philippe Van Asbroeck

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[1] http://www.euro-online.org/display.php?file=ms_info.php&country=LT&title=Lithuania&parent=202
[2] http://www.euro-online.org/display.php?page=working_groups

January 30, 2004

Column One

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EURO Gold Medal 2003 Report
PAOLO TOTH

What is it?

According to the EURO Statute, "The EURO Gold Medal, the highest distinction within Operational Research in Europe, is conferred to a prominent person or a prominent institution, either for a remarkable role played in the promotion of Operational Research in Europe or for an outstanding contribution to the Operational Research science."

The first EURO Gold Medal was delivered to Hans Jurgen Zimmermann at EURO VII (Bologna, June 1985). In the following years, other 15 scholars won the award.

The Procedure

- EURO Executive Committee appoints a chairman
- The chairman suggests a jury
- The jury is appointed by EURO
- Nominations for the Gold Medal are solicited from the EURO national societies in the year prior to each EURO-k conference.
- The numbers of candidates was 6.

The members of the jury were:

- Bernard Roy,
  Université Paris-Dauphine (chair)
- Nicos Cristofides,
  Imperial College London
- Rudolf Kruse,
  OVG-Univeristät Magdeburg
- Pierre Hansen,
  Ecole des HEC Montreal
- Paolo Toth,
  Universita di Bologna

The Process

The members of the jury were invited to perform their choices by taking into account, for each candidates:

The "Scientific Contribution" (based on the relevance of the scientific results, the papers published in top level international journals, the books, the journal editorship, the prizes, the involvement in Operational Research applications...)

AND

The "Contribution to the Operational Research Community" (based on the involvement in national and international societies, the organization of conferences and schools, the supervision of PhD students...)

The level of all the candidates was excellent and the choice was very difficult. The jury unanimously felt that one candidate was really outstanding and deserving the award. It is really a pleasure for me to announce that the 2003 EURO Gold Medal was conferred to Professor ANDRAS PREKOPA. The award was delivered during the Opening Session at the EURO XIX Conference, Istanbul, July 6 - 10, 2003.

A short summary of the scientific activity of Andras Prekopa follows. He is a highly respected scholar in the field of stochastic models, mathematical programming and applications of OR to real life problems. He has been a leading personality in Stochastic Programming: his early results related to convexity properties of problems with joint probabilistic constraints in the seventies are considered a true breakthrough in the theory. The application areas are power systems, water resources, network design, inventory control, production, insurance, finance...

He is author of more than 40 papers published in international top-level journals. He is the father of OR in Hungary. He supervised more than 40 PhD students, many of them now being professors at Hungarian universities or abroad.

An achievement of his European dimension is the organisation of many international meetings since 1963:

- International OR Conference in Eger (1974)
- Mathematical Programming Symposium in Budapest (1976)
- International Conference on Stochastic Programming in Köszeg (1981)
- ...

These meetings offered the unique opportunity for researchers from East and West to meet and to freely exchange their scientific ideas in a difficult political era. He was the Chairman of the Organising Committee of the EURO Conference held in Budapest in 2000. Let us thank Andras Prékopa by awarding him the 2003 EURO Gold Medal!

Opinion

■ ■ ■

Ethics and Operations Research
CHRISTOPH SCHNEEWEISS

1. Introduction

What has Operations Research to do with ethics? Or, more generally, what has science to do with ethics? Should not science be free or at least intellectually be separable from moral norms as Max Weber [Weber] postulated? Indeed, being aware that Operations Research (OR) may be identified as the science of formal decision making, these questions are of particular significance for this discipline. Formal decision making has, in a very general way, to do with norms, and these norms are not simply exogenously given but essential objects of investigation.

One might therefore even ask: What are the implications of OR with respect to ethics?" Or, in more operational terms: "Are the concepts of general systems theory, and more specifically, those of OR, appropriate to investigate ethical questions?".

As is well-known, ethics is usually defined as the science of moral norms. Morality, on its part, may be understood as the totality of all rules of a society to differentiate between "good and evil". These rules are deemed to be essential for the viability of a society. They provide a certain security and often enjoy a broad societal acceptance. Some of these rules are codified by law, particularly those that are easy to scrutinize.

Usually, one associates with moral behavior those actions that are banned by society but which are not or not yet punished or punishable by codified law. Typical examples for ethical issues are genetic manipulations or medical experiments with human beings, and the production of poison gas or nuclear weapons. But not only in the domain of the natural sciences one has ethical questions, in business administration, too, such questions arise. Think of the general problem of cheating, the free rider problem or untruthfulness as a marketing instrument. In principal agent theory (e.g., see [Bamberg/Spremann]), one even introduced technical terms like 'shirking' and 'moral hazard' to describe an opportunistic behavior that might occur in cases when an action is not observable; or, more precisely, when the (visible) consequences of an action cannot be attributed to particular action.

Obviously, looking at the applications of Operations Research, planning problems will often touch questions of moral concern as it is the case for other sciences as well. In what follows, we do not intend to discuss moral conflicts of a particular kind, rather we are aiming to investigate more conceptual questions concerning the interrelation between ethics and OR. In doing so, our starting point will be the general decision (or planning) process which seems to be rich enough to discuss some important methodological questions of ethics, such as:

How do moral norms interfere with the decision process for a particular problem? What is the relationship between moral norms and rationality? How to deal with the problem of changing moral norms?

2. The Decision Process and its Ethical Implications

Operations Research as a pure science provides general insights and develops techniques and rules about modeling, optimization, and implementation. This general expertise may then, in a specific setting, be applied to real-life problems using in an interdisciplinary way, 'applied knowledge' of various other disciplines. Hence, as most sciences, Operations Research consists of a pure and an applied direction. As to the discussion of ethical questions, two scenarios seem to be of particular interest:

1. Short term effects, i.e., direct violations of moral norms, and

2. Long term effects, i.e., decisions (or better: omissions) which in the long run imply violations of moral norms.

The first scenario will be met more on the applied side of OR, whilst the second one touches more basic questions of research strategies and is of crucial significance for a science like Operations Research that has as its object of investigation the decision process itself. Both scenarios will be discussed as specific configurations within the general decision process.

2.1 The General Decision Process

As mentioned before, the general decision process comprises all three major activities of OR, i.e., modeling a problem, generating a solution, and implementing the generated plan. In abstract terms the process may be understood as a sequence of decision models of which the pertaining decision fields and criteria are undergoing a permanent learning process. In this process several persons may be involved and the problem to be solved may change over time. Hence the decision process is to be discussed within a multi-person, multi-criterion, dynamic setting with asymmetric information and various hierarchical interdependencies. One of the key notions for the discussion to follow may be seen in the fact that the decision process is at the same time a goal seeking and a goal observing process. Operations Research, as a pure science, is analyzing this process and is particularly providing optimization techniques to contribute to its efficiency. Moreover, through its modeling techniques, it provides methods to construct preference systems. On the other hand, via an analyst or consultant, Operations Research as an applied science is part of the decision process and thus is - at least partially - responsible for keeping moral norms. Since, for the subsequent discussion, a deeper understanding of some of the main features of the general decision process turns out to be crucial, let us illustrate this process somewhat further.

A decision process describes all stages, from an initial stimulus via various operational-izations up to a solution and its implementation. It is evolving in cycles of the type as illustrated in Fig. 1. Each cycle is defined by a description of the "problem" to be solved ("Model"), by a "Solution", and a "Discrepancy" (DIS) which provides the decision maker with some idea of how far apart the present solution is from the solution he is desiring. If a discrepancy is still existing, the decision maker has to select a new cycle (through his "Governing Process"). In particular, he has to decide whether he should change his preferences and especially his aspiration levels. Thus, obviously, depending on the kind of cycles one is selecting, the decision process is simultaneously a goal observing and a goal seeking process. (For a much deeper discussion of the general decision process, see [Schneeweiss (1987)] or [Schneeweiss (1992)].)

Using the general structure of the decision process to analyze ethical problems, one may identify moral norms with special aspiration levels which need not only be observed but, simultaneously, may be allowed for change. It clearly shows that the solution of a particular real-life problem might give rise to question the validity of certain moral norms and might even give rise to change these norms for future decision processes.

Particularly, in Section 3, we will continue this discussion on a more fundamental basis. For this general discussion, it should be clear that aspiration levels and (moral) constraints of the decision field can be very general quantities. Thus a prescribed decision rule, e.g., can in principle be considered as a moral norm.

2.2 Short Term and Long Term Scenarios

Let us come back to the two scenarios mentioned before. They may be considered as being associated with the goal observing (1) and the goal seeking (2) aspect of the Operations Research decision process. Let us deal with scenario first.

(1) Scenario 1, short term effects - goal observation

As any member of a society, Operations Research as an institution is compelled to observe moral norms. This seems to be obvious for day to day applications and is no specific problem of Operations Research but of those who apply it. Thus, professional groups like applied statisticians or the various associations of engineers possess an ethic committee which guarantees their clients a morally fair treatment.

Ethical questions become far more intricate, however, if moral norms are not yet settled or contradict to other moral norms. Concerning these questions, let us content ourselves with only two remarks:

1. Not settled or contradictory moral norms have to be discussed within its particular context. What can be demanded from a science like Operations Research, however, is that it makes every effort to support the search for appropriate solutions and to explore their possible implications. In particular, it should employ its multi-person, multi-criterion decision techniques.

2. Coming back to the postulate of Max Weber [Weber] mentioned in the introduction, ethical considerations should be separated from the subject under investigation or should at least be made explicit. The decision process proves to be especially appropriate to discuss such questions. As mentioned before, one might formulate moral norms as additional goals or as aspiration levels within a multi-criterion decision problem. We return to this point in the next section.

(2) Scenario 2, long term effects - goal seeking

Considering Operations Research as a pure science, one has not primarily the problem of not observing moral norms but far more the question of omissions that might imply non-moral behavior. This is an extremely intricate problem which points to the center of a science of decision making. Moral norms usually are conservative rules. They give society a certain security and focus on elementary human needs. Some of these rules, however, are subject to substantial change. Hence, in considering long term involvements, science, and in particular Operations Research, has to analyze moral rules themselves.

To elucidate the problems that might occur consider an omission which deliberately avoids a conflict with given moral norms. Assume further that this omission implies, at a future point in time, a catastrophe which necessitates to break traditional norms. Clearly, these traditional norms will then be sacrificed in view of the pressures inherent in the situation and no immorality would be involved. Hence only the cognizant scientist knows that he or she acted immorally.

These highly involved questions may again be discussed within the framework of the decision process. As explained before, the planning process may be considered as a learning process. This means that the decision fields are permanently changing and that preferences are to be adapted. This adaptation is caused on the one hand by the history of the process, i.e., by the experience one has gained thus far and on the other hand by external re-evaluations or the presumption of a possible change. A science of the decision process has to consider all these possibilities and has thoroughly to explore all possibilities in a given situation.

With these general remarks we arrive at a point which brings ethics and a decision science like Operations Research even closer together.

3. Ethics and Rationality

Obviously, since ethics discusses problems of discerning between "good and evil", it describes part of the preferences of a society and certainly has an impact on the criteria of the decision process. The relationship between ethics and the analysis of the decision process, however, turns out to be much more fundamental than one might suppose and cannot simply be described by extending the decision process by an additional criterion representing a moral norm. The key question is indeed rationality. Under which conditions might the decision process be considered to be rational?

Usually rationality has to do with welfare, i.e., with the welfare of the present and future generations. To achieve a rational solution, the decision process must have in mind the welfare of all parties involved. In its comprehensive meaning, this is of course almost impossible. Arrow's famous 'impossibility theorem' [Arrow] and the impossibility of 'rationally' aggregating ordinal data [Arrow/Raynaud] reveal some of the principle difficulties. In particular, it shows that one has to be content with a less arbitrary notion of rationality than that being usually employed in formal decision analysis: Within available resources, one has to explore all decision fields and criteria which might increase the well-being of the particular decision maker and of further parties concerned. Since the decision process is a goal seeking process, rationality cannot be defined in obeying certain goals. Thus one has to be satisfied with a "process or discourse rationality" (e.g., see [Habermas], [Ulrich]), which says that all activities are rational that follow logical arguments and obey commonly accepted rules of discourse. Indeed, this postulate is not too far from general considerations in ethics, and in particular from Kant's categorial imperative [Kant]. Thus, ethics and the analysis of the general (discourse) rationality of the decision process are closely related: rationality involves ethics and ethics might be discussed within a general discourse rationality.

However, rationality and moral norms are, of course, not identical. Let us stress only three points:

1. Moral norms are primarily concerned with the conservation of existing (morally accepted) societal rules. Hence those actions are deemed as favorable that defend these rules which are felt to be indispensable. Activities which simply increase welfare (without breaking moral norms) are not considered as being of ethical relevance but would simply be viewed as being rational. The same holds for activities which might affect a moral status in the far reaching future. Rationality would have to consider these aspects as well. Hence moral norms are simple and often all too simple rules of a society bound to here and now, i.e., they are often simple aspiration levels assigned to only one cycle of the decision process that do not consider the entire development of the process in the future.

2. Typical for many moral norms is their highly personal character. Deep emotions are often associated affecting the whole personality. Thus, a simple rationality concept as that of the "homo economicus" (e.g., Bernoulli rationality) would by no means be capable of capturing this far more general and comprehensive aspect of moral norms. Usually, however, Operations Research will have to do with less personal ethical questions. As an example think of the modern problem of sustainability. Planning a society's sustainable development implies activities which at least do not negatively effect the well-being of future generations and of socially discriminated groups. Hence, sustainability might be used to define more precisely in which kind of ethical problems OR might generally be involved.

3. Ethical postulates and general rationality postulates differ also in the comprehensiveness of their content. Rationality has to consider not only ethical postulates but the specific properties of the particular problem one has to solve. To reconcile these two types of criteria, again the decision process gives a hint. One might adopt a two-stage consideration [Schneeweiss (1987), Sec. 6]. In a first stage, within a rather general framework, one would specify certain ethical norms which would then have to be observed on the lower level of the specific decision problem at hand. Thus this two-stage representation decouples the (ethical) normative rationality from the instrumental or purposive rationality ("Zweck-rationalität") and allows the lower stage considerable freedom. It should be clear, however, that ethical

norms as additional criteria components do not only have an impact on the lower stage criteria but also on its decision field, or, more generally, on the whole process of finding a decision. Thus, the entire decision process finally grounds in moral postulates and cannot be discussed without considering ethical questions, and it is exactly in this context one should interpret Max Weber's postulate of a value-free science.

4. Conclusions

Within this short discourse on ethics and Operations Research, we emphasized that Operations Research is particularly concerned with ethical questions. These questions do not only arise in applying Operations Research to real-world problems but are a constituting part of OR as a normative science. Withdrawing to a position of a very general notion of rationality, ethics and the analysis of rationality are not too far apart. As a prerequisite, both for ethical considerations and for the general concept of rationality, the decision process is required to be thoroughly explored within an "oppression free" discourse [Ulrich], i.e., all possible scenarios and decisions should be considered and all their possible consequences should in principle be known by all parties being involved. Thus, the hitherto rather general considerations may result in some concrete desiderata. These desiderata ultimately result from the (moral) postulate of taking into account a general concept of rationality which considers the obedience to moral norms and their possible change. Thus following this general concept of rationality, all the subsequent suggestions put a particular problem into a more comprehensive perspective.

(1) Extend the scope of time.
This particularly implies that the long term consequences of proposed decisions should be analyzed, having as an important effect that Operations Research should extend its activities from the operational to the strategic level.

(2) Extend the space of decision variables.
This requirement tends into the same direction as the extension of the scope of time. Not only the problem at hand should be considered, but all possible 'side effects' as well. For a typical example that combines (1) and (2) consider the so-called rebound effect. For Operations Research the rebound effect says that saving certain resources in applying specific planning procedures often has as a consequence that having removed this one bottleneck other resources will be exploited even more. Obviously, the decision problem had been formulated within a too narrow perspective, and hence does not follow the postulate of general rationality.

(3) Extend the cultural perspective.
This postulate primarily has to do with the multi-person character of the planning and implementation process. Particularly the claim of OR to be applicable for a multi-cultural society calls for its further extension into the field of distributed decision making.

(4) Extend the language of description.
Obviously, in extending the perspectives of a planning problem, one often has to incorporate other than decision analytic descriptions. Hence, more general languages are necessary and, what is of crucial importance, in order to follow general rationality, these levels have to be connected with each other. Hierarchical planning might provide some general ideas how such an integration of different levels of description could be achieved (e.g., see [Schneeweiss (1999), Section 13]).

Considering proposals (1) to (4), ethical considerations necessitate at least an enhancement of a problem's perspectives. This results in a research strategy that expands OR from the operational, one person analytic paradigm to a more strategic, multi-person and less analytic stage of description. To provide efficient tools for this important step proves to be a major challenge.10 Ethics and OR for Operations Research.

Developing instruments to analyze complex situations and hence to be able to observe moral norms proves not only to be an essential postulate for OR as an area of research but for OR as an institutionalized science as well. Operations Research as an institution is responsible for the content of the education within its discipline. The ethical perspective finally re-

sults in the claim that education in OR should provide a comprehensive view of a problem's solution which particularly takes into account all parties being involved and affected.

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Just around the corner

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An algorithm for Cooking

What is easy, it's not the receipt, it 's the Method to execute it.

The so-called secrets of the Cuisine are only false problems; the art is alembicated only in appearance. As soon as we know how to organise, the most complex receipt is executed without efforts, quasi automatically.

For all the receipts, the operations are divided as follows:

1. the choice of aliments

2. the preparation

3. the cooking

The two first steps meet no difficulty, only be careful of the freshness of the products and their quality.

The algorithm

It is evident that the success depends on the execution and the Method used for it. This one is composed of three imperatives prescriptions:

The First (of major importance):
TO DISPOSE IN ORDER the aliments, products and ingredients that we will use as the cooking goes along.

The Second (of not lesser importance):
ALWAYS KEEP AN EYE ON THE RECEIPT.

The Third:
DO NOT TRY TO LEARN THE RECEIPT AND EXECUTE IT BY MEMORY.

Explanations

1. Why dispose in order the products and aliments that we will use? Because one of the most frequent reason of failure consists in looking after one or another ingredients which we don't know where it is, and during that time we get nervous; the onion gets burned, the sauce turn sour.

   On the contrary if each product is well ordered, we fill find it when needed. And even better, if we took the N°4 instead of N°3, it is the sign that we have missed a paragraph of the execution and the omission will be rectified in time.

2. Why always keep an eye on the receipt? Because the secret of the success is there.

   Each operation to do, even the simplest, has to be done at the right moment, not too early not too late, and one at the time (for example: to salt, to pepper; or to reduce the fire; or to cover the stew-pan, etc) It is imperative to strictly read the paragraph one after the other; to go to the next operation only when the previous one has been completely executed. Mostly do resist to the temptation to remember four or five (nor two or three) paragraphs together: it is the best way to fail.

Please remind those various recommendations, and if you can respect it, then you won't forget or make mistake and it will work easily.

Reference

Jean BRULLER dit VERCORS, Je cuisine comme un chef sans y connaître rien, Les 101 plus fines recettes de la gastronomie française mises à la portée des personnes les moins expérimentées, Bibl. Lettre Internationale, Christian Bourgeois Editeur, Paris, 1991.

What's new

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EURO XX, EURO 2004
20th European Conference on Operational Research
Island of Rhodes, Greece, July 4-7, 2004

OR and the Management of Electronic Services
http://www.Euro-rhodes2004.org
Hosted by: The Hellenic Operational Research Society (HELORS)

The Association of European Operational Research Societies (EURO) and the Hellenic Operational Research Society (HELORS) are pleased and honored to invite you to Rhodes to attend and enjoy "EURO 2004".

The Island of Rhodes, the largest of the Dodecanese complex, is also known as the isle of Sun. The famous poet Pintar mentions in one of his Odes that it was born out of the union of Helios, the sun god, and the nymph Rhoda. The capital of this island, also called Rhodes, consists actually inthree cities on one site - modern, ancient and medieval. Its history goes back to 700B.C. and along the centuries the city has been gifted with a lot of monuments and sites worthy to visit.

The fact that the 20th Conference of EURO has chosen as main topic "OR and the manage-ment of electronic services", a modern and very important topic for all researchers and interested companies, may represent an additional reason for you to join us on the beautiful Island of Rhodes.

The conference is taking place in a five stars environment, which is only 50 meters from the sea. It is a great opportunity to combine your participation to the conference with holidays in Rhodes. Therefore, we are expecting you and your whole family, and mostly of all, don't forget to mark your calendars: July 4-7, 2004, Rhodes, Greece.

Professor Yannis Siskos
President of HELORS
Chairman of the Organizing Committee

Visit http://www.euro-online.org/CFPRhodes2004-1.1.pdf for the complete call for papers.

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EURO 2006 Conference in Iceland

Iceland has been selected by the EURO Council to host the EURO 2006 meeting in Reykjavik, Iceland

- Good organization
- Relatively low cost
- Midnight sun

Why EURO 2006 in Iceland?

- First EURO conference in a Nordic country since Finland 1992
- Popular tourist destination in the summer
- Half-way between Europe and US
- Interesting excursions and trips
- Excellent conference facilities
- Very active OR Society

Organizing Committee

- Dr. Snjolfur Olafsson, University of Iceland (Chair)
- Mr. Bjarni Kristjansson, Maximal Software
- Dr. Birna P. Kristinsdottir, Alcan Iceland
- Dr. Pall Jensson, University of Iceland
- Dr. Thorkell Helgason, National Energy

Authority

- Mr. Hlynur Stefansson, AGR
- Dr. Jakob Krarup, University of Copenhagen
- Dr. Magnus Mar Halldorsson, University of Iceland
- Dr. Zilla Sinuany-Stern, Vice-President 1 of EURO

Program Chair

- Lic. Sc. (Econ.) Tuula Kinnunen, Finland Post Corp.

Conference Venue

University of Iceland

- Located within a short walking distance from downtown Reykjavik
- Good lodging accommodations within walking distance from the university
- Wide selection of lodging within a 10 minute driving distance

Conference Meeting rooms

Over 35 meeting rooms available within a short walking distance.

Proposed conference theme

OR and Management of Natural Resources

Proposed conference dates

July 3-6, 2006 or July 10-13, 2006

Proposed Registration Fees

Regular Early	250-300 Euros
Regular Late	300-380 Euros
Student Early	150 Euros
Student Late	200 Euros

Social Program

Iceland offer some unique possibilities for an interersting social program. One of the ideas we are considering is to host the Welcome Reception at the popular "Blue Lagoon" geothermal spa (www.bluelagoon.is/english) for an once-in-a-lifetime experience!

Technical Visits

The use of Operations Research in industry has rapidly increased in recent years in Iceland. Examples of industries that apply OR and would make interesting technical visits:

- Energy Systems, Hydro-power, Geothermal
- Fishing Industry and Food Processing
- Biotechnology

Fun things to do in Iceland

Many interesting and unique possibilities for social events and pre/post excursions:

- Excursions, Hiking, Bicycling, Bird Watching
- Horseback Riding, Whale Watching, Fishing
- Cultural Shows, Museums & Galleries
- Glacier Tours, Jeep Safaris 4x4
- Outdoor Swimming
- Midnight Golf
- River Rafting
- Blue Lagoon

Visit http://www.euro2006.org for more information.

15th Mini Euro Conference

First Call for Papers
15th Mini-EURO Conference

The Association of European Operational Research Societies

Portuguese Operational Research Society

Managing Uncertainty in Decision Support Models
MUDSM 2004
Coimbra - Portugal   22-24 September 2004

Institute of Systems Engineering and Computers - Coimbra

Faculty of Economics, University of Coimbra

Scope and objectives

Mini EURO Conferences are conferences allowing specialists of a particular promising OR theme of research to participate in a meeting where the screening of papers can be more effective and participation in the debates can be more lively than at larger meetings.

The 15th Mini EURO Conference is aimed at providing an open forum in which researchers coming from different scientific disciplines and operational research areas can discuss and share their experience regarding methodological approaches to tackle, in an explicit manner, uncertainty and imprecision stemming from distinct sources, which have influence on obtaining robust conclusions in decision support models with application to several areas.

Particular attention will be paid to multicriteria evaluation models in which distinct types of difficulties are associated with achieving robust conclusions: the intrinsic incomplete nature of models, the imprecision associated with input data, and the uncertainty associated with the analytical representation of the structure of the decision maker's preferences.

Contributions from decision theory, fuzzy sets, rough sets, risk analysis, stochastic programming, sensitivity analysis, robustness analysis, interval programming, inexact programming, etc. are expected both from methodological and application perspectives, thus paving the way for a cross-fertilization between distinct ways to incorporate uncertainty, imprecision and risk in decision support models.

Organizing Committee

Luís Cândido Dias (Chair), Carlos Henggeler Antunes, Maria João Alves, Ana Rosa Borges.

International Program Committee

Carlos H. Antunes (Chair, Portugal)
Alexis Tsoukiàs (France), Andreas Saltelli (Italy), Bernard Roy (France), Carlos Bana e Costa (Portugal), Constantin Zopounidis (Greece), Danae Diakoulaki (Greece), David Rios-Insua (Spain), Denis Bouyssou (France), Efraim Turban (HK), Jacinto Gonzalez-Pachon (Spain), Jacques Teghem (Belgium), Jean-Marc Martel (Canada), Jean-Pierre Brans (Belgium), João Clímaco (Portugal), João Paulo Costa (Portugal), José Figueira (Portugal), Kaisa Miettinen (Finland), Luís C. Dias (Portugal), Manuel Matos (Portugal), Maria João Alves (Portugal), Mashahiro Inuiguchi (Japan), Pascale Zaraté (France), Philippe Vincke (Belgium), Rudolph Vetschera (Austria), Raimo Hamalainen (Finland), Richard Wendell (USA), Rita Almeida Ribeiro (Portugal), Roman Slowinski (Poland), Ronald R. Yager (USA), Salvatore Grecco (Italy), Simon French (UK), Theodor Stewart (South Africa), Tomas Gal (Germany), Valerie Belton (UK)

Submissions

Three kinds of submissions are welcome:

- Proposal for a session of three papers dedicated to a given topic. After acceptance, the promoter will be responsible for his/her session and will chair it.
- Proposal for a panel discussion on a given topic. After acceptance, the promoter will be responsible for his/her session and will chair it.
- Free submission of short papers (4-6 pages). The accepted papers will be published as conference proceedings.

The official language of the conference is English.

Publication

In agreement with the Editors of the European Journal of Operational Research and the Editor of Decision Support Systems, authors present at MUDSM 2004 will be invited to submit full versions of their papers to be published on a Special Issue of EJOR or a Special Issue of DSS on the theme of the conference.

Venue

The conference will be hosted by the Faculty of Economics, University of Coimbra. Dating from 1290, the U. Coimbra is one of the oldest in Europe and the oldest in Portugal. It now comprises eight faculties, including the Faculty of Economics, which was established in 1972.

Coimbra is located in the centre region of Portugal, easily accessible by car, bus or train from Lisbon (200 Km) or Oporto (130 Km) international airports.

Registration fee

Type of registration	Until June 23, 2004	After June 23, 2004
Normal[1]	240 €	300 €
Student[2]	120 €	150 €

[1] Includes conference Proceedings and documentation, lunches, coffee breaks, social program, and taxes (VAT).

[2] Includes all of the above, except the banquet comprised in the social program. To qualify as a student, the delegate must present a student card.

Support from EURO may be granted to seven delegates from Eastern European countries (300-600€ each).

Important dates

March 31, 2004: Submission of short papers (4-6 pages)
June 1, 2004: Notification of acceptance
June 23, 2004: Early registration deadline
June 30, 2004: Revised short paper due
July 25, 2004: Registration deadline (to guarantee inclusion in the final program and proceedings volume)

Secretariat

MUDSM 2004
INESC Coimbra
Rua Antero de Quental, 199
3000-033 Coimbra, Portugal
mudsm2004@inescc.pt

Web page

www.inescc.pt/mudsm2004

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Workshop on Operational Research Education in South and Eastern Europe

Organized by the Yugoslav Operational Research Society (YORS), the Hellenic Operational Research Society - Macedonia Thrace Branch (HELORS), and the Technical University of Sofia - Faculty of Applied Mathematics&Informatics (TUS), under the support of the European Association of Operational Research Societies (EURO)

The workshop was held on October 12th during the national Yugoslav OR Symposium YU SYM-OP-IS 2002, at the mountain Tara, Yugoslavia.

Motive

Operational Research is taught at almost all faculties of economics, management, engineering and mathematics in Yugoslavia. A similar situation is in neighbouring countries. Due to political and economical difficulties in the last decade it was hard to follow rapid changes in field of OR. There is an evident need to modernise OR teaching methods not only in Yugoslavia but in all countries of South and Eastern Europe.

Objectives

- to establish framework for collaboration and further coordination in the area of OR education in South and Eastern Europe
- to transfer experience and teaching methods from developed countries
- to prepare for education reform in Organized by Yugoslav Operational Research Society (YORS), Hellenic Operational Research Society - Macedonia Thrace Branch (HELORS), and Technical University of Sofia - Faculty of Applied Mathematics&Informatics (TUS), under the support of European Association of Operational Research Societies (EURO) the field of Operations Research according to Bologna declaration
- to update existing curricula in the field of OR in accordance with positive experience in developed country

- to bring together OR teachers from different countries of Europe.

Chairmen

Prof. Mirko Vujosevic (YORS) Prof. Byron Papathanasiou (HELLORS) Prof. Dimiter Ivanchev (TUS)

Participants

At the opening plenary session of SYMOPIS 2002, Prof. Mirko Vujosevic invited all SYMOPIS 2002 participants to be active in the workshop and cca. 40 of them attended the workshop.

Contributions

1.Prof. Mirko Vujosevic, University of Belgrade, Yugoslavia: "Challenges for OR Education"

2.Prof. Byron Papathanasiou, Aristotle University, Thessalonica, Greece: "Some experiences in teaching OR at Aristotle University"

3.Prof. Dimiter Ivanchev, Technical University of Sofia, Bulgaria: "Teaching OR and applied mathematics at Technical University of Sofia"

4.Prof. Mirko Vujosevic, University of Belgrade, Yugoslavia: "Hoe OR is taught in Yugoslavia"

5.Prof. Slavica Petrovic, University of Kragujevac, Yugoslavia: "New developments, methodologies and application in management science"

6.Prof. Miomir Stankovic, University of Nis, Yugoslavia: "OR topics in existing teaching programme at the Faculty of occupational safety"

7.Prof. Bozidar Radenkovic, University of Belgrade, Yugoslavia: "An application of Internet

technologies and distance learning on the University"

8. Prof. Slobodan Vujic, University of Belgrade, Yugoslavia: "Operations Research and mineral-raw complex"

9. Alexandar Holostov, Academy for fire protection, Moscow, Russia: "Organizational problems of distance learning in Russia"

10. Alexandar Holostov, Academy for fire protection, Moscow, Russia: "Time schedule modelling in distance learning"

11. Prof. Vera Kovacevic-Vujcic, University of Belgrade, Yugoslavia: "A proposal for a Tempus project for OR teaching"

12. Gen. Spasoje Mucibabic, Yugoslav Armey: "Military applications of OR"

13. Gen. Sinisa Borovic, Yugoslav Armey: "Possibilities and applications of OR in practice"

14. Milan Martic and Milija Suknovic, University of Belgrade, Yugoslavia: "OR at the Faculty for Organizational Sciences, Belgrade"

Conclusion

The main objectives of the workshop are fulfilled. Many valuable experiences and ideas were heard at the workshop. A framework for further cooperation is established. As a result, a Tempus Project Proposal was made and submitted after the workshop.

Belgrade, March 2003
Prof. Mirko Vujosevic

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EURO Summer Institute XXII
Optimization and Data Mining

Scope

The computer revolution has paved the way to a search for techniques capable of dealing with the huge amount of data information around us in all branches of sciences, bringing new theoretical and computational challenges to exciting research areas ranging from web page clustering, to computer vision, financial mathematics and bioinformatics, etc., to mention just a few. The perceptron algorithm, support vector machines, margin classifiers, k-means clustering, EM-algorithm, are just few examples of the terminologies we often encounter in classification, clustering and machine learning problems. Optimization algorithms and techniques are often at the heart of such methodologies, and a variety of other properties leading to interpretation and computation of solutions rely on optimization techniques as well.

The scientific aim of this summer institute is seeking solutions to challenging data mining problems within the use and development of advanced / modern mathematical optimization and statistics tools. The special structures often encountered in data mining systems also provide motivation for further investigations on new optimization methods and algorithms capable of handling very large scale data, and hence this summer meeting will advance both areas.

Contributions on other topics of the continuous and discrete optimization theory, statistical learning and applications are also welcome.

EURO Summer and Winter Institutes (ESWI) are organized to stimulate good social and working links among promising young OR scientists in Europe. The participation is limited to a group of about 25. The participation is a matter of honor and a person can be a participant in an ESWI only once in her/his career. Applicants should submit an unpublished paper in the range of the subjects of the Institute together with their curriculum vitae to their National OR Society. Each National Society of EURO will then select one (eventually two) candidate(s) and submit the information to the chairperson of ESI XXII. The Programme Committee will make the final choice of the participants.

Activities

The activities on our ESI are twofold. Firstly, there is the common scientific exchange which we, students from all over Europe and renowned international teachers, are going to have together. At the Institute, there will be lectures delivered by invited speakers, but the main emphasis will be on the young participants' presentations, on the discussion, extension and refinement of their papers. A special issue of European Journal of Operational Research (EJOR) will be prepared, based on the papers submitted after ESI. Secondly, besides scientific exchange, there is the common time spent by all ESI participants, students and teachers, being so valuable. EURO considers the social activities to be most important for the success of the ESI. In fact, by common time spent for sportive activities, visiting museums, ancient places and various other sights, enjoying Turkish food specialities and entertainment and by a bus tour to wonderful Cappadocia, we will get better acquainted with each other and friendship can just begin. This might be a stable basis for an initialization of scientific collaboration and of the development of a personal network, a scientific home of young scientists who made valuable experiences and even let other colleagues and friends benefit from them. Herewith, of course, we also hope that the teachers will enjoy young people's interest and enthusiasm, and see them in a new generation of colleagues. The organizers of the Ankara ESI are looking forward to a scientificly and personally attractive and exciting Institute that encourages, supports and enjoys all participants and gives various impulses among them, in and with hospitable Turkey.

Location and expenses

ESI 2004 will take place on the campus of Middle East Technical University (METU), a leading Turkish university, in Ankara, the capital of modern Turkey. METU is well-known not only for its high scientific level, but also for its international contacts and atmosphere, its large and beautiful campus, for its vivid and fascinating student life. There are excellent sports facilities, e.g., in tennis and swimming, possibilities for walking around METU's own lake, restaurants with Turkish and international food. Ankara is like a painting composed by both places from the middle age and representative buildings from 20-21st century. Nearby we find settlements of many ancient civilizations, there are Hittites and Romans, early Christianity, Shellshocks and Ottomans. The expenses of staying at the ESI (scientific program, accommodation, meals, and social activities) are covered by EURO, and other sponsors. The young participants will have to cover the costs of travel to Ankara. However, EURO encourages the National OR Societies to give support to their participants to cover these costs. The travel expenditures of the invited speakers will partially be covered by our Institute ESI 2004.

Schedule

- Deadline for submission of papers to the National Societies:
  - To be decided by each National Society.
- Deadline for submission of information on the candidates by the National OR Societies to ESI XXII:
  - April 20, 2004
- Announcement of selected participants by the Scientific Committee of the ESI XXII:
  - May 15, 2004,
- ESI 2004 (Optimization and Data Mining):
  - July 9 - 25, 2004

Information

Bülent Karasözen
Chairman of the ESI 2004
Institute of Applied Mathematics
Middle East Technical University
06531 Ankara-Turkey

Phone: 90 312 2102780
Fax: 90 312 210 1119
E-mail: esi04@metu.edu.tr

http://www.iam.metu.edu.tr/esi04/index.html

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EURO Summer Institute
Stochastic and Heuristic Methods in Optimization

Neringa, Lithuania, 25 July - 7 August, 2003

The XXI EURO Summer Institute took place in Nida-Neringa, Lithuania, from 25 July to 7 August, 2003, on the subject "Stochastic and Heuristic Methods in Optimization". The XXI ESI has been sponsored by the Lithuanian Operational Research Society (LitORS) and EURO with the active support of EURO itself, FP5 Programme of European Union, Vilnius Gediminas Technical University (VGTU), Institute of Mathematics and Informatics (MII, Vilnius), Lithuanian State Foundation on Study and Research (LSFSR).

The subject has been identified as an emerging issue for a rapidly developing field of modern optimization theory and its techniques. From the call for papers we quote: "Planning and optimization under uncertainty were begun to consider in the middle of the last century, however the existing experience left more questions than offers ready methods and ways for practical solution. The later challenge stimulates a study of existing techniques as well as development of new, heuristic concepts for optimization. The organization at 2003 of the ESI XXI, aimed to overview last achievements and to gain a common attitude on heuristic and

stochastic optimization techniques, is opportune and facilitates to seek the modern level in the field. We encourage those interested in the following topics to overview trends and gain a common attitude towards:

- new trends in stochastic linear and non-linear optimization;
- neural networks for optimal decisions;
- evolutionary and genetic algorithms;
- optimization by the annealing method and taboo search;
- scatter search;
- quantum computations and optimization;
- aspects of multimode and multiobjective optimization".

ESI XXI was the first EURO Summer Institute organised in a country of the former Soviet Union as well as in Central and East Europe, thus very facilitating for extension of the area of EURO activity area, stimulating contacts among specialists from many countries in the expanding European research space, and including them to consideration of issues, important to OR.

The complete final report of ESI XXI can be found at http://www.euro-online.org/eswi3.doc.

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The EURO Award 2003 for Excellence in Practice

This first award was conferred at the EURO XIX/INFORMS conference in Istanbul, July 2003, following presentations by the three finalists at the conference. The call for papers, published in the EURO Bulletin and by the national societies, attracted seven full submissions, with authors from six countries.

The jury had six members: Jaume Barcelo (Spain), Cathal Brugha (Eire), Rui Guimaraes (Portugal), Bert Lambrecht (Belgium), Theo Stewart (South Africa) with Mike Pidd (UK) as

Chair. The jury read all seven papers and were unanimous in choosing the following three finalists to present their papers at the conference.

- Broadcast scheduling for mobile advertising
  Bert De Reyck and Zeger Degraeve (London Business School, UK)
- ARMS: an Automated Resource Management System for British Telecommunications plc

Christos Voudouris, Gilbert Owusu, Raphael Dorne, Cedric Ladde (BTExact Technologies, UK)

- Laps Care: an operational system for staff planning in home care
  Patrik Eveborny, Patrik Flisberg (both of Linköping Institute of Technology, Sweden) and Mikael Rönnqvist (Optimal Solutions AB. Sweden)

The three papers, which reflect the wide range of fields of application of OR, will be published together in EJOR, subject to full refereeing.

Having heard the three finalists, the jury were unanimous in awarding the 2002 Euro Excellence in Practice Award to Patrik Eveborny, Patrik Flisberg and Mikael Rönnqvist. The 2003 Award carries the following citation.

The provision of high quality social care for the elderly is a growing concern throughout Europe. It is important that elderly people can stay in their own homes and live dignified lives, by receiving care that is consistent and appropriate. Laps Care is software that enables the rapid development of care schedules that are feasible and that provide consistent care in an efficient manner. It employs well-established methods that have been implemented in a smooth, friendly software tool for daily use. The development process seems exemplary in its involvement of users and carers, as well as system managers. It is now in successful use in a number of regions of Sweden and is being tested elsewhere. The authors, a joint team of academics and software developers, are to be congratulated for their work on an important social problem and their use of appropriate methods to enable improved care, lower costs and greater job satisfaction. They are worthy winners of the 2003 EURO Excellence in Practice Award.

M. Pidd, Jury Chair

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Management Science Strategy Innovation Prize (MSSIP)

The European Association of Operational Research Societies (**EURO**) is offering the Management Science Strategic Innovation Prize (**MSSIP**) to foster specific areas of application of Operational Research in management. The prize is intended to award outstanding contributions in theory or in practice to a well-chosen scientific area encouraging innovative researchers and possibly entire research groups to focus their work on a domain of particular strategic interest. The prize is conferred at each EURO-k conference and is sponsored by the SAP AG, Germany, with an **endowment of 20.000 CHF**, each.

The Bosphorus - view from the EURO 2003 Conference Site
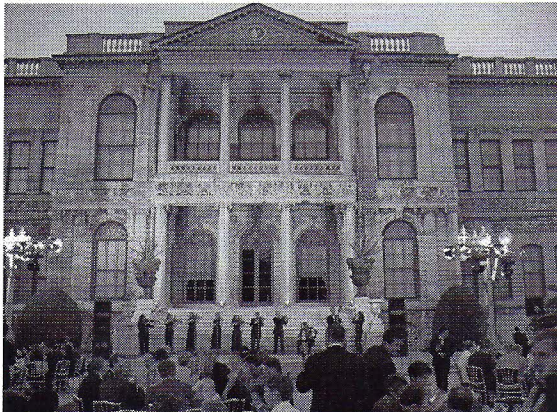
Dolmabahce Palace where the price was awarded during the Conference Banquet

The MSSIP award 2003 was dedicated to the topic

**Market Coordination in Supply Chain Management**

and was awarded to Dr. Stefan Spinler from the Wharton School of the University of Pennsylvania, USA and Prof. Dr. Huchzermeier from the WHU Vallendar, Germany for their contribution
"The Valuation of Options on Capacity in the Presence of State-Contingent Demand".
As the chairman of the MSSIP 2003 jury Prof. Dr. Christof Weinhardt awarded the winners with the price on this years **EURO Conference in Istanbul**, Turkey on July 9th 2003.

The MSSIP 2003 Jury consisted of

- *Prof. Dr. Claus Heinrich*, SAP AG, member of the Board, Germany
- *Prof. Dr. Paul Kleindorfer*, Wharton School, Philadelphia, USA
- *Dr. Peter van Laarhoven*, TNT Post Group, Dir. Cor. Strategy, The Netherlands
- *Prof. Dr. Christoph Schneeweiss*, EURO President 1999/2000, University of Mannheim, Germany
- *Prof. Dr. Jacques Teghem*, Editor of EJOR, Faculté Polytechnique de Mons, Belgium
- *Prof. Dr. Gerhardt Wäscher*, Chair of PC EURO 2003, University of Magdeburg, Germany
- *Prof. Dr. Christof Weinhardt*, Chairman of the MSSIP Jury 2003, University of Karlsruhe (TH), Germany
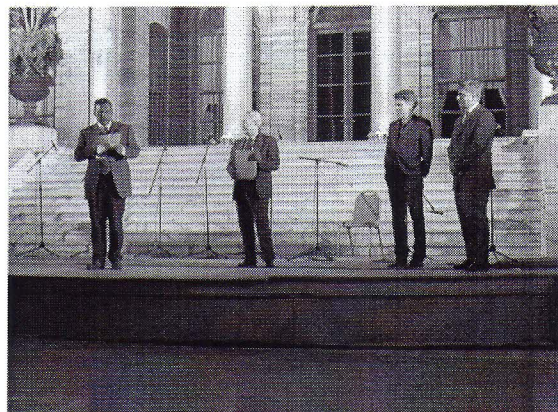
From left to right: Prof. Christof Weinhardt (Chairman of the MSSIP 2003 Jury), Prof. Laureno Escudero (President of the EURO), Dr. Stefan Spinler (MSSIP 2003 award winner), Prof. Arnd Huchzermeier (MSSIP 2003 winner)

Dr. Spinler giving his talk in the MSSIP 2003 Semi-Plenary session on the EURO Conference in Istanbul

Out of many substantial contributions the jury selected the award winning "The Valuation of Options on Capacity in the Presence of State-Contingent Demand" which deals with real options as an instrument to coordinate resource allocation in Supply Chains. In their paper, Mr. Spinler and Mr. Huchzermeier show that introducing markets for real options coordination problems can be solved resulting in pareto improving allocations. They apply real options for the reservation of capacities in different scenarios in logistics and supply chain management. They can show that under certain conditions there always exists a range of Win-Win-situations for both sides - the buyers and the sellers. On top of this they are able to calculate the size of this range.

The MSSIP award winning contribution will be published in the **European Journal of Operations Research (EJOR)**.

As the chairman of the MSSIP 2003 Jury I congratulate the winners and wish them all the best for their future research.

Also, I want to encourage all researchers in the field to submit to the **MSSIP 2004 Award** which is dedicated to the topic **Performance Management and Benchmarking**.

In the name of the MSSIP 2003 Jury

Karlsruhe, July 9th 2003,

Prof. Dr. Christof Weinhardt
(Chairman of the MSSIP 2003 Jury)
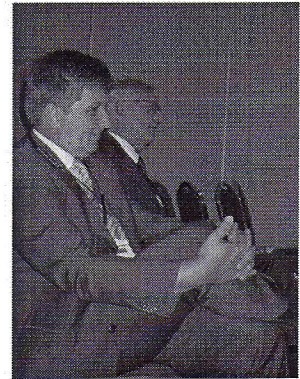
From left to right: Prof. Dr. Arnd Huchzermeier (MSSIP 2003 award winner), Prof. Dr. Christoph Schneeweiss (1999/2000 EURO President and MSSIP initiator)

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EURO Management Science Strategic Innovation Prize
(MSSIP 2006)

OR/MS in Humanitarian Security

Call for Applications

The prize is intended to recognise the role of Operations Research/Management Science in the area of 'humanitarian security', and thereby to encourage OR/MS researchers and professional to consider this area as an important and challenging one for their activity.

By 'humanitarian security' we understand all those situations in which the survival, the welfare,? the health, or the fundamental rights and liberties of people, whether entire populations or particular social groups, are threatened.

Typical situations in which issues of humanitarian security arise are:

1. humanitarian emergencies, either the result of natural disasters (earthquakes, floods, droughts, epidemics, ...) or of armed conflicts with their consequences of displaced populations, health problems, famine, ...;

2. crises and conflicts which may develop into armed conflicts or situations of violent conflict in action;

3. the normalisation of a country after a violent conflict, with problems such as de-mining, infrastructure and institution building, ...;

4. arms trade monitoring and enforcing of disarmament treaties; (v) environmental problems with their related risks;

5. security? problems which arise in everyday life, often related to the diffusion of technologies, such as transportation security, transportation and disposal of toxic? materials, electronic surveillance and privacy issues.

These are situations in which a variety of traditional OR/MS methodologies can find or have already found successful application. At the same time, from the many challenging problems arising within the humanitarian security area,? there is an emerging need to develop new methodologies or new variants of old ones, such as emergency logistics, conflict management and resolution, security assessment, strategic management of crises,...

The submission should be a single or joint authored unpublished paper describing either a successful? application of known OR/MS methodologies to a real problem in the humanitarian security area, or novel methodologies that have been developed in order to solve relevant problems in the area.

The paper is to be submitted in electronic form (either Pdf or PostScript) to the chair of the jury not later than January 15, 2006.

The MSSIP Jury 2006 is included by Georgio Gallo, Jonathan Rosenhead and Alois Josef Sieber. The coordinates of prof. G. Gallo are as follows:

Giorgio Gallo Professor of Operations Research
Dipartimento di Informatica
Via F. Buonarroti, 2
56127 Pisa
tel.? ++39 050 2212714
fax. ++39 050 2212726
email: gallo@di.unipi.it
http://www.di.unipi.it/ gallo

January 30, 2004

Jobs

This list is automatically generated from the EURO web server. Only jobs not older than 100 days are displayed.

1. **job opening for academics in Applied Statistics and Operations Research at KUL (Belgium)**

    The Department of Applied Economics at K.U. Leuven (Belgium) announces a full-time job opening for academics in

    Applied Statistics and Operations Research

    The normal starting date is October 1, 2004. The successful applicant's duties include research and teaching, as well as services related to academic life. There may be some flexibility about the initial teaching assignment (posted on

    http://www.kuleuven.ac.be/admin/rd/niv3p/vzap2/ad-i02ec.htm).

    Applicants must have a doctoral degree in the relevant discipline or a closely related field. The level of the appointment depends on the applicant's research and teaching record.

    Application forms can be downloaded from the above web site and should be sent by March 1 to K.U.Leuven, Dienst Academisch Personeel, Parijsstraat 72b, B-3000 Leuven.

    For additional information, contact Martina Vandebroek by phone ((+32 or 0) 16 32 6975) or by email (martina.vandebroek@econ.kuleuven.ac.be).

2. **2 open positions at LAVAL (Quebec)**

    Le Département des opérations et systèmes de décision de la Faculté des sciences de l'administration de l'Université Laval a présentement deux postes de professeure ou de professeur à combler, l'un en ingénierie d'entreprises et l'autre en opérations et systèmes de décision, de préférence au rang de professeur adjoint.

    Description:

    http://www.fsa.ulaval.ca/html/posteingenierie.html

    http://www.fsa.ulaval.ca/html/posteosd.html

3. **Open positions University of Luxembourg**

    Faculty of Law, Economics and Finance

    http://www.cu.lu/def/recruteDEF.html

4. **Lecturer in Operational Research and Systems**

    The Operational Research and Systems group at Warwick Business School, University of Warwick, are recruiting a lecturer, £26,270-£33,679pa (pay award pending).

    The candidate may have interests in any area of operational research, although we are especially interested in any of soft OR/systems, multivariate statistics, yield management, forecasting, data envelopment analysis or healthcare modeling.

    Warwick Business School is one of the foremost schools in the UK with a top 5* research rating in the 2001 RAE and was the first Business School to be accredited in the UK (AMBA), Europe (EFMD) and the US (AACSB). The appointment is in line with a continuing programme of expansion, both into new areas and also within existing activities.

    Closing date for applications is 30 January 2004. Details can be found at www.jobs.ac.uk/warwick. Informal enquiries may be addressed to Robert Dyson (Robert.Dyson@wbs.ac.uk) or Ruth Davies (Ruth.Davies@wbs.ac.uk).

    Ruth Davies Professor of Operational Research and Systems Warwick Business School University of Warwick Coventry CV4 7AL Tel: 44 (0)24 7652 2475

5. **Lectureship in OR at University of Southampton**

    Lectureship in Operational Research School of Mathematics, University of Southampton

Applications are invited for a Lectureship in Operational Research with a start date of 19 April 2004 or as soon as possible thereafter. The Operational Research Group obtained a grade 5 in the 1996 and 2001 Research Assessment Exercises and our policy is to reinforce this strength.

We seek someone with a strong research background in any area of Operational Research. Current strengths of the Operational Research Group include: simulation; combinatorial optimization; mathematical programming; stochastic modelling; non-linear optimization; scheduling; and health-care modelling.

Salary will be in the range £22,954 to £34,838 per annum on the Lecturer A/B Salary Scale.

Informal enquiries are welcome and should be addressed to: Professor C N Potts, email C.N.Potts@maths.soton.ac.uk, Tel. +44 (0)23 8059 3651, School of Mathematics, University of Southampton, Highfield, Southampton, SO17 1BJ, UK (Fax +44 (023) 8059 5147).

Further particulars are available from the Human Resources and are also available from the Website: http://www.maths.soton.ac.uk/jobs/lecor.phtml

Applicants should send a full curriculum vitae (7 copies from UK applicants and 1 from overseas), including the names of three referees, to Human Resources (F) University of Southampton Highfield Southampton SO17 1BJ UK Tel: +44 (0)23 8059 2750 Email: recruit@soton.ac.uk or minicom: +44 (0)23 8059 5595 to arrive no later than Friday 6 February 2004.

Please quote reference number 03F0358.

Working for Equal Opportunities.

6. Job opening in APPLIED STATISTICS AND OPERATIONS RESEARCH

The Department of Applied Economics at K.U. Leuven (Belgium) announces a full-time job opening for academics in Applied Statistics and Operations Research

The normal starting date is October 1, 2004. The successful applicant's duties include research and teaching, as well as services related to academic life. There may be some flexibility about the initial teaching assignment (posted on http://www.kuleuven.ac.be/admin/rd/niv3p/vzap2/ad-i02ec.htm). Applicants must have a doctoral degree in the relevant discipline or a closely related field. The level of the appointment depends on the applicant's research and teaching record. Application forms can be downloaded from the above web site and should be sent by March 1 to K.U.Leuven, Dienst Academisch Personeel, Parijsstraat 72b, B-3000 Leuven. For additional information, contact Martina Vandebroek by phone ((+32 or 0) 16 32 6975) or by email (martina.vandebroek@econ.kuleuven.ac.be).

7. Chair/Full Professorship in Operational Research/Systems (Warwick Business School)

UNIVERSITY OF WARWICK - WARWICK BUSINESS SCHOOL

Chair/Full Professorship in Operational Research/Systems

The School wishes to appoint a scholar of international standing to a professorship in the Operational Research and Systems Group.

Warwick Business School is one of the foremost in the UK with a highly rated research record, and was the first UK school to be accredited by the three international agencies AACSB (US), EFMD (Europe) and AMBA(UK). The School has strong undergraduate, specialist masters(including an MSc in Management Science and Operational Research), MBA, doctoral and executive programmes.

The ORS Group, one of the leading European groups, has particular research strengths in data envelopment analysis, scheduling and planning, simulation, strategic/soft OR and health services OR.

Further particulars and application packs are available from www.jobs.ac.uk/warwick, or by email from recruit@warwick.ac.uk, reference 17/6A/03, closing date 16 January 2004. Contact Professor Robert Dyson (Robert.Dyson@wbs.ac.uk) or Professor Ruth Davies (Ruth.Davies@wbs.ac.uk) for more information.

Ruth Davies Professor of Operational Research and Systems Warwick Business School University of Warwick Coventry CV4 7AL Tel: 44 (0)24 7652 2475

8. **looking for work opportunities after graduation**

Dear Sir/Madam,

I am a final year student at the University of Warwick reading MORSE (Mathematics, Operational Research, Statistics and Economics) and am very much interested in gaining work experience after the graduation. Could you please advise me the possible opportunities in that respect.

Sincerely yours, Alexandra Bytchkova

Tocil Flats 28A University of Warwick Coventry CV4 7AL Tel.: + 44(0)7984654812

This calendar is automatically generated from the EURO web server.

EURO Calendar

Date	Group	Event
16-20/2/2004	ESWI	**Elavio X: Latin American Association of Operations Research Societies Summer School for Young Scholars** Montevideo, Uruguay elavio@fing.edu.uy http://www.fing.edu.uy/inco/eventos/elavio
18-20/3/2004	EWG	**1st ESICUP Meeting, EURO Special Interest Group on Cutting and Packing** Lutherstadt Wittenberg, Germany gerhard.waescher@ww.uni-magdeburg.de http://www.apdio.pt/esicup-1stMeeting/
29-30/4/2004	EWG	**59th Meeting of EWG MCDA: "Banking and finance"** Brest, France jP.Barthelemy@enst-bretagne.fr http://www-iasc.enst-bretagne.fr/mcda59/
24-26/6/2004	EWG	**ECCO-XVII 2004, The 17th Europeen Chapter on Combinatorial Optimization annual meeting** Beirut, Lebanon. Ibrahim.Osman@aub.edu.lb http://www.ecco2004.org
4-7/7/2004	EURO-k	**EURO XX Conference:** Rhodes, Greece ysiskos@unipi.gr http://www.Euro-rhodes2004.org
9-25/7/2004	ESWI	**The EURO Summer Institute - OPTIMIZATION AND DATA MINING** Ankara, Turkey esi04@metu.edu.tr http://www.iam.metu.edu.tr/esi04/
22-24/9/2004	Mini EURO	**15th Mini-EURO Conference - Managing Uncertainty in Decision Support Models (MUDSM 2004)** Coimbra, Portugal mudsm2004@inescc.pt http://www.inescc.pt/mudsm2004
2-5/7/2006	EURO-k	**EURO XXI, 21st European Conference on Operational Research 2006** Reykjavik, Iceland info@euro2006.org http://www.euro2006.org

European Journal of Operational Research

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Research Societies (EURO) within IFORS

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http://www.elsevier.com/locate/ejor.