

## EDITORIAL

The 18th triennial IFORS conference, one of the highlights of the international federation, is just around the corner. The arrangements for the conference are going well while the schedule for the programme of papers is being finalised. Some 870 papers are scheduled to be presented and many of the delegates have registered. In South Africa we look forward to welcoming all our delegates to this historic first IFORS conference on the African continent. In addition IFORS will be celebrating its 50th anniversary at this conference. This adds a special flavour to the conference. It is bound to be a wonderful event.

From humble beginnings IFORS has grown in stature as well as becoming much stronger financially over the last fifty years. It is from this perspective that Peter Bell, the treasurer of IFORS, can state that IFORS is in a position to do more for its member societies. So much is already being done but more is possible. His short article on this topic is a real inspiration and invitation to all to join the IFORS administration committee in discussions on how to extend the IFORS influence worldwide.

IFORS, for example, supports international events such as the 13th ELAVIO Summer School. In addition IFORS also support individuals, young operations researchers from developing countries, to attend these summer schools. The latest Latin-American Summer School for Operations Research was held early February in Peru. There are two reports in this newsletter on this Summer School, one by the young OR person from the Philippines, Denis Capage, who was financially supported by IFORS, and also by the organisers of the Summer School. From the two reports, and the photographs of the event, it is clear this was a great event. What is also encouraging is that as an outflow of this event an ad hoc committee was established to look at the formation of a new society, the Peruvian Operations Research Society. It clearly illustrates what IFORS support can achieve.

The feature article is around OR and Ethics. The article "7 Barriers to Ethics in OR" clearly illustrates

how our profession grapples with the difficult concept of ethics. It is a sensitive topic that has been raised at a number of occasions at different conferences but somehow it seems as if it is something that should be avoided. Surely as the authors' state "it cannot be true that profession has no time for ethics".

As in the previous edition of the newsletter there is a short piece on EURO one of the larger regional groupings of IFORS. The summary on EURO possible does not do any justice to the wide range of activities of this very active association. The impact and influence of EURO within the international OR community is indeed wide ranging.

A new feature, which we hope will become a regular feature, in the newsletter is articles and news items specifically dedicated to developing countries. There is an announcement of ORPA 4 (Operations Research Practice in Africa) which will be held in October in Washington, D.C. preceding the INFORMS annual meeting while the eight finalists for the IFORS prize for OR in Development are listed. These finalists will present their papers at IFORS 2008 to a formal committee that will make the selection of the winner and runner up.

One of the initiatives of IFORS is the IFORS Distinguished Lecturer (IDL). At the most recent INFORMS meeting Ralph Keeney was the IFORS IDL. We feature a short piece on Keeney with the extended abstract of his presentation. One of the IFORS office bearers, Theo Stewart, received the gold medal of the International Society on Multiple Criteria Decision Making at the society's most recent meeting. The newsletter also contains the customary announcements on a diverse range of conferences.

Enjoy this edition of the newsletter and keep on "doing good with good OR"!

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# IFORS:

## IN A POSITION TO DO MORE

IFORS will celebrate its 50th anniversary at the 2008 Triennial Conference in Sandton, South Africa in July. The first 50 years of IFORS has seen some significant accomplishments, but the purpose of this editorial is to suggest that IFORS is now well positioned to play a larger role in the internationalization of OR. To justify this suggestion, we first look at some history.

Prior to 1989, IFORS operated on a financial shoestring. Helle Welling, the IFORS secretary, ran the office and somehow managed to keep IFORS going on income from dues paid by member societies and on the modest profits from the triennial conference. Since the conference only provided funds every three years, there was often a concern that the funds would run out before the income from the next conference started to arrive. Under these very tight financial conditions, IFORS could do little but Helle somehow managed to establish an IFORS presence at many international events and managed and grew an international network of OR people.

In 1989, Bill Pierskalla took office as IFORS President and immediately recognized the critical need to firm up IFORS finances and particularly the need for new sources of income if IFORS was to become a more important player in international OR. The contract to publish International Abstracts in Operations Research (IAOR) was renegotiated under much more favourable terms to IFORS, a new journal (International Transactions In Operational Research or ITOR) was started, a series of special interest conferences was initiated and a number of such conferences held, and the financial terms for the triennial conference were regularized. The IFORS Presidents since Pierskalla have embraced this financial initiative, and the result, together with the outstanding financial stewardship of David Schrady and Hugh Bradley, my predecessors as IFORS Treasurer, has been a financial turnaround at IFORS: IFORS finances are now on a firm and sustainable footing.

IFORS is now in a position to do more. The issue today is not so much "Do we have the money?" as "What else can and should IFORS be doing?"

IFORS mission as defined in the statutes "shall be the development of operational research as a unified science and its advancement in all nations of the world" but IFORS has flexibility as to how this mission is accomplished. As IFORS' finances have improved, a number of new programs have been initiated. The Developing Countries umbrella initiative includes a number of different programs that are seeing an impact, the very successful IFORS' Distinguished Lecturer (IDL) series has helped to add an international flavour to the annual conferences of the IFORS regional groups, and IFORS has invested heavily in some important changes to our flagship publications (IAOR and ITOR) which we hope you will see soon. But IFORS is now in a position to do more.

Proposals for funding do come to IFORS fairly often. The majority of these request funding for individual travel, and it is clear that IFORS could spend its entire income (and more) flying OR people around the world. However, there must be more to IFORS than just being a source of funding for travel. IFORS is now, at the beginning of its second 50 years, positioned to develop and run "programs" that consist of an integrated package of activities that are put together to achieve a specific objective (the IDL is a good example of this.) The IFORS Administrative Committee (AC), which makes all decisions on how IFORS' funds are spent, is now starting to plan programs along this line.

The AC would like to encourage you to join in this discussion. IFORS now has the resources to do more in pursuit of its mission, but the AC needs your input on new programs and initiatives that will contribute to the development of OR around the world.

Elise del Rosario, [elise@jgdelrosario.com](mailto:elise@jgdelrosario.com), IFORS President

Peter C. Bell, [PBell@lvey.ca](mailto:PBell@lvey.ca), IFORS Treasurer



# HIDDEN GEMS IN OR, NO. 2

## Non-perpendicular B&B in Integer Programming

There are hidden gems in the early Proceedings of IFORS (and other organizations) which are almost completely neglected since. Here is number 2.

When Land and Doig suggested the first Branch-and-Bound (B&B) technique for integer programming in 1960, they set the single variables equal to integers, such as  $x_j = 4, x_j = 5, x_j = 6$  etc. Little et al. contributed the name "Branching and Bounding" in 1963. In 1965, Dakin replaced Land and Doig's equalities by inequalities, such as  $x_j \leq 4$  vs.  $x_j \geq 5$ . Many improvements were suggested since.

However, one of the most powerful alternative concepts was almost completely ignored. This is Ed Brocklehurst's "Generalized Branch and Bound" (1976) presented at the 7th International Conference on Operational Research, IFORS '75 in Japan.

Brocklehurst suggested a kind of "non-perpendicular" B&B. He did not branch on single variables only. Instead, he used branching inequalities such as  $x_1 + 2x_2 \leq 10$  vs.  $\geq 11$ . Such branching inequalities could be designed such that they are nearly parallel to the objective function, and this property tends to result in small B&B trees. In many cases, one of the two branches does not include any feasible solution such that only the other branch has to be considered hitherto; this property tends to reduce the B&B tree even further.

Considered be the small example 1:

max	z	=	$3x_1$	+	$5x_2$			
	s.t.		$13x_1$	+	$21x_2$	$\leq$	115	
					$x_1, x_2$	$\geq$	0,	integer

The continuous optimum reads:  $x_1 = 0, x_2 = 115/21 = 5.476, z = 575/21 = 27.381$ . The integer optimum is quite different:  $x_1 = 4, x_2 = 3, z = 27$ .

Traditional (perpendicular) branching requires a B&B tree of some 11 nodes. Non-perpendicular branching requires a B&B tree of only 3 nodes (Figure 1) with the branching inequalities  $x_1 + 2x_2 \leq 10$  vs.  $\geq 11$  (see above). The latter branch ( $\geq 11$ ) does not lead to a feasible solution, while the earlier branch ( $\leq 10$ ) immediately produces the integer optimum.

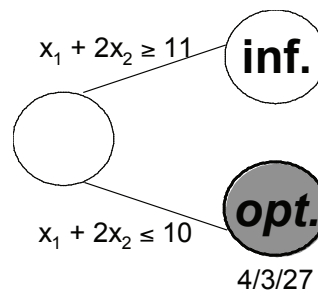


Figure 1: B&B tree for example 1, non-perpendicular branching

Brocklehurst demonstrated his generalized B&B by means of five numerical examples, up to the size of 14 constraints and 9 variables. The crucial part of non-perpendicular B&B is the construction of the branching inequalities. Different procedures are available. Müller-Merbach (1983) suggested a different procedure than Brocklehurst. Müller-Merbach's procedure will be demonstrated by example 2:

Max z	=	$38x_1$	+	$20x_2$	+	$41x_3$	+	$35x_4$			
s.t.		$2x_1$	+	$2x_2$	+	$2x_3$	+	$x_4$	$\leq$	32	
		$x_1$			-	$3x_3$	+	$5x_4$	$\leq$	2	
		$2x_1$	-	$2x_2$	+	$5x_3$	+	$3x_4$	$\leq$	17	
								$x_j$	$\geq$	0,	integer

The continuous optimum reads:  $x_1 = 8.47, x_2 = 5.37, x_3 = 2.16, x_4 = 0, z = 517.84$ . The integer optimum is somewhat different:  $x_1 = 7, x_2 = 6, x_3 = 3, x_4 = 0, z = 509$ .

The integer optimum can be found in one B&B step only, using the branching inequality  $2x_1 + x_2 + 2x_3 + 2x_4 \leq 26$  vs.  $\geq 27$ .

The branching inequalities are designed stepwise. The "basic branching inequalities" are developed first; they are based on the coefficients of the objective function for those variables only which are basic in the continuous optimum, i.e.  $x_1, x_2$ , and  $x_3$  in example 2.

The aim is to have a branching inequality which is as parallel to the objective function as possible. This problem is similar to that of fair representation of parties (with, say, 35, 20, 41 votes) in a parliament. A commonly used procedure is that by d'Hondt. He divides the number of votes by 1, 2, 3, ... (Table 1).

$x_1$	$x_2$	$x_3$
35	20	41
17.5	10	20.5
11.7	6.7	13.7





Table 1: d'Hondt ratios for example 2

The seats are then given to the parties in the order of the d'Hondt ratios, i.e. 41, 35, 20.5, 20, 17.5, 13.7 etc. If there is only one seat, it will be given to party 3, the second seat to party 1, the third seat to party 3 again, the fourth seat to party 2 etc. The equivalent will be done here with the variables, leading to a sequence of branching inequalities:

$x_3$	$\leq$	2	vs.	$\geq$	3	
$x_1 + x_3$	$\leq$	10	vs.	$\geq$	11	
$x_1 + 2x_3$	$\leq$	12	vs.	$\geq$	13	
$x_1 + x_2 + 2x_3$	$\leq$	18	vs.	$\geq$	19	
$2x_1 + x_2 + 2x_3$	$\leq$	26	vs.	$\geq$	27	etc.

Thus, the potential branching inequalities become more and more parallel to the objective function, but – at the same time – the distance between the two bounds ( $\leq$  vs.  $\geq$ ) becomes smaller, which is unfortunate. Therefore, for each of these potential branching inequalities, the effect on the value  $z$  of the objective function will be computed. That very branching inequality will be chosen which guarantees the greatest decrease of the value  $z$  of the objective function.

So far, only the “basic” branching inequalities are considered. They are augmented by those variables which are nonbasic in the current continuous solution (no details here).

There seems to be a great potential in non-perpendicular B&B. Former numerical tests were encouraging. A new research project is on its way.

It is not surprising that almost nobody seems to look for hidden gems in the old proceedings. Gems are rare. It is surprising, however, that nobody else seems to have created the idea of non-perpendicular B&B since, i.e. after for Ed Brocklehurst. He, however, did never again appear in the OR scene.

#### References:

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Land, A. H., Doig, A. G.: An Automatic Method of Solving Discrete Programming Problems, in: Econometrica, vol. 28, 1960, pp. 497-520.

Müller-Merbach, H.: An Obliquely Angled Branch and Bound Technique for Integer Programming, in: Angewandte Informatik, 1983, no. 6, pp. 252-257.

Heiner Müller-Merbach, University Kaiserslautern, IFORS President 1983 to 1985

## HOLA INVESTIGADORES PRÓJIMOS – ELAVIO SUMMER SCHOOL

*During the tour in Pachacamac*



The Latin-American Summer School for Operations Research (ELAVIO) was a week-long event held on February 4-8, 2008 in Country Club El Bosque located in the capital of Lurigancho, Peru – Chosica. Chosica has beautiful countrysides and splendid dry climate with a lot of Sun. It is the entry point to the central mountain of Peru.

Every year, the ELAVIO gathers young scholars and researchers in the field of Operations Research for short-courses, tutorials, discussion panels and lectures on a wide-array of topics in advanced operations research given by senior researchers. It also gives opportunity to a select group of researchers to present the results of their research work. The primary objective of the ELAVIO is to promote scientific exchange and networking opportunities between senior and young scholars.

In its 13th year, advanced topics discussed include advanced facilities location modeling, multi-criterion decision making, heuristics and metaheuristics, data mining, stochastic processes and mathematical programming. Among the distinguished speakers were Prof. Horacio Hideki (Brazil), Dra. Luciana Buriol (Brazil), Prof. Andres Medaglia (Colombia), Prof. Nelio Pizolatto, Prof. Hector Cancela (Uruguay) and Prof. Carlos Cotta. New research also were presented by the delegates coming from other countries, mostly from South America. I am glad to have presented in this conference, I presented a heuristic for the multiple vehicle routing problem. I got to hear possible extension or future studies from my work.

Aside from the successful lectures of the senior professors in the field, I together with the other foreign delegates also get to enjoy a one day tour of the beautiful landscapes and sceneries in Lima. We visited Pachacamac, the remains of Native American ruins, Lima center and downtown market. I also get to taste different South American delicacies which are not very different from the Philippines'. Almost every night, the younger delegates would organize a social gathering which I believe aims to celebrate new friendship, spread culture and of course, to have fun. I actually learned that some have attended ELAVIO several times now.

I believe that ELAVIO was successful in this endeavor to promote the application of Operations Research in various fields. The delegates were able to form discussion groups to talk about their work in

detail and other interest areas. Since we are specializing in different modeling applications, we were able to contribute numerous different ideas for new and bigger research. In this regard, ELAVIO also became a venue for the involvement of international scholars in the initiation of future research work.

I would like to express my gratitude to ELAVIO and IFORS, to Mrs. Elise del Rosario (IFORS President) and to Prof. Horacio Hideki for giving me the opportunity to participate in this momentous event. The experiences and knowledge I gained in this event is really worth the exhausting travel halfway across the globe. I hope that the Philippines would again be able to share in the next years our excellence in Operations Research.

(Short article by the IFORS sponsored scholar Denis Cagape from the Philippines)



*Some delegates*



*Country Club El Bosque – the venue of the event*







Opening of the Event



Country Club El Bosque

At Lima Center



# XIII LATIN-AMERICAN SUMMER SCHOOL ON OPERATIONS RESEARCH – ELAVIO

## FORMAL REPORT

The XIII Latin American Summer School on Operations Research (XIII ELAVIO), took place from 04 to 08 February this year, in Lima – Peru. It was organized and sponsored by the Universities: Universidad Nacional Mayor de San Marcos and Universidad Inca Garcilaso de la Vega. The school was also sponsored by the Peruvian Science and Technology National Council (CONCYTEC), the Internacional Federation of Operational Research Societies (IFORS), the Asociación Latino-Ibero Americana de Investigación de Operaciones (ALIO) and the Centro Latinoamericano de Estudios en Informática (CLEI). Thanks to the sponsorship, all participants enjoyed lodging, food and materials.

The international scientific committee was formed by an excellent team of scientists representing countries members of ALIO, which worked with IFORS, CORS and EURO for promotion and selection of participants. The number of applicants was 114, coming from Argentina, Brazil, Canada, Chile, Colombia, Cuba, Germany, Holland, Israel, Mexico, Peru, Dominican Republic and Uruguay; of whom 55 were selected and 32 submitted the communication of their researches.

The program consisted of three mini-courses, five tutorials and the presentation of 32 research works. The mini-courses and tutorials were displayed by teachers Andrés Medaglia (Universidad de los Andes, Colombia), Horacio Hideki (Instituto de pesquisas espaciais, Brazil), Luciana Buriol (Universidade Federal do Rio Grande do Sul, Brazil), Héctor Cancela (Universidad de la República, Uruguay) and Nelio Pizzolato (Pontificia Universidade Catolica do Rio de Janeiro, Brazil).

The courses and tutorials exposed in the XIII ELAVIO have served to increase and enhance the knowledge of all participants through updated information on issues emerging in the area of operational research and concrete applications of great transcendence for the region as the location of facilities with multiple criterion, the design of telecommunications networks, optimization of transport networks, optimization content networks, among others.

The presentations of young researchers' investigations, applying for a master or a PhD degree, have been enriched by comments and suggestions from senior researchers and participants.

The works exposed by the four young researchers sent from EURO/IFORS, CORS and IFORS/Fellowship have been of great interest for their applicability also for our region. As well as, their presence has allowed a link between researchers from different regions.

New interest groups among the participants of ELAVIO, for joint research were established, and new friendships were created.

The XIII ELAVIO has attracted interest from professionals, students and even some Peruvian academic authorities for development and dissemination of this area as an important tool for sustainable development of every kind of organizations and proper national development. In consequence an ad-hoc committee was established for the creation of the Peruvian Society for Operations Research.





# 7 BARRIERS TO ETHICS IN OR/MS



Marc Le Menestrel

## OUR MOTIVATION

As scholars of Operations Research and Management Sciences (OR/MS), interested in ethics, we have dedicated a significant part of our academic effort to promoting ethics in our field. Like many others, we are convinced that issues like environmental sustainability, social justice or personal values have an important role to play in the future of our discipline. We think there are opportunities and potential rewards in a better integration of ethics in OR/MS. On the other hand, our experience shows that ethics can also be a difficult subject for our community to come to grips with. At some occasions, we were puzzled by the reluctance of scholars to consider ethical issues, and felt a perceived lack of legitimacy for these issues in our profession.

This sparked the idea to identify barriers that render the integration of ethics in OR/MS difficult. Not quite familiar on how exactly to start doing this, we decided to send out a web-based exploratory survey to the registered participants to the EURO 2007 conference in Praha. We received responses from 79 participants, which provided us with approximately 600 entries to our open questions about barriers towards integrating ethical values in (1) research content, (2) research process, (3) teaching, and, (4) consulting. We were able to classify the entries into 7 categories that constitute 7 candidates for barriers to Ethics in OR/MS.

We believe our little survey sheds some light on the challenges of integrating ethics in OR/MS. By presenting our exploration of these barriers, we hope to contribute to the discussion on the place of ethics in OR/MS, and, more generally, the future of the discipline. As a first step, this exercise also helped us identify potential ways to alleviate these barriers. As we hope to show, the value of our approach is that it provides avenues to further the integration of ethics in OR/MS beyond a mere







Luk van Wassehove

advocacy for being “more ethical”, a path we clearly do not believe in.

## THE 7 BARRIERS

**Barrier #1:** Ethics is not relevant in OR/MS  
Under this heading, we gather entries that express an absence of intersection between ethics and OR/MS. We have entries such as “ethics has little relevance given the technical nature of my work” or, “ethics is not applicable to my topic of research” or, “ethics is not part of my research interest”. We also have entries such as “ethical values are not the content of my courses” and, “lack of ethical consideration in the initial terms of references” or, “my expertise does not fall within ethical aspects”.

**Barrier #2:** Ethics is difficult to treat in OR/MS  
In this category, we find comments related to the nature of ethics such as “the subjective nature of ethics makes it difficult”, “ethical values are sometimes contradictory”, “different interpretation of the issues”, “lack of agreement”, but also entries that relate to “lack of information” and “lack of comprehensive method”, “lack of formality”, “measurement difficulties”, “lack of techniques”.

**Barrier #3:** The external context is not favorable  
This category gathers entries that broadly refer to contextual and institutional elements external to the respondent. We find comments like “as an organization, we are not used to address ethical issues”, “pressure from administration”, “ethical

values are never explicitly discussed”, “no public awareness”, “no public discussions”, “existing well-accepted assumptions do not account for ethical values”, “most OR researchers are not interested in ethical values applied to MS problems”, “lack of familiarity with the topic from administration”.

**Barrier #4:** Ethics conflicts with academic success

In this category, we gather entries that reflect the perception that ethics is not a good topic for success. It includes comments like “research about ethics is not appreciated by good journals”, “the price of not paying attention to ethics is not perceived by students”, “peer pressure”, “political correctness of academic community”, “performance evaluation”, “promotion and tenure”.

**Barrier #5:** Ethics conflicts with economic success

In this category, we find entries that directly relate to the difficulty of finding funding for the integration of ethical values in OR/MS research. Most entries are simply stating “money” or “sponsorship”, but some explicitly articulate the dilemma “ethical values are not appreciated in research funding”, “sometimes ethical values are not compatible with profits”, or “profit motive is overriding”.

**Barrier #6:** Ethics requires time

We find “time” frequently mentioned as a barrier, as well as “deadlines”, “time pressure”, “need to finish faster”. Is it the case that our profession has “no time for ethics”?

**Barrier #7:** Psychological barriers

In this category, we gather barriers that refer to psychological traits such as “vanity”, “arrogance”, “satisfaction”, “stress”, “egocentrism”.

## Synthesis

Our exploratory survey indicates that there may be different types of barriers to the integration of ethics into OR/MS. A first type of barrier comes from the subjective nature of ethical values, which contrasts with the tradition of objective models of OR/MS. Instead of leading to a unique quantitative solution, ethics implies a plurality of values and opinions which may not allow the analyst to be as decisive in formulating recommendations as s/he would like to be (or is expected to be). We term these barriers conceptual and methodological. A second type of barrier is more contextual and contributes to positioning ethics as irrelevant or conflicting with academic and economic incentives. We assume that such a negative perception would then de-motivate scholars from considering ethics in their work. We term these barriers cultural, organizational and motivational. Finally, ethics frequently involves loaded judgments

which explicitly or implicitly influence relationships between people, as well as their communication patterns. This certainly does not facilitate the integration of ethics in our discipline. These barriers are psychological and emotional.

## No Time for Ethics?

From the conceptual and methodological side, the integration of ethics in OR/MS raises the challenge of developing theories, models, frameworks and rational approaches to help handle the subjectivity and diversity of ethical values in a way that they complement the traditional theories and methodologies of OR/MS. To the extent that such a program preserves the analytical rigor that provides OR/MS with its scientific credibility, it can only enrich the ability of our discipline to meet the complex and value-loaded issues that organizations and society are increasingly facing. There is no reason to believe that OR/MS analysts would be ill-positioned to face these challenges. After all, it may be easier to learn about ethical values as an applied mathematician than it is to study mathematics as an ethical philosopher. It is clear that ethical issues will become more pressing as we increasingly face environmental and societal challenges, and as increasing responsibility and accountability will be expected from business organizations. This is not necessarily a threat to our discipline. Instead, it could provide a great opportunity. Perhaps we should work on the cultural, organizational and institutional context to better prepare the OR/MS community to grasp these opportunities. Typically, such transformations require a top-level commitment, which could take the form of a code of ethics for the profession, a commitment from leading journals to promote the topic and/or the sponsoring of projects aimed at developing and disseminating knowledge about the integration of ethics in OR/MS.

Finally, our exploratory survey suggests that we could gather more knowledge about ethical attitudes in the OR/MS community. This would help better understand the place of ethical values in the psychology and emotions of researchers, of management students, and of managers.

In conclusion, we would like to stress our intention to promote ethics in OR/MS beyond advocacy. It is our experience that promoting ethics too directly induces unnecessary resistance, detrimental to the progress that may be necessary for the future relevance and prosperity of the OR/MS profession. In a sense, alleviating the barriers to ethical values is a way to let ethical values flourish naturally. After all, *ceteris paribus*, everyone would prefer to be more ethical rather than less. It cannot be true that our profession has no time for ethics.



**EURO** is the Association of European Operational Research Societies within IFORS. It is a non profit association domiciled in Brussels, Belgium. Its aim is to promote Operational Research throughout Europe. The members of EURO are full members of IFORS and comprise the national OR societies of countries located within or nearby (in a broad sense) Europe. EURO represents 29 national OR societies gathering about 10000 OR specialists. EURO affairs are regulated by a Council consisting of representatives of all its members and an Executive Committee which constitutes its board of directors. Each EURO member is represented in the EURO Council by two representatives, one of whom votes, if required. Council meetings are held annually, normally in conjunction with the EURO-k conferences. The Council elects a President, a President-Elect, three Vice-Presidents, and a Secretary. These six EURO officers form the Executive Committee.

The activities of EURO are organised along several 'instruments' that are all designed to promote OR in Europe. The following EURO instruments were launched in 1975:

- EURO-k Conferences
- EURO Working Groups
- EURO Newsletter
- European Journal of Operational Research (EJOR)

The EURO Working Groups represent a major EURO instrument. With 27 Working Groups, EURO supports European wide scientific networks in all major topics of OR. EURO Working Groups have a meeting at least once a year where the members exchange ideas, experiences and research results, and support each other in research work. In addition to their annual meetings, the Working Groups also organise sessions in conferences, publish feature issues of the European Journal of Operational Research or other OR journals, and organise conferences or seminars.

Additional EURO instruments were introduced thereafter:

- (1983) EURO Summer and Winter Institutes
- (1983) MINI-EURO Conferences
- (1983) EURO Gold Medal
- (1994) EURO Supports
- (1995) EURO Excellence in Practice Award
- (2001) Management Science Strategic Innovation Prize
- (2001) OR peripatetic Post-graduate Program (ORP<sup>3</sup>)
- (2003) EURO Doctoral Dissertation Award (EDDA)
- (2006) EURO Distinguished Service Medal (EDSM)

Extensive information about EURO and its activities may be found in the EURO website: <http://www.euro-online.org>

## ANALYTICS: INFORMS

is happy to introduce the premiere issue of Analytics.

<http://www.analytics-digital.com/analytics/current?u1=IFORS>

This new digital magazine provides readers with an inside look at how data and mathematical analysis help drive better business decisions.



Because this is a digital magazine, Analytics looks very much like an actual magazine online, not just a collection of PDFs or links to HTML articles. This technology is increasingly attractive to readers who can easily page through the magazine, share particular articles with colleagues, electronically search for content, and take advantage of live links to gather additional information.

We plan to offer two issues of this new digital magazine beginning now with this initial issue and about three months later with a second issue. If acceptance among the business analytics community is high, we will continue with two more issues in 2008. As you page through the magazine, you will notice that we are asking you to register to receive more issues. This is our main means of judging success.

Content in this initial issue is based on classic articles from past issues of OR/MS Today and includes news articles, features, columns, and department.

Enjoy this initial issue with our compliments and please tell us what you think.

Gary Bennett, Director of Marketing, INFORMS

# AWARDS AND IFORS PERSONALITIES:



Theo Stewart (left), Jyrki Wallenius (president of the MCDM society) and right Murat Koksalan (chair of the awards committee)

## Theodore J. Stewart receives the MCDM Gold Medal

Theo Stewart is the current IFORS chair person for the committee looking after Developing Countries and also Professor in the Department of Statistical Sciences at the University of Cape Town, Cape Town, South Africa. During the 19th International Conference on Multiple Criteria Decision Making held at the University of Auckland from 7 to 12 January 2008 in Auckland, New Zealand he received the MCDM gold medal. The International Society on Multiple Criteria Decision Making makes three awards at each of its international meetings (approx every 2 years). The "Gold Medal" is for overall contribution to the field as a whole. The citation for this award states: The MCDM Gold Medal is the highest honor that the International Society on Multiple Criteria Decision Making bestows upon a scholar who, over a distinguished career, has devoted much of his talent, time, and energy to advancing the field of MCDM, and who has markedly contributed to the theory, methodology, and practice of MCDM. Theo was the President of this Society from 2003 to 2007. Congratulations Theo!

Previous recipients are the following:

- 1992 Stanley Zionts
- 1994 Oleg I. Larichev
- 1995 Bernard Roy
- 1997 Ralph E. Steuer
- 1998 Ralph L. Keeney & Howard Raiffa
- 2000 Thomas Saaty
- 2002 Jaap Spronk
- 2004 William W. Cooper
- 2006 Murat Koksalan

## Ralph L Keeney – IFORS Distinguished Lecturer 2007

In 1999 IFORS established a special program, called IFORS Distinguished Lectures (IDL), to recognize distinguished OR scholars and analysts and support member societies and regional groupings. Through this program IFORS is sponsoring lectures by distinguished OR scholars and analysts at conferences of members societies and regional groupings. The most recent Distinguished Lecturer was Ralph L. Keeney who presented the IFORS Distinguished Lecture at the INFORMS meeting in Seattle, Washington State, USA in November 2007.



Tom Magnanti left and Ralph Keeney right

Ralph L. Keeney is Research Professor of Decision Science at the Fuqua School of Business at the Duke University in Durham, North Carolina, USA. His areas of expertise are decision analysis, risk analysis and management decision-making. He is an authority on decision making with multiple objectives. During the past thirty years, he has contributed substantially toward the development of decision analysis and risk analysis. He is the author or co-author of 10 books, the most recent being *Smart Choices: A Practical Guide to Making better Decisions* co-authored with John S. Hammond and Howard Raiffa.

The title and extended abstract of his presentation at the INFORMS meeting were the following:





## Using OR to Improve the Quality of Your Life

Most operations researchers are concerned with helping companies, governments, organizations, and other individuals make better decisions. We should also use our OR concepts, techniques, and tools for the important decisions in our own lives. This presentation outlines guidelines for systematic thinking and analysis to help you improve the quality of your life. Since individuals can purposefully influence the quality of their lives only by their decisions, an individual first needs to define what he or she means by quality of life. This can be done by creating a coherent set of life objectives. Using these, the individual should recognize decision opportunities, create alternatives, and make decisions that further these life objectives. The presentation includes procedures to help one examine life-changing decisions, personal policy choices, and fundamental life tradeoffs, such as time, health, and money.

Two examples using the ideas were presented in detail. As both have recently been published, only their abstracts and references are presented here. One was "Your Money or Your Life: A Prescriptive Model for Health, Safety, and Consumption Decisions", coauthored with James E. Smith and published in *Management Science* in 2005 (Volume 51, No. 9, pp. 1309-1325). The abstract states "In this paper we develop a conceptual framework and model for valuing risks to an individual's health and life and to support decision making about investments in health, quality of life, and safety. Our treatment of health risks in the model builds on the popular quality-adjusted-life-year (QALY) framework that balances health quality and length of life issues. We extend this framework to consider financial concerns

as well as health quality and length of life. Our model considers uncertainty in income and health and incorporates the decision maker's ability to adjust consumption over time in response to changes in expectations about health and income. We use this model to study the optimal tradeoffs between financial gains or losses and improvements or reductions in health or longevity and apply it in an example medical decision problem."

The second detailed example was "Analysis of the Biological Clock Decision", coauthored with Dinah A. Vernik and published in *Decision Analysis* in 2007 (Volume 4, No. 3, pp.114-135). The abstract read "The decisions of if and when to have a first child are very important for any woman or couple. This paper develops a model to examine when a woman should begin trying to conceive, which depends on the personal circumstances and values of each woman. The model incorporates separate objectives for a woman's professional, social, and family aspects of life and integrates them into a quality of life function that includes the changing relative importance of these aspects with age over a woman's life. Descriptions of the relative quality of each of these three aspects of a woman's life are modeled over time for different cases. One case involves no child and other cases involve the woman giving birth at different ages from 21 to 50. The probabilities of conceiving when trying as a function of a woman's age are included. The relative pros and cons of waiting until the late thirties to have a child to avoid perceived detrimental impacts on one's career or social life are investigated. Several illustrations are included in the paper to demonstrate insights that can be generated using the model."

# DEVELOPING COUNTRIES

## ORPA IV

The fourth Operations Research Practice in Africa Conference (ORPA-4) will be held from 10 to 11 October 2008 in Washington D.C., immediately preceding the 2008 INFORMS Annual meeting. The theme of ORPA 4 is: Using Operations Research to Address Urban Transport and Water Resource Management Issues in Africa. The theme of this conference has been selected to encourage the use of operations research to address problems with African transportation and water systems.

ORPA 4 will be the fourth conference in a very successful annual series; previous conferences include:

- ORPA 1 - the First Conference on OR Practice in Africa April 7 & 8, 2005 in Ouagadougou, Burkina Faso, hosted by Prime Minister H. E. Dr Paramanga E. Yonli); (<http://www.euro-online.org/africanOR/orpa2005En.htm>),
- ORPA 2 - Improving Governance & Enhancing Policymaking in Africa, June 6 & 7, 2006 in London, UK; and
- ORPA 3- Improving Governance & Enhancing Policymaking in Africa, June 6 & 7, 2007 in Cape Town, South Africa. (<http://www.orssaorpa2007.org.za/>)

Note that ORPA is also planning and organizing ORPA 5 for 2009. This conference was originally to be held in Nairobi, Kenya; however, because

of the political unrest over the recent Kenyan national election results, we are currently considering alternative sites (Dar es Salaam in Tanzania, Maputo in Mozambique, or Dakar in Senegal).

ORPA 4 is scheduled for October 10-11, immediately preceding the 2008 conference of the Institute for Operations Research and the Management Sciences (INFORMS, the leading professional society for operations research worldwide). Furthermore, the venue, the Marriott Wardman Park Hotel, is the 2008 INFORMS Conference venue. These choices have been made expressly to promote the participation of operations research practitioners and academicians from around the world. The tentative program follows:

Speakers from academia, the private sector, the public sector, and NGOs will discuss current problems and potential solutions as well as recent problems and their ultimate solutions based on first-hand knowledge. The conference will include discussions of i) problems and issues that need to be addressed, ii) work-in-progress, and iii) implementation of recent solutions to problems and issues related to African water and transportation systems.

Approximately 200-250 attendees are expected to attend, 20% of which will be students with sincere career interests in application of operations research to issues in Africa. Registration fee will be \$250 per registrant, and students will be allowed to register for the reduced fee of \$100.



# IFORS 2008 OR IN DEVELOPMENT PRIZE COMPETITION FINALISTS

	<b>Names</b>	<b>e-mail address</b>	<b>Country</b>	<b>Title</b>
<b>1</b>	Adewumi A.O., Ayeni J.O.A., Fasina E.P. and Ali, M.M.	Montaz.ali@wits.ac.za	South Africa and Nigeria	A Genetic Algorithm Metaheuristic for a Multi-stage hostel space allocation problem
<b>2</b>	Chemak F.	fr_chemak@yahoo.fr	Tunisia	Farming system performance and water use efficiency in the Tunisian semi-arid region: Data Envelopment Analysis approach
<b>3</b>	Haouari M., Aissaoui N., Berrima K., Sherali H.D. and Mansour F.Z.	mh6368@yahoo.com	Tunisia	Integrated aircraft fleetling and routing at TunisAir
<b>4</b>	Munoz D.F., Romero-Hernandez O., Detta-Silveira J.E. and Munoz D.G.	davidm@itam.mx	Mexico	Forecasting demand using a model based on the application
<b>5</b>	Raad D., Sinske A. and van Vuuren J.	darianr@sun.ac.za	South Africa	Robust multi-objective optimization for water distribution system design using a meta-meta-heuristic
<b>6</b>	Serrato M.A., Tello J., and Diaz J.A.	mserrato@itesm.mx	Mexico	Visitor profile, satisfaction levels and clustering of tourists for decision making in Michoacan, Mexico
<b>7</b>	Ren Xinhui and Zhao Yifei	xinhui9596@sina.com	China	An Application of DEA to Measure the Efficiency of Airports in Middle-west China
<b>8</b>	Zheng Yi and Zhou Ying-qi	yzheng@shfu.edu.cn	China	Research on measuring and controlling fishing capacity for Chinese inshore fleets by DEA method



# CONFERENCE ANNOUNCEMENTS:

**Interdisciplinary Studies in Information Privacy and Security Workshop-Conference 2008** to be held on May 12, 2008 at the Hyatt in New Brunswick, New Jersey.

[www.scils.rutgers.edu/ci/isips/WebPage%20ISIPS%20Practice/index.html](http://www.scils.rutgers.edu/ci/isips/WebPage%20ISIPS%20Practice/index.html)

## \*Call for Papers\*

There is an inherent tension between the need to gather intelligence necessary to protect the security of persons and nations, and the privacy rights of persons and organizations. The Center for Interdisciplinary Studies in Information Privacy and Security was established to explore this interplay. The second international workshop and conference on these topics will be held on May 12 in New Brunswick, New Jersey. The conference is sponsored by the ISIPS, and by the Center for Dynamic Data Analysis (DyDAn).

Following our 2007 conference model, the conference will feature parallel tracks on technical issues and social, ethical and legal issues related to privacy and security. Proposals for papers, panels or posters are welcome from practitioners in the field of security, academic researchers in fields of security and privacy, and others interested in investigating this area. New to this year's workshop will be an exploration of the interaction between privacy rights and the gathering of data for commercial purposes or to facilitate the growth of online communities such as U2 and Facebook.

## Principal themes:

- To what extent can we protect privacy while still maintaining homeland security?
- What are the conflicts? What are the solutions?
- What is the role of commercial entities?
- What are the impacts of voluntary disclosure of personal information?

As distinct from organizations focused on increasing the security AND privacy of electronic information, this conference is focused on the trade-off implied "Those who would give up Essential Liberty to purchase a little Temporary Safety deserve neither" (attributed to Benjamin Franklin, letter from the Pennsylvania Assembly, 1755).

For example, we seek papers that discuss the (homeland) security value of different data mining efforts and the risk to individuals of those same efforts. Or, papers that address the difficulty of translating the obvious difference between the security of a letter, and that of a postcard, into the digital world.

The conference proceedings will be published in the prestigious series Lecture Notes in Computer Science (LNCS) published by Springer. [ <http://www.springer.com/computer?SGWID=0-146-0-0-0>]

Submissions may address practice, theory, system, methodology, evaluation, technology, testbed or policy. Well-reasoned position papers will also be considered. Research papers must be relevant to the management of information for purposes of protecting the general security of citizens OR to the issues involved in protecting information that persons or corporations may wish to hold private (or, of course, the interface between these issues). Practice papers should reflect real experience or real needs. Topics include but are not limited to areas noted below.

Extended Abstracts of no more than 5 pages (6,000 words in English) may be submitted by Monday, March 17th, 2008 at: <https://www.softconf.com/s08/ISIPS08/>

## I. General Paper Topics include:

- » Privacy protecting data-mining
- » Anonymous sharing of information
- » Electronic whistle blowing
- » Voluntary disclosure of personal information for commercial purposes
- » Protection of the privacy of users of online document management systems
- » Systems for analyzing encrypted data Methods for detecting and tracking terrorist activity
- » Filtering and categorization of message streams Adaptive systems that detect significant changes in data streams
- » Social aspects of information sharing behavior
- » National and international legal standards for privacy protection
- » Roles and responsibilities of information utilities in security and privacy





## II. Mining of data for terror threats

- » Identifying unusual patterns of action
- » Coping with changing threats
- » Identifying social networks of agents or actors
- » Real-time tracking and detection of threats for rapid response
- » Intrusion, detection and protection
- » Deception and intent detection in people streaming past a point
- » Web-based intelligence monitoring and analysis
- » Agents and collaborative systems for intelligence sharing
- » Processing, sharing, and analysis
- » Social network analysis (radicalization, recruitment, operations), visualization and simulation

## III. Privacy protection and disclosure

- » Personal patterns of information disclosure
- » Practical effectiveness of data anonymization techniques
- » Information disclosure for commercial advantage (shopper ID)
- » Position tracking and monitoring
- » Position aware collaboration via mobile phones

## IV. The tension between security and the privacy of information

- » University responsibilities with regard to student risks and threats
- » Government responsibility to protect privacy of citizens
- » Analysis of government efforts to monitor communication
- » Terrorism forecasting and root-cause analysis
- » Measuring terrorism's impact on society
- » Information sharing policy and governance

### Program Committee:

Yaakov Amidror, Lander Institute, Israel

Yigal Arens, USC/ISI

Antonio Badia, University of Louisville

Arthur Becker, ITIC

\*Terry Benzel, University of Southern California

Michael Blair, RDEC

Endre Boros, RUTCOR, Rutgers University

Yigal Carmon, MEMRI

\*Fred Cate, Indiana University School of Law

Gordon Cormack, University of Waterloo

George Cybenko, Dartmouth University

\*Chien-Lung Chang Hsinchun Chen, University of Arizona

\*Whitfield Diffie, Sun Microsystems

\*Marc Donner, Google

Dennis Egan, Telcordia

Yuval Elovici, Deutsche Telekom Laboratories at Ben-Gurion University, Israel

\*David Farber, Carnegie Mellon

Uwe Glaesser, Simon Fraser University, Canada

Mark Goldberg, RPI Vladimir Golubev, Computer Crime Research Center, Ukraine

\*Marc Goodman, INTERPOL

David Grossman, IIT

Jim Horning, SPARTA Inc.

Leslie Kennedy, Rutgers School of Criminal Justice

Joseph Kielman, DHS

Moshe Koppel, Bar-Ilan University, Israel

Ivan Koychev, Bulgarian Academy of Sciences

Don Kraft, Louisiana State University

Carl Landwehr, University of Maryland

Mark Levene, Birkbeck University of London

Janusz Luks, Grupa GROM, Poland

Richard Mammone, ECE, Rutgers University

Naftaly Minsky, Rutgers University

\*Rafail Ostrovsky, UCLA

Gerhard Paass, Fraunhofer Institute, Germany

Warren Powell, Princeton University

Fred Roberts, DIMACS, Rutgers University

\*Marc Rotenberg, EPIC

Antonio Sanfilippo, Pacific Northwest National Laboratory

\*Fred Schneider, Cornell University

Bracha Shapira, Information Systems Engineering, Ben-Gurion University, Israel

Andrew Silke, University of East London

Joshua Sinai, The Analysis Corp.

David Skillicorn, Queen's University, Canada

Eugene Spafford, Purdue University

Gary Strong, Johns Hopkins

Rebecca Wright, Rutgers, DIMACS.

\*Stefan Wrobel, Fraunhofer Institute, Germany

Daniel Zeng, University of Arizona

\*Invited but not confirmed



# CALL FOR PAPERS: AAAI-08 WORKSHOP M-PREF-08

## “4th Multidisciplinary Workshop on Advances in Preference Handling”

Chicago, Illinois, July 13-14, 2008

**Submission deadline:** April 7, 2008

<http://wikix.ilog.fr/wiki/bin/view/PreferenceWS/MdPref08>

<http://www.cse.buffalo.edu/~chomicki/MdPref08>

### DESCRIPTION

Preference handling has become a flourishing topic. There are many interesting results, good examples for cross-fertilization between disciplines, and many new questions.

Preferences are a central concept of decision making. As preferences are fundamental for the analysis of human choice behavior, they are becoming of increasing importance for computational fields such as artificial intelligence, databases, and human-computer interaction. Preference models are needed in decision-support systems such as web-based recommender systems, in automated problem solvers such as configurators, and in autonomous systems such as Mars rovers. Nearly all areas of artificial intelligence deal with choice situations and can thus benefit

from computational methods for handling preferences. Moreover, social choice methods are also of key importance in computational domains such as multi-agent systems.

This broadened scope of preferences leads to new types of preference models, new problems for applying preference structures, and new kinds of benefits. Preferences are studied in many areas of artificial intelligence such as knowledge representation, multi-agent systems, game theory, social choice, constraint satisfaction, decision making, decision-theoretic planning, and beyond. Preferences are inherently a multi-disciplinary topic, of interest to economists, computer scientists, operations researchers, mathematicians and more.

This workshop promotes this broadened scope of preference handling and continues a series of events on preference handling at AAAI-02, Dagstuhl in 2004, IJCAI-05, ECAI-06, and VLDB-07

<http://wikix.ilog.fr/wiki/bin/view/PreferenceWS/WebHome>

The workshop provides a forum for presenting advances in preference handling and for exchanging experiences between researchers facing similar questions, but coming from different fields. The workshop builds on the large number of AI researchers working on preference-related issues, but also seeks to attract researchers

from databases, multi-criteria decision making, economics, etc. These different research areas are represented in the organization committee.

### TOPICS

The workshop on Advances in Preferences Handling addresses all computational aspects of preference handling. This includes methods for the elicitation, modeling, representation, aggregation, and management of preferences and for reasoning about preferences. The workshop studies the usage of preferences in computational tasks from decision making, database querying, web search, personalized human-computer interaction, personalized recommender systems, e-commerce, multi-agent systems, game theory, social choice, combinatorial optimization, planning and robotics, automated problem solving, perception and natural language understanding and other computational tasks involving choices. The workshop seeks to improve the overall understanding of the benefits of preferences for those tasks. Another important goal is to provide cross-fertilization between different fields.

- Preference handling in Artificial Intelligence
  - » Qualitative decision theory
  - » Non-monotonic reasoning
  - » Preferences in logic programming
  - » Preferences for soft constraints in constraint satisfaction
  - » Preferences for search and optimization
  - » Preferences for AI planning
  - » Preferences reasoning about action and causality
  - » Preference logic
- Preference handling in database systems:
  - » Preference query languages for SQL and XML
  - » Algebraic and cost-based optimization of preference queries
  - » Top-k algorithms and cost models
  - » Ranking relational data and rank-aware query processing
  - » Skyline query evaluation
  - » Preference management and repositories
  - » Personalized search engines
  - » Preference recommender systems



- Preference handling in multiagent systems:
  - » Game theory
  - » (Combinatorial) auctions and exchanges
  - » Social choice, voting, and other rating/ranking systems
  - » Mechanism design and incentive compatibility
- Applications of preferences:
  - » Web search
  - » Decision making
  - » Combinatorial optimization and other problem solving tasks
  - » Personalized human-computer interaction
  - » Personalized recommendation systems
  - » e-commerce and m-commerce
- Preference elicitation:
  - » Preference elicitation in multi-agent systems
  - » Preference elicitation with incentive-compatibility
  - » Learning of preferences
  - » User preference mining
  - » Revision of preferences
- Preference representation and modeling:
  - » Linear and non-linear utility representations
  - » Multiple criteria/attributes
  - » Qualitative decision theory
  - » Graphical models
  - » Logical representations
  - » Soft constraints
  - » Relations between qualitative and quantitative approaches
- Properties and semantics of preferences:
  - » Preference and choice
  - » Preference composition, merging, and aggregation
  - » Incomplete or inconsistent preferences
  - » Intransitive indifference
  - » Reasoning about preferences
- Comparison of approaches, cross-fertilization, interdisciplinary work

## FORMAT

We will have a mixture of presentations with ample time for questions and open panel discussions about future challenges. An option is to have an invited talk about potential applications of preference handling.

## ATTENDANCE

Researchers interested in preference handling from AI, OR, CS or other computational fields may submit a paper or send a statement of interest in participation.

## SUBMISSION REQUIREMENTS

We solicit electronic submissions of papers (5-6 pages in PDF, formatted in AAAI style) by e-mail to [ujunker@ilog.fr](mailto:ujunker@ilog.fr).

Submissions need not be anonymous.

## IMPORTANT DATES

- April 7: Submissions due
- April 21: Notification of acceptance
- May 5: Camera-ready copy due to organizers
- May 12: Camera-ready copy due to AAAI
- July 13-14: AAAI-08 Workshop Program

## ORGANIZERS

- Jan Chomicki, University at Buffalo, [chomicki@cse.buffalo.edu](mailto:chomicki@cse.buffalo.edu)
- Vincent Conitzer, Duke University, [conitzer@cs.duke.edu](mailto:conitzer@cs.duke.edu)
- Ulrich Junker, ILOG, [ujunker@ilog.fr](mailto:ujunker@ilog.fr)
- Patrice Perny, LIP6, [patrice.perny@lip6.fr](mailto:patrice.perny@lip6.fr)

## PROGRAM COMMITTEE

- Wolf-Tilo Balke, University of Hannover, Germany
- Craig Boutilier, University of Toronto, Canada
- Ronen Brafman, Ben-Gurion University, Israel
- Felix Brandt, University of Munich, Germany
- Jan Chomicki, University at Buffalo, USA
- Paolo Ciaccia, University of Bologna, Italy
- Vincent Conitzer, Duke University, USA
- James Delgrande, Simon Fraser University Vancouver, Canada
- Carmel Domshlak, Technion - Israel Institute of Technology, Israel
- Jon Doyle, North Carolina State University, USA
- Matthias Ehrgott, University of Auckland, New Zealand
- Edith Elkind, University of Southampton, United Kingdom
- Judy Goldsmith, University of Kentucky, USA
- Sergio Greco, University Calabria, Italy
- Samuel Leong, Stanford University, USA
- Ulrich Junker, ILOG, France
- Werner Kießling, University of Augsburg, Germany
- Jerome Lang, IRIT - Univ. Paul Sabatier, France
- Amelie Marian, Rutgers University, USA
- Barry O'Sullivan, University College Cork, Ireland
- David Parkes, Harvard University, USA
- Jian Pei, Simon Fraser University, Canada
- Patrice Perny, LIP6 - Paris 6 University, France
- Ariel Procaccia, Hebrew University, Israel
- Francesca Rossi, University of Padova, Italy
- Alexis Tsoukiàs, LAMSADE, France
- Panos Vassiliadis, University of Ioannina, Greece
- Toby Walsh, UNSW, Australia
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# CALL FOR PARTICIPATION: CP-AI-OR'08, PARIS, FRANCE, MAY 20-23, 2008

<http://contraintes.inria.fr/CPAIOR08/>

The fifth international conference on Integration of Artificial Intelligence (AI) and Operations Research (OR) techniques in Constraint Programming for Combinatorial Optimization Problems will be held in Paris, France, May 20-23, 2008.

The program includes three plenary talks, a selection of 18 long papers and 22 short papers among 130 submissions, three workshops and a master class.

## Conference Chairs

François Fages, INRIA France  
Laurent Perron, ILOG France

## Program Chairs

Laurent Perron, ILOG France  
Michael Trick, CMU USA

## Plenary Speakers

Cynthia Barnhart MIT, USA  
François Laburthe Amadeus, France  
Pascal Van Hentenryck Brown University, USA

## Master Class Chairs

Cynthia Barnhart, MIT, USA  
Laurent Michel, Univ. of Connecticut, USA

Registrations are opened with an early registration rate valid until April 11th and will be closed after May 10th. Please register at the conference web page <http://contraintes.inria.fr/CPAIOR08/>

## Francois Fages

<Francois.Fages@inria.fr>  
Senior Research Scientist  
INRIA Paris-Rocquencourt  
<http://contraintes.inria.fr/~fages>

## XIV LATIN-IBERO AMERICAN CONGRESS ON OPERATIONS RESEARCH (CLAIO 2008)

# CALL FOR PAPERS

The XIV Latin-Ibero American Congress on Operations Research (CLAIO 2008) will be held at the Cartagena de Indias Convention Center, in Cartagena de Indias, Colombia, during the week of 9–12 September 2008 ([socio.org.co/CLAIO2008/](http://socio.org.co/CLAIO2008/)). Cartagena de Indias is a popular tourist destination. Its downtown district features an impressive display of Spanish colonial architecture. This area was designated a UNESCO World Heritage Site.

CLAIO 2008 is sponsored by the Latin-Ibero American Association of Operations Research (ALIO), who has the support of the International Federation of Operational Research Societies (IFORS). The conference will be hosted by the Colombian Society of Operations Research (SOCIO) and it is organized by four Colombian universities:

Universidad EAFIT,  
Universidad del Norte,  
Universidad Tecnológica  
de Bolívar and Politécnico  
Grancolombiano  
Institución Universitaria.

The Honorary Chair of the CLAIO 2008 is the Colombian Professor Guillermo Owen of the Naval Postgraduate School (Monterrey, USA) who is a world famous researcher in Game Theory. In addition to Prof. Owen, the conference will feature top notch plenary speakers including:

- **Alejandro Jofre** (Subdirector, Centro de Modelamiento Matemático, Universidad de Chile, Chile)



- **Celso Ribeiro** (Departamento de Informática, Pontificia Universidade Católica do Rio de Janeiro, Brasil)
- **Christodoulos A. Floudas** (Department of Chemical Engineering, Princeton University, USA)
- **Ignacio Grossmann** (Dean University Professor of Chemical Engineering, Carnegie Mellon University, USA)
- **Donald Ratliff** (Executive Director, The Supply Chain & Logistics Institute, Georgia Tech, USA)
- **Michel Gendreau** (Director, Centre de Recherche sur les Transports, Université de Montréal, Canadá)
- **Onésimo Hernández-Lerma** (Centro de Investigación y de Estudios Avanzados, Instituto Politécnico Nacional, Mexico)
- **Robert Bixby** (Chief Scientific Officer, ILOG Inc., France-USA)
- **Robert L. Smith** (Director, Dynamic Systems Optimization Laboratory, University of Michigan, USA)
- **Shmuel S. Oren** (Chairman, Department of Industrial Engineering and Operations Research, University of California at Berkeley, USA)
- **Stavros Zenios** (Director, HERMES European Center of Excellence on Computational Finance and Economics, University of Cyprus, Chipre)

We are also pleased to announce the support of DAAD and EURO/INFORMS/IFORS in enabling the participation of

- **Christopher J. Zappe** (Co-Director, Institute for Leadership in Technology and Management, Bucknell University, USA)
- **Fredrik Odegaard** (Ivey School of Business, Canada)
- **Horst W. Hamacher** (Chair of Management and Educational Mathematics, Department of Mathematics, University of Kaiserslautern, Germany)
- **James J. Cochran** (Ruston Building & Loan Endowed Research Professor, Louisiana Tech University, USA)
- **Joerg Rambau** (University of Bayreuth, Germany)
- **Marc C. Steinbach** (Leibniz Universität Hannover, Germany)
- **Richard Pibernik** (European Business School, International University, Germany)

CLAIO 2008 invites submissions in all areas of Operations Research. The conference is aimed at providing a platform where significant theoretical contributions as well as insightful new applications will share the stage. To achieve this goal, accepted submissions will be jointly classified in "clusters" (based upon methodological and analytical techniques or application domains) and "workshops" (emphasizing practitioners' insight and experience). It is expected that this two-fold classification will enable a more lively interaction between academics, practitioners from various industries and recognized suppliers of OR-based technologies.

The preliminary list of clusters include: data mining and machine learning, multi-criteria decision making, optimization theory (semi definite programming, global optimization, stochastic programming, integer programming), applications in the process industry, telecommunications, transportation, energy markets, health systems;

queuing systems, dynamic games, financial engineering and risk management. The preliminary list of workshops include:

- 2nd ALIO/INFORMS Workshop on OR Education
- 1st ALIO/ALL Workshop on Operations Research, Logistics and Supply Chain.
- CLAIO 2008 Workshop on Finance and Financial Risk
- CLAIO 2008 Workshop on Energy Markets Modeling
- CLAIO 2008 Workshop on Regional Planning
- CLAIO 2008 Workshop on Military Applications and Homeland Security
- CLAIO 2008 1st Workshop on Knowledge Discovery, Knowledge Management and Decision Making
- Meeting on Game Theory, In Honor Of Guillermo Owen on The Occasion of His 70th Birthday

Contributed sessions in subject areas not covered by any of the conference's clusters and/or workshops are welcome (instructions on how to submit a contributed session are available at the conference's webpage).

Submissions will be in the form of extended abstracts (max. 3 page length). These should be formatted according to instructions (available at the conference's webpage) and should be submitted electronically as a PDF file at [www.easychair.org/CLAIO\\_2008](http://www.easychair.org/CLAIO_2008). The official languages of CLAIO 2008 are: Spanish, Portuguese and English. Special issues dedicated to CLAIO 2008 will be published by Annals of Operations Research and the Journal of Intelligent Manufacturing.

### Deadlines:

- Submission of new clusters is March 15, 2008
- Submission of the extended abstracts is April 30, 2008
- Final decisions will be notified by May 31, 2008
- Final program will be published June 20, 2008.

### Alfredo García, Ph. D.

#### Chair

Academic Committee  
Associate Professor,  
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### Jesús Velásquez, Ph. D.

#### Chair

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# CONSTRAINT PROGRAMMING LETTERS SPECIAL ISSUE ON “AUTONOMOUS SEARCH”

## Second Call for Papers

More details and up-to-date information at  
[www.info.univ-angers.fr/pub/saubion/Autonomous/index.html](http://www.info.univ-angers.fr/pub/saubion/Autonomous/index.html)

**Deadline for paper submission (provisional):**  
June 15th, 2008

### GENERAL INFORMATION

Recent progresses in the processing of combinatorial problems have demonstrated that search algorithms can become extremely efficient when they take advantage of previous attempts to drive their exploration. For instance in modern DPLLs, the collect of conflicts feeds the variable selection heuristic, and the quality of unit propagation controls the use of the restart strategy. These implicit uses of closed control loops have been empirically discovered by the SAT community. We believe that a more principled and autonomous approach for search efficiency has to be started in CSP and Constraint Programming. The purpose of this special issue is to present recent attempts in the design of autonomous solvers, therefore works coming from different communities are especially welcomed.

### Topics

Typical topics include, but are not limited to:

- Adaptive/Reactive search
- Self configuration of search
- Self optimization of search
- Meta-search
- Self-hybridizing search
- Learning for search
- Explanations analysis
- Impact-based heuristics
- Portfolios-based algorithms

### Submission procedure

All the papers should be full journal length versions and follow the guidelines set out by CPL. All the papers will be peer reviewed following the CPL reviewing procedures. The guide for authors can be found here:

[www.cs.brown.edu/people/pvh/CPL/format/authors-guide.html](http://www.cs.brown.edu/people/pvh/CPL/format/authors-guide.html)

Authors should send a pdf file to [Frederic.Saubion@univ-angers.fr](mailto:Frederic.Saubion@univ-angers.fr)  
<mailto:Frederic.Saubion@univ-angers.fr>

### Guest Editors

Youssef Hamadi, Microsoft Research Cambridge,  
Eric Monfroy, Université de Nantes/UTFSM Valparaiso,  
Frederic Saubion, Université d'Angers.

### Review criteria

Papers will be reviewed by an international committee according to the following criteria:

- **Pertinence:** does the paper describe methods or theories concerning the topics of the special issue?
- **Scientific quality:** does the paper clearly identify a scientific problem, document the state of the art and demonstrate an original technique or method that resolves the problem?
- **Impact:** is the method/model likely to be adopted for the design or evaluation of solvers?
- **Generality:** can the method/model be used for a variety of solvers?
- **Innovation:** does the method/model demonstrate an improvement in the current state of the art?

### Expected agenda

- Submission deadline: 15th of June 2008
- Publication of the special issue: December 2008

### About CPL

Constraint Programming Letters (CPL) provides an international forum for the electronic publication of high-quality scholarly articles on constraint programming. All published papers are freely available online. The goal of CPL is to promote and nurture constraint programming research, report on its successful applications, and encourage cross-fertilization with neighbouring areas.

<http://www.constraint-programming-letters.org/>

