

## Editorial

IFORS 2008 has come and gone! It has been a wonderful experience for us in South Africa to have hosted this event. Many of us, who were closely associated with IFORS 2008, will talk about this event for years to come. Most of the activities around the event went well but there were also things that could have been managed differently. That is just the nature of these events. There were some disappointments, at least for me personally, and the biggest was the number of delegates that attended in the end. We had 700 delegates but two months before the conference we still had close to 900 papers submitted. These reduced substantially in the period leading up to the conference and ultimately only 600 papers were presented. The implication therefore was a huge drop in potential delegates. Being in Africa and all that is associated with it, as well as things that happened on various fronts close to the start of the conference, must have influenced people's decision to attend or not. We nevertheless had a great conference with a number of highlights. This edition of the IFORS newsletter contains quite a bit about this conference.

As is the tradition by now there is a piece by a member of the IFORS Administrative Committee, this time it is by Tom Magnanti. Tom touches on a number of aspects that are critical to the operations research fraternity. The opening session of IFORS 2008 on the Monday morning was great and the feedback I got was that delegates really enjoyed it. It is therefore appropriate to include the entire opening speech of the Minister of Science and Technology of South Africa in this edition of the newsletter. One of the long standing stall warts of IFORS wrote a dairy account capturing his entire experiences during that week. The only down side, it seems, he had no formal IFORS responsibilities during the week and that made him feel like a Mr Nobody! There is a report by Paul Fatti, convenor of the panel for the IFORS prize for OR for Development, on how this competition was run, with the selection of finalists and then the ultimate winners. This competition is something that operations researchers from developing countries value. To complete the news about IFORS 2008 there is a photo collage of the various events and aspects of the conference. It is always difficult with photos because of the size of these and therefore we have included a limited number. For those readers that are interested a full set of pictures taken during the IFORS President's dinner and the gala dinner can be viewed at the following website [www.ifors2008.org](http://www.ifors2008.org)

The IFORS family is growing and early in January 2008 the Slovakian Operations Research Society was welcomed into IFORS. A short report on this new member of IFORS is contained in this newsletter giving an outline of their activities. Then there is news on a number of conferences that will take place in the foreseeable future.

As always news and articles for the newsletter are very welcome.

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▲ *IFORS Country Representatives that received the IFORS certificates. For more photo's on IFORS 2008, go to page 7.*

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# The Big 4, The Big 5 and The Big 50

*No, 4, 5, and 50 aren't the first few terms of a clever numerical sequence (at least as best I know) nor are they some form of numerology. Rather, these numbers remind me of a few things that we as operations researchers might reflect upon.*

The number 4? While serving as Dean of Engineering at MIT for eight and a half years, I had the opportunity to learn about technology and its impact on the world. I classified some of the latest developments using the term the "Big 4 Oh's." This phrase wasn't intended to denote a significant birthday, but rather the technology trends of bio, nano, info and macro --- how biology was joining chemistry, physics and mathematics as a fundamental underpinning of engineering, how things tiny (micro and nano), such as innovative materials, were becoming so central to engineering, how pervasive information and powerful computing were transforming all our lives, and how the engineering of large, complex (macro) systems in energy, transportation, manufacturing, supply chains and many other domains were so essential to society's well being.

It is easy to see the importance of operations research to engineering systems. Indeed, we operations researchers might argue that operations research is one of the key disciplines, if not the key discipline, at the core of engineering systems. We can point with pride to our many accomplishments in this domain. It is also clear that operations research is intimately tied to information engineering. Information is essential for the practice of OR and pervasive information enables even more successful OR. Additionally, operations research helps to effectively manage information and the technologies used to store, manipulate and transform it. But, how do the developments in bio and nano fundamentally effect what we do as operations researchers? By bio here I mean the fusion of biology and engineering which

includes the biology of medicine and health care but also, for example, biologically based materials and biologically inspired electronics. What does OR have to offer in these domains? One of operations research's great virtues, and undeniably one of the keys to its continuing success, is its ability to respond to the changes in technology and to contribute to their success. We as operations researchers don't create new technologies, we make them better.

The number 5? Some of us who had the good fortune to attend the superb IFORS triennial meeting in Johannesburg took advantage of the opportunity to enjoy an African safari. Seeing the splendor of the African Big 5 -- the lion, rhinoceros, Cape buffalo, leopard and elephant -- and other amazing animals in their natural habitat, one couldn't help but reflect upon conservation and the environment. Advances in technology impact operations research and the quality of our lives. We need to apply these technologies and our expertise to the pressing problems and issues of our times -- the environment, energy, transportation, health care, and education. How can we contribute effectively to these issues? It is the responsibility of the profession to do so. As a result, OR will continue to evolve and flourish.

And 50? Back to birthdays. The Johannesburg triennial conference provided an opportunity to reflect upon the 50 years of IFORS. From its inception in January 1959 with three member societies, IFORS has grown to a membership of 49 national societies representing over 25,000 operations research professionals. IFORS has played an important, special and singular role in

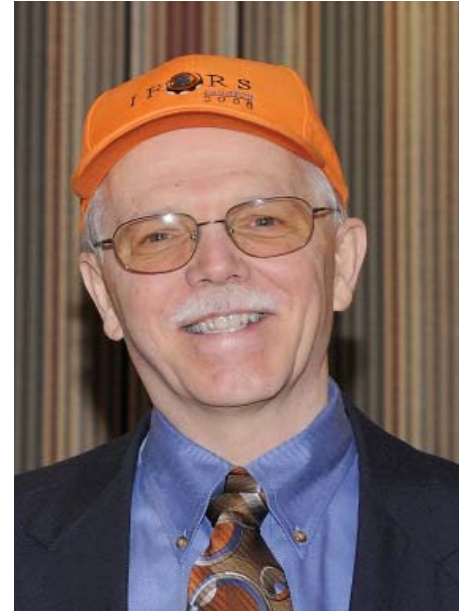
developing countries by helping to kindle interest and nurture progress in operations research. The multitude of new IFORS member societies in developing countries is proof of our success.

This special role of IFORS brings me back to the numbers 4 and 5. How can the operations research profession help society to apply new technologies (the Big 4 Oh's and others) to address the most critical problems that the developing world faces (e.g., the environment, conservation and the Big 5)? Are there ways to create low cost systems for water purification and distribution by harnessing bio, nano and other technologies? What about low cost, accessible energy? The effective distribution of drugs and health care? A clean environment coupled with economic development? These are imposing issues that require concerted effort from many quarters. Operations research should, and indeed has an obligation to, develop methodologies, models, and applications that focus on these issues.

As IFORS turns 50, we should celebrate our accomplishments and traditions, but also build upon them to help create a better future. In the simple but profound words of the noted English writer, William Hazlitt (1778-1830),

"The more we do, the more we can do."

**Thomas L. Magnanti**  
Past President, IFORS, and Institute Professor, MIT ■



# OPENING ADDRESS BY THE SOUTH AFRICAN MINISTER OF SCIENCE AND TECHNOLOGY

THE HONOURABLE MOSIBUDI MANGENA, AT THE  
18TH TRIENNIAL CONFERENCE OF INTERNATIONAL  
FEDERATION OF OPERATIONAL RESEARCH SOCIETIES,  
ON 14 JULY 2008 AT 10:00, AT THE SANDTON  
CONVENTION CENTRE

*Programme Director Mr Hans W  
Ittmann, Chair of the Local Organising  
Committee*

*Ms Elise del Rosario, President of the  
International Federation of Operational  
Research Societies*

*Prof. Sarma Yadavalli, President of the  
Operations Research Society of South  
Africa*

*Distinguished Guests*

*Ladies and Gentlemen*

I am honoured to have been invited to open this important gathering, the 18th Triennial Conference of the International Federation of Operational Research Societies. Apart from the fact that IFORS is celebrating its 50th anniversary, what makes this conference particularly special to South Africa is that it is the first IFORS Triennial Conference to be held on the African continent.

The First International Conference on Operational Research was held in Oxford, in the United Kingdom, in 1957. Currently, IFORS has a membership of well over 25 000 people, and is represented in more than 45 countries from four geographic regions – Asia Pacific, Europe, North America and South America. This is no mean feat by any imagination.

I must therefore congratulate the Operations Research Society of South Africa on having secured the privilege of hosting this conference in our beautiful country, at a time when our continent is making such great strides in addressing its socio-economic and other challenges. One of our initiatives by Africa for Africa is the New Partnership for Africa's Development, which is working to combat escalating levels of poverty and underdevelopment, among other things.

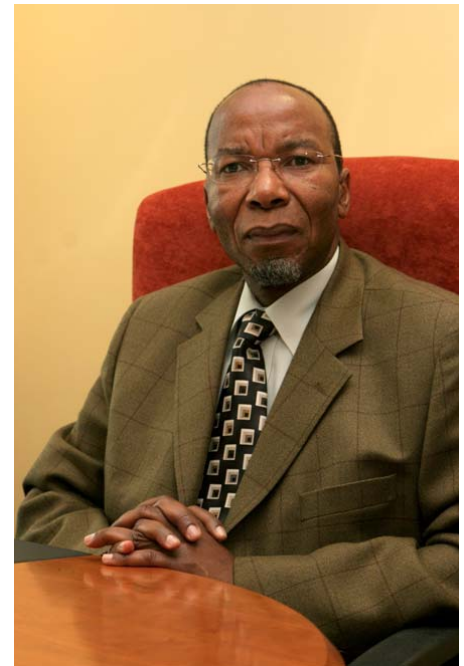
Operations research is a discipline that warrants great attention. It uses advanced analytical methods like mathematical

modelling to help decision-makers find the best possible solutions to the problems they face. Our countries and organisations need operations research to produce better strategies, reduce organisational risks and provide insight into difficult problems.

As a country we have to deal with the pressing issues of HIV/Aids, poverty, unemployment and crime, among others, which are also problematic for the rest of the continent, and much of the rest of the world. The need for operations research, particularly in Africa, therefore cannot be emphasised too strongly. More research in methods and techniques are required to address these serious problems. Problem structuring methods are but one type of approach to address these. I am also pleased to note that one of the plenary sessions will be devoted to humanitarian logistics, a new field of logistics which is crucial not only for South Africa but the continent as a whole. We need operations research practitioners to come forward and use scientifically tested methods to provide solutions to our problems.

I am quite aware that in our country operations research is not used as intensively in the public sector as it is in the private sector. This is a source of concern, and the situation will have to change if we are to realise the Millennium Goals and improve the lives of our people. Many of our problems have multiple objectives and require the kind of skills that operations research can offer such as multiple criteria decision making. South Africa as a developing country, like most countries in Africa, faces many challenges and I believe many of these can be addressed using Operations Research.

While government has to work on ensuring that operations research is used to inform strategies to address the country's socio-economic challenges, organisations like the Operations Research Society of South Africa have to work on marketing operations research as a viable tool for decision makers.



We cannot allow operations research to remain an unheard of field to most of our people, especially our young people. We need to build human capital in this important field, and we need to ensure that it becomes far more representative. Both transformation and human capital development are challenges faced not only in operations research, but throughout our National System of Innovation.

If we are to improve our people's quality of life we will have to market operations research intensively at schools – as an academic discipline and a profession. We have to dispel the myth (held by both learners and educators) that Mathematics is a theoretical subject with little use in the real world. Our youngsters must learn that mathematics can be used to solve the real problems facing people, communities, and organisations.

I am greatly concerned that Africa has only two IFORS affiliates – Egypt and South Africa. However, I am encouraged by ORSSA's efforts to encourage the creation of operations research networks in the rest of the continent through the "OR into Africa" project, as well as by efforts made by IFORS and EURO, one of the IFORS regional groupings..

I also welcome efforts by IFORS to include Kindred Societies, as this will give the Federation links to countries that do not yet have national societies ready to join it.

In closing, I would like to wish you well in your deliberations over the next four days. I hope that those of you who come from other countries, and more particularly those from other continents, will enjoy South Africa's sunny weather and spectacular biodiversity.

I now declare the 18th IFORS Triennial Conference open.

*Thank you.* ■





# Diary of a nobody\* at IFORS 2008

## Friday July 11

Mid-afternoon, leave Lancaster by train to Manchester airport with colleague Richard Eglese. Despite train breaking down and being forced to change trains arrive for check-in in time to savour Air France's lounge and catch the England v South Africa cricket score: good news. Richard, meanwhile, is on the way to Dubai, and due to arrive in Johannesburg some hours after me: it's cheaper that way. Arrive in Paris: can't get off the plane. When we eventually are able to, can't get out of the jetty. Time for connection is running out, but make it and settle down to the overnight flight into Joburg.

## Saturday July 12

Am met at the airport and escorted to the group of IFORS delegates waiting for the coach. Bjorn Nygreen from Norway has been waiting for sometime, but once I arrive we are soon on our way. As my hotel is last on the circuitous route, ironic given the routing experts on board, I get an unexpected tour of Sandton. I've been attending IFORS conferences since 1971, and have only missed the previous one, held in Hawaii. Each time I've been involved one way or the other in the IFORS organisation, which involve committee meetings. But this time there is no such pleasure, hence the literary reference in the title of this piece, and I'm free. So I decide to go to a rugby match: not as straightforward as I'm used to. I can't just catch public transport: here I need a taxi, whose driver says he'll wait for me while the match is on. The attraction is as much the stadium as the match. Ellis Park hosted the World Cup final in 1995, which South Africa won after the inspiration of Nelson Mandela support in the national shirt. Open the programme to read "Welcome to Coca-Cola Park! You are the first to witness an event in this newly named stadium." So much for the dream. Whilst having a drink in the bar that night the game is shown on TV. And there I am, clearly to be seen in the smallish crowd. Perhaps the only IFORS participant to appear several times on National TV. And the cricket is still going England's way.

## Sunday July 13

Sunday morning – go to church, with Richard, who did eventually arrive, and friends David and Tina Smith. We are warmly welcomed, and appreciate the service and the opportunity to chat afterwards. Then to register and enjoy a welcome reception with good food and wine, and African music. An opportunity to greet many long-standing friends and receive an invitation for my wife and I to visit Sweden next year.

## Monday July 14

Early start: sessions start at 8.00am. Or at least they should do, but a power failure causes chaos, and we get underway at 8.30am. I catch a session where three women talk impressively about their work in OR consultancy: a magnificent regiment, perhaps. African dancing opens the conference, followed by an inspirational talk by Clem Sunter on scenario planning. He had made a difference in the 90s with his "High Road" and "Low Road" scenarios for South Africa, and his discussion of current scenarios was thought-provoking. I then attend three sessions devoted to the OR in Development Prize. This prize has been awarded since 1987 and encourages examples of OR Practice in the cause of Development to be presented. Overall the standard is good, with cases from Mexico (2), South Africa, Nigeria, China and Tunisia (2). Later in the week I hear that Mohammed Haouari is the well-deserved winner, for his paper on fleet planning for TUNISAIR, and that my friend Jan van Vuuren is a runner-up for a third time, for his excellent paper on water distribution systems design using a meta-heuristic. Bad news from the cricket: South Africa hold out for a draw.

## Tuesday July 15

Education day. I start off with a paper, jointly presented by my colleague and friend John Ranyard, in the 8.00am session. We talk about the 4-month projects undertaken by our MSc students in a variety of organisations in the UK, and indeed overseas. It becomes clear that the expression "MSc project" means different things to different people, but ours are consultancy projects paid for by the organisations, which provide a valuable bridge to an OR career. After a lunch hosted by the South African journal ORION for its editorial board, maybe I am still a somebody, I'm involved in a workshop organised by Peter Bell, where there is opportunity for discussion, and which also provides some useful input by Peter's younger colleague, Fredrik Odegaard, on using cases in teaching. His willingness to share the case used to illustrate his points may prove useful in teaching this year. A second excellent plenary paper on Logistics, delivered by Don Ratliff, provided some useful thoughts for a paper I had been asked to deliver at the Operational Research Society Conference in September. The ORS is celebrating 50 years of conferences, so I was asked to talk on the history of OR and logistics: I assume on the basis of my age. The evening reminds me that I have been somebody. I'm delighted to be invited to the IFORS Presidents' Dinner: a lavish affair,

superbly hosted by Elise del Rosario, one of the aforementioned magnificent regiment. I find myself on a French-speaking dominated table, but my companions take pity on me, and I have some interesting and enjoyable discussions in English.

## Wednesday July 16

The traditional outing day. Bus loads of conference delegates go their separate ways to enjoy the delights of South Africa and the company of other delegates. I'm off to a wild-life rescue farm and enjoy watching wild dogs and cheetahs.



We are even allowed to stroke a cheetah, for a fixed price per photograph, so four of us for ever share this experience.



## Thursday July 17

IFORS day. IFORS past, present and future. Again I'm in the 8.00am session, the past, sandwiched between two long-standing friends and former IFORS Presidents Brian Haley and Heiner Muller-Merbach, last seen stroking a cheetah with me. I'm there to provide the light relief, and encourage others to get involved in IFORS and so, like me, enrich their professional careers. After a third outstanding plenary, delivered by Luk van Wassenhove on Humanitarian Logistics, IFORS Present is a disappointment. Too much time is spent giving detailed information about what is happening in the various IFORS regions, and there is almost no time to ask questions, to find out what is happening in IFORS. For instance, why is ITOR going in a different direction to the recommendation of a recent report? Are the changes necessary? Have they been discussed by the Administrative Committee of IFORS? If they have, why does it appear that the commissioned report has been ignored? But it is good to hear that the IFORS family is growing: Slovenia has joined

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EURO. But there are countries active in ALIO, Cuba and Columbia, for instance, who are not members. Can they be encouraged to join? IFORS Future is also a disappointment: a panel discussion dominated by some who seem to have very little sensitivity to issues concerning a worldwide organisation. Perhaps it is as well that I'm now a nobody.

The conference banquet is held in the evening: a magnificent affair, in which representatives of nearly every IFORS member parades across the platform to receive a commemorative plaque. Cathal Brughda of Ireland is seen proudly displaying the one he received.

I had been fortunate to gather together on a



table an international group with friends from Sweden, Germany, South Africa, UK and Ireland, and we certainly enjoyed the evening's conversation and entertainment. I left as the party started, not up to the dancing and the loud music: this nobody's getting old.



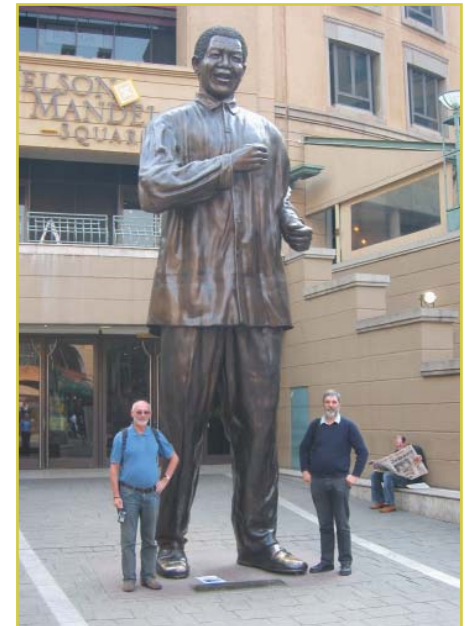
### Friday July 18

Nelson Mandela's 90th birthday. We were there! A session on OR and Ethics before the closing ceremony. The talk on the Simputer was disappointing, after the high standard of the previous three plenary addresses. And the ending of the conference produces a sense of anti-climax, and my flight is 12 hours away. So to the square, for photo-opportunities with the enormous statue of the great man – it was good to put John and Richard in their place. Then to the hotel, where the afternoon is spent saying goodbye to UK friends, until I'm the only one left. Richard is off on his round Middle-East trip: will we meet up in Manchester? The hotel kindly change channels to the cricket, where South Africa dominate. Must be time to go. The 7-seater minibus arrives, what a relief, to collect me and 7 others: the 3-seater back row becomes a 4-seater. We are all off to Paris with Air France or Amsterdam with KLM, so several of us meet up in the lounge for a final drink together.

### Saturday July 19

Arrive in Paris mid-morning with a lengthy wait before the connecting flight. Appreciate the shower facilities in the lounge. Arrive at the train station in Manchester to see my train disappear, so don't meet up with Richard as we had hoped. The journey home gives the opportunity to reflect on a memorable experience: a conference superbly organised by Hans Ittmann, many excellent talks, reconnecting with old friends and making new ones, and some slight disappointment at being a nobody.

\* *Diary of a Nobody, an English comic novel by George Grossmith (1892).*



# The 2008 IFORS Prize for OR in Development

## Introduction

The OR in Development Prize competition is an IFORS initiative aimed at encouraging papers on good applications of OR:

1. in developing countries
2. by OR practitioners from these countries
3. with a stress on developmental issues.

Two prizes are awarded for the competition:

- a US\$2000 prize for the winning paper, and
- one or more US\$1000 prizes for the runners-up.

The competition was introduced at the IFORS XI conference in Buenos Aires in 1987 and, except for 1990, the prize has been awarded at every IFORS triennial conference since then. Of the six winning papers that had been awarded since the inception of the competition until the Honolulu IFORS conference in 2005, two each had originated from Chile and China and one each from India and Brazil. Of the ten runners-up over this period, three had been awarded for papers from China, two each from Brazil, India and South Africa and one from Egypt. This is ample evidence of the broad appeal of this competition.

## The 2008 Competition

Calls for submissions to the competition were sent out to all IFORS member societies in mid-2007, with a submission deadline of 31 January, 2008. The criteria for submissions are set out as follows in the Call:

- "The paper describes a practical OR application in a developing country, conducted to assist a specific organization in its decision-making process, with original features in methodology or implementation."
- "Principal authors and presenters are nationals of a developing country. While recognising that "developing country" is a fuzzy concept, the committee will consider the eligibility of an entry on the basis of the levels of economic, social and political development of the country, as well as the extent to which the practice of OR is embedded in its public and private sectors."
- "If selected to be among the finalists, the entry should be presented by one of the principal authors during the 18th IFORS Triennial Conference in Sandton, South Africa on July 13-18, 2008." >>





- “The paper includes some description of the application’s social context and its impact on the decision-making process or on the organization for which it was conducted. Where appropriate, the relevance of the country’s state of development to the study is addressed. A stress on developmental issues will be an important factor in the judging. Papers of a purely technical nature, or those which have no relevance to the developmental context, will not be considered.”

Fifteen submissions were received by the deadline from the following countries:

two each from Brazil, China, Mexico, South Africa and Tunisia and one each from Colombia, India, Nigeria & South Africa, Serbia and Vietnam.

The panel of judges, comprising the following members:

- Paul Fatti (Chair – South Africa)
- Arabinda Tripathy (India)
- Irene Loiseau (Argentina)
- Leroy White (UK)
- Theo Stewart (Chair: IFORS Developing Countries Committee – South Africa)
- Joao Neiva de Figueiredo (Brazil)

For the first round of judging, in which every paper had to be evaluated and a shortlist selected, it was decided to optimise the panel’s efforts by not requiring every paper to be judged by every member. In order to ensure that the allocation of papers to judges was reasonably fair, allocations were made according to a Partially Balanced Incomplete Block Design (no fully balanced design exists for this combination of papers and judges), which required each member to evaluate five papers, each paper being evaluated by two members. So as to ensure impartiality in the allocation of papers to members, the fifteen papers were put in random order before the allocations were made. This design enabled the differences between the judging standards of the different judges to be (partially) adjusted for in the final score allocations.

The criteria used in judging the papers are given in the table below, the “First round” column giving the weights attached to each criterion in this round. Every paper allocated to each of the six panelists was evaluated according to each of these criteria.

CRITERIA	WEIGHTS	
Technical Aspect	First round	Final round
<i>Definition of Problem</i>	5%	5%
<i>Creativity / Appropriateness of Approach</i>	15%	10%
<i>MS/OR Content</i>	15%	15%
<i>Paper organisation and structure</i>	5%	5%
Application Area		
<i>Impact of the Study (actual and potential)</i>	40%	20%
<i>Stress on Developmental Issues</i>	20%	15%
Presentation		
<i>Clarity and organisation</i>		10%
<i>Handling of Questions</i>		5%
<i>Assessment of Study Impact</i>		15%

After all the scores were received from the panelists and processed, the top eight papers were selected for the shortlist to be presented at the IFORS XVIII conference in Sandton on July 14, 2008. The conference registration fees of the presenting authors were waived, and in a few cases where an author was unable to raise sponsorship for travel and hotel expenses, these were sponsored by the conference organising committee. Unfortunately, one of the finalists was unable to make it to the conference to present his paper.

The finalists, their countries and the titles of their papers are given below:

Names	Country	Title
<i>Adewumi A.O., Ayeni J.O.A., Fasina E.P. and Ali, M.M.</i>	<i>South Africa and Nigeria</i>	<i>A Genetic Algorithm Metaheuristic for a Multi-stage hostel space allocation problem</i>
<i>Chemak F.</i>	<i>Tunisia</i>	<i>Farming system performance and water use efficiency in the Tunisian semi-arid region: Data Envelopment Analysis approach</i>
<i>Haouari M., Aissaoui N., Berrima K., Sherali H.D. and Mansour F.Z.</i>	<i>Tunisia</i>	<i>Integrated aircraft fleetling and routing at TunisAir</i>
<i>Munoz D.F., Romero-Hernandez O., Detta-Silveira J.E. and Munoz D.G.</i>	<i>Mexico</i>	<i>Forecasting demand using a model based on the application</i>
<i>Raad D., Sinske A. and van Vuuren J.</i>	<i>South Africa</i>	<i>Robust multi-objective optimization for water distribution system design using a meta-meta-heuristic</i>
<i>Serrato M.A., Tello J., and Diaz J.A.</i>	<i>Mexico</i>	<i>Visitor profile, satisfaction levels and clustering of tourists for decision making in Michoacan, Mexico</i>
<i>Ren Xinhui and Zhao Yifei</i>	<i>China</i>	<i>An Application of DEA to Measure the Efficiency of Airports in Middle-west China (not presented)</i>
<i>Zheng Yi and Zhou Ying-qi</i>	<i>China</i>	<i>Research on measuring and controlling fishing capacity for Chinese inshore fleets by DEA method</i>

The finalists presented their papers on the first day of the conference, in the special stream devoted to the OR in Development Prize Competition. The members of the judges’ panel were generally very impressed by the high standard of the presentations. The criteria used for judging this round of the competition, and their weights, are also given in the table above.

Two papers stood out above the rest, and although it took some debate amongst the judges, they were eventually unanimous about the winner. This was presented by Mohamed Haouari, and describes the models and solution approaches developed by him and his co-authors towards integrated airline operational planning, simultaneously considering both the fleetling and routing of aircraft in a small to mid-sized airline such as TunisAir. Computational experiments conducted on real data showed that their proposed heuristic is effective, fast, robust and easy



▲ Paul Fatti, Chair of the adjudication committee, announcing the winners

to implement, and its flexibility should allow it to be applied directly to airlines in developing countries. The judges' panel was unanimous in their view that this paper epitomizes good OR in development!

The runner-up paper, presented by Darian Raad, describes a meta-algorithm, developed by him and his co-authors, for optimizing the design of urban water distribution systems. This uses a robust multi-objective approach that finds the best trade-off between system cost and reliability and can handle multiple demand loading conditions, withstand component failures and allow surplus capacity for growth. Application of this algorithm demonstrated large cost savings and reliability improvements for a real developmental water distribution system in South Africa. For one of the co-authors of the paper, Jan van Vuuren, this is the third time that he has been runner-up in the prize!

Although the future of the IFORS OR for Development prize competition is currently under review, the panel of judges was of the unanimous opinion that the quality of the papers presented at this year's competition is ample evidence of the success of this IFORS initiative!

Paul Fatti



▲ Mohammed Hauari, the winner, with Elise del Rosario



▶ Jan van Vuuren and Darian Raad the runners-up with Elise del Rosario

# IFORS 2008

## Photo Collage

Here are a whole range of photos from the recent IFORS conference. It endeavours to capture some of what happened during the conference. It will however never be possible to portray everything and all activities during this event. It is nevertheless a record of some of the events and will hopefully, in years to come, be very useful as a photographic reference.

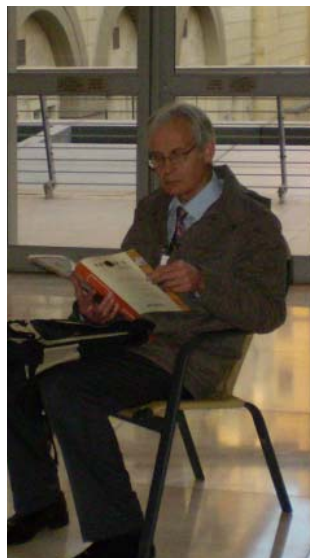


▲ A few colleagues discussing the event that lies ahead

◀ Prof Koos Pauw of UNISA studying the conference proceedings



▲ The registration desk at IFORS 2008



▲ Day of outings – getting kissed by an elephant

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# Welcome to a New IFORS Member Society

The members of the Administrative Committee of IFORS take great pleasure in welcoming the Slovenian Society INFORMATIKA as a new IFORS Member Society. The Operations Research Section of the Slovenian Society INFORMATIKA currently has seventy-six members. Officers of the Society include: Niko Schlamberger, President, Lidija Zadnik Stirn, IFORS Representative, Katjusa Skukan, Treasurer, and Samo Drobne, Secretary. Additional information about the Slovenian Society Informatika is listed on their website: <http://www.drustvo-informatika.si/sekcije/sor/index.jsp>

Prof. Dr. Lidija Zadnik Stirn, President of the Slovakian OR Society with Elise del Rosario. ▶



## The Slovenian Society of Operations Research

### GENERAL INFORMATION

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Slovenian Society INFORMATIKA

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Phone: +386 1 4768649, Fax: +386 1 4250681, e-mail: [sdrobne@fgg.uni-lj.si](mailto:sdrobne@fgg.uni-lj.si)

Newsletter: *Uporabna informatika* (in slovenian language)

<http://www.drustvo-informatika.si/posta>

### SOME FACTS ABOUT SSI-SOR

The Slovenian Section (Chapter) for Operations Research (SOR) is part of the Slovenian Society INFORMATIKA (SSI) that was established within the new state Republic of Slovenia in December 1992. Up to then the Slovenian researchers and experts who worked in the field of operations research were active members of the Yugoslav Operations Research Society.

Today the SOR Group consists of 76 members, mostly from universities, (research) institutes as well as from industry. The goal of the group is to pursue, support and facilitate research and development, the development of application as well as education in the operations research area where mathematics, economics, computer science, statistics, environmental economics and system theory plus some other disciplines come together. The interdisciplinary and applied nature of OR are one of the main concerns of the SOR group. Thus, SOR is a forum for scientists and practitioners in all areas of operations research and neighbouring fields, across the disciplines and programs in resource management, networks, tools, information and education. In the last years its main concern has been to increase its visibility and

influence, especially closer collaboration with educational institutions (universities) and praxis (industry) as well as on the international arena and also publicity.

SOR is managed by an Executive Board elected by the members of the section (chapter). The body has 22 members of which one is the president of SOR (Prof. Dr. Lidija Zadnik Stirn was re-elected for another five year term), one vice-president, one secretary (Mr. Samo Drobne, MSc, was re-elected for another five year term), and one vice-secretary. SOR has 5 honorary members. The way the SOR operate is regulated by SSI statute and bylaws. In 1999 SSI code of professional ethics was proposed and passed at an extraordinary general assembly. The operation of SOR is monitored by the SSI Supervisory Board.

Since the SOR was established its members have been were active on various fronts. We mention some of these:

1. They have organized nine international symposia on operations research, known as SOR'93, SOR'94, SOR'95, SOR'97, SOR'99, SOR'01, SOR'03, SOR'05, SOR'07. At first, these symposia were organized annually but after the SOR reached an agreement with the Croatian Operational Research Society, the symposium was still organised annually but alternatively in one and then the other country. The Operations Research symposia in Slovenia consists of plenary sessions, where several (usually 6) prominent scientists present invited papers, and about 60 contributed papers in sessions covering the following topics: networks, stochastic and combinatorial optimization, algorithms, multicriteria decision making, scheduling and control, location theory and transport, environment and human resource management, duration models, finance and investment, production and inventory, education and statistics, OR communications. Papers are peer reviewed by two independent reviewers according to international standards and are published in the Proceedings. The editors, leading members of SOR, are proud of all nine SOR Proceedings, especially the last five, which are cited in international publications such as INSPEC, MathSci, etc. (see the cover of one of the SSI-SOR proceedings below)
2. In 2009 they are organizing the 10th International Symposium on Operational Research SOR'09, September 23 - 25, 2009, Nova Gorica, Slovenia, [www.drustvo-informatika.si/sekcije/sor](http://www.drustvo-informatika.si/sekcije/sor).
3. The members of SOR have written 3 monographs, the last two in English and these two are listed below:
  - Solutions to production problems, Rupnik V., Zadnik Stirn, L., Drobne, S. (eds.), SDI-SOR Series, No. 2, Ljubljana, Slovenia, 2000, 290 pages

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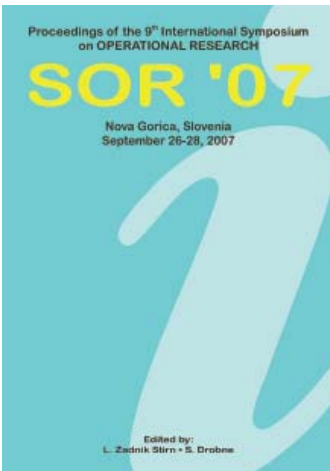


**WELCOME TO ... CONTINUES >>**

- Selected decision support models for production and public policy problems, Zadnik Stirn, L., Indihar Štemberger, M., Ferbar, L., Drobne, S. (eds.), SDI-SOR Series, No. 3, Ljubljana, Slovenia, 2005, 243 pages (see the picture below)
- 4. Some of the members are co-editors of Central European Journal of Operations Research (CEJOR) since 1997. (CEJOR is published by Physica-Verlag.
- 5. They are co-organizers of annual meetings in informatics and of the biannually organized symposia on Operations Research in Croatia; they actively participate at INFORMS and the GOR conferences.
- 6. They are the 49th member of IFORS and was accepted to IFORS in 2007 although a formal letter to this effect was received from the IFORS President Elise del Rosario in January 2008.
- 7. The SOR is the 30th member of EURO as from July 13, 2008; accepted as a member of EURO in Sandton during the IFORS conference.

**SSI-SOR PUBLICATIONS**

*Proceedings of the 9th International Symposium on Operational Research in Slovenia*



*The 3rd book in SDI-SOR Series: Selected Decision Support Models for Production and Public Policy Problems*



**President's Dinner**



▲ *IFORS Past Presidents - Heiner Muller-Merbach, Brian Haley, Peter Bell, Elise del Rosario, Andreas Weintraub, Paulo Toth and Tom Magnanti*



▲ *Hugh Bradley and Elise del Rosario - Hugh gets recognized for years of service to IFORS*



▲ *Keynote Speaker Don Ratliff and his wife Glynda*



▲ *IFORS Administrative Committee - Peter Bell, Mike Trick, Tatsuo Oyama, Horacio Yanasse, Michel Grandreau, Elise del Rosario, Mary Magrogan and Tom Magnanti*



▲ *IFORS Representatives*

*... CONTINUES ON P12 >>*



# XXXIII EURO 23

## 23rd EUROPEAN CONFERENCE ON OPERATIONAL RESEARCH

Bonn, Germany, July 5 - 8, 2009

### CALL FOR PAPERS

<http://www.euro-2009.de/>

The 23rd European Conference on Operational Research, EURO XXIII, is organized by the Gesellschaft fuer Operations Research (GOR) e.V. in co-operation with the University of Siegen and will be held in the Gustav-Stresemann Institute and the Maritim Hotel in Bonn. The Programme and Organising Committee are preparing a high quality academic programme of the Conference. In addition to this, you will have an excellent opportunity to exploit the city and vicinity of Bonn! A history of more than 2000 years has given the city most appealing and memorable facets. Bonn is an international center of science, arts and politics. You will enjoy the picturesque impressions along the romantic Rhine, Bonn's international and political life or the magnificent Ahr wine region. Culture is inseparably linked to the works of Ludwig van Beethoven, but also of Robert Schumann, August Macke and Ernst Moritz Arndt.

On behalf of all organizers, we wish you will have a pleasant stay in Bonn, with many unforgettable memories to take back home.

**Gerhard Woeginger - Chair, Programme Committee**

**Erwin Pesch - Chair, Organizing Committee**

### IMPORTANT DATES

- Submission for abstracts starts: October 2008
- Deadline for abstract submission: March 1, 2009
- Notification of acceptance: March 31, 2009
- Deadline for early registration: April 1, 2009
- Deadline for author registration (for inclusion in the programme): April 15, 2009
- Conference: July 5-8, 2009

*More information about Bonn, visas, accommodation, conference venue, book and software exhibitions and the social programme you will please find under <http://www.euro-2009.de/>.*

### PROGRAMME COMMITTEE

- Chair: Gerhard Woeginger, The Netherlands
- Horst Hamacher, Germany
- Graham Kendall, Great Britain
- Bernhard Korte, Germany

- Jan Karel Lenstra, The Netherlands
- Ulrike Leopold-Wildburger, Austria
- Silvano Martello, Italy
- Benny Moldovanu, Germany
- George Nemhauser, USA
- Erwin Pesch, Germany
- Roman Slowinski, Poland
- Gerhard-Wilhelm Weber, Turkey
- OR education, history & ethics
- OR for developing countries
- OR in agriculture & natural resources
- OR in industries & software applications
- Production management; supply chain management
- Revenue management & managerial accounting
- Scheduling, time tabling & project management
- Stochastic programming; stochastic modelling; simulation
- System dynamics; dynamic modelling
- Telecommunication & network analysis

### ORGANIZING COMMITTEE

- Chair: Erwin Pesch, Germany
- Co-chair: Peter Letmathe, Germany
- Josef Jablonsky, Czech Republic
- Florian Jaehn, Germany
- Jose M.P. Paixao, Portugal
- Frank Schultmann, Germany
- Gerhard Waescher, Germany (VP EURO)
- Gerhard-Wilhelm Weber, Turkey

### CONTACT

**Prof. Dr. Erwin Pesch**

*Institute of Information Systems, FB 5  
University of Siegen*

*57068 Siegen, Germany*

*Phone: 0049 271 - 740 2420*

*Fax: 0049 271- 740-2940*

### CONFERENCE TOPICS

We invite all researchers, academicians, practitioners, as well as students interested in all branches of operational research, mathematical modeling and economic analyses to participate at the conference and to present their papers in the following areas:

- Continuous optimization and control
  - Data mining; knowledge discovery; artificial intelligence
  - DEA and performance management
  - Decision analysis; decision support systems; modelling languages
  - Discrete optimization; graphs & networks
  - Energy, environment & climate
  - Financial modelling; risk management; banking
  - Fuzzy sets; soft computing
  - Game theory; mathematical & experimental economics
  - Health, life sciences & bioinformatics
  - Location; logistics; transportation; traffic
  - Meta heuristics & biologically inspired approaches
  - Multiple criteria decision making, optimization & group decision
- Rainer Burkard (Graz, Austria; EURO Gold Medal 1997)
  - Edmund Burke (Nottingham, UK)
  - Ulrich Dorndorf (Aachen, Germany)
  - Salvatore Greco (Catania, Italy)
  - Toshihide Ibaraki (Kobe, Japan)
  - Hubertus Th. Jongen (Aachen, Germany)
  - Andrea Lodi (Bologna, Italy)
  - Rolf Moehring (Berlin, Germany)
  - Noam Nisan (Jerusalem, Israel)
  - Franz Rendl (Klagenfurt, Austria)
  - Nitin Saxena (Bonn, Germany; Goedel Prize 2006, Fulkerson Prize 2006)
  - Reinhard Selten (Bonn, Germany; Nobel Prize 1994)
  - Michael Trick (Pittsburgh, USA)
  - Jens Vygen (Bonn, Germany)

### SESSIONS

Invited and contributed papers will be organized in parallel sessions of 90 minutes, with three or four papers in each session. Abstracts can be submitted via the Conference web page - [www.euro-2009.de/](http://www.euro-2009.de/). Every participant can present no more than one paper at the Conference.

Invited and contributed sessions will generally be a part of conference Streams which are grouped by Main Streams. Their lists together with responsible organizers are presented on the conference web page. Researchers who want to organize an invited session or contribute a paper within an invited session should contact the Stream organizer, Main Stream organizer or a corresponding member of the PC with their proposals.

### INVITED (KEYNOTE) SPEAKERS (not yet complete):

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## PRIZES AND AWARDS

During the EURO XXII conference the following prizes will be awarded:

- The EURO Gold Medal
- The EURO Distinguished Service Medal
- The EURO Excellence in Practice Award (EEPA 2009)
- The EURO Management Science Strategic Innovation Prize (MSSIP 2009)
- The EURO Doctoral Dissertation Award (EDDA 2009)

## REGISTRATION FEES

- Regular Early (before April 1, 2009): 340 Euros
- Regular Late (after April 1, 2009): 440 Euros
- Student Early (before April 1, 2009): 180 Euros
- Student Late (after April 1, 2009): 280 Euros
- Accompanying persons: 120 Euros
- Banquet (Tuesday night): 70 Euros

## THE REGISTRATION FEE INCLUDES

- Participation in all sessions
- Access to the exhibition during the EURO Conference
- Conference materials (Final Program, Book of Abstracts)
- Participation in the Welcome Reception
- Coffee breaks
- Lunches

## SATELLITE EVENTS

There are some scientific events in preparation already, organized by EURO Working Groups and their friends:

- 7th EUROPT Workshop 'Advances in Continuous Optimization', University of Applied Sciences, Remagen (near Bonn), Germany, July 3-4, 2009.
- A EURO ORD Workshop on OR for Developing Countries - young Researchers and PhD Symposium, July 4, 2009.

More information will be announced soon, and further satellite events are cordially welcome.

## SPECIAL ISSUES

We are collecting and at the homepage announcing Calls for Papers for precious special issues succeeding EURO 2009.

The organizers of EURO XXIII 2009 are looking forward to welcoming you to Bonn and sharing with you an exciting time of premium science and precious community and everlasting friendship - truly, a Once-in-a-Lifetime experience! ■

# META'2008

## International Conference on Metaheuristics and Nature Inspired Computing

29-31 Oct 2008, Hammamet, Tunisia

<http://www.lifl.fr/META08>

The 2nd International Conference on Metaheuristics and Nature Inspired Computing, META'08, will be held in Tunisia from 29 to 31 Oct. The Conference will be an exchange space thanks to the sessions of the research works presentations and also will integrate tutorials and a vocational training of metaheuristics and nature inspired computing.

The scope of the META'2008 conference includes, but is not limited to:

- Local search, tabu search, simulated annealing, VNS, ILS, ...
- Evolutionary algorithms, swarm optimization, scatter search, ...
- Emergent nature inspired algorithms: quantum computing, artificial immune systems, bee colony, DNA computing, ...
- Parallel algorithms and hybrid methods with metaheuristics, machine learning, game theory, mathematical programming, constraint programming, co-evolutionary, ...
- Application to: logistics and transportation, telecommunications, scheduling, data mining, engineering design, bioinformatics, ...
- Theory of metaheuristics, landscape analysis, convergence, problem difficulty, very large neighbourhoods, ...
- Application to multi-objective optimization
- Application in dynamic optimization, problems with uncertainty, ...

## SUBMISSION PAPERS

Submission of papers should be in shape of an abstract of two pages sent before the 15th May 2008 via the website.

Selected papers will be published in international journals.

Predefined styles are available on the website <http://www.lifl.fr/META08> that we invite you to visit regularly and which evolves when the organization progresses.

## INVITED SESSIONS AND TUTORIALS

Deadline 15th May 2008. Contact [talbi@lifl.fr](mailto:talbi@lifl.fr)

## CONFERENCE ORGANISERS

- E-G. Talbi ( Conference Chair)
- K. Mellouli (Co-chair)

## Check out the NEW IAOR Online and **win** an iPod Nano!

IFORS

and Palgrave Macmillan are pleased to announce that the online version of International Abstracts in Operations Research (IAOR) [an IFORS publication] has been completely revamped for 2009.

We invite you to try the Beta Version completely FREE at [www.palgrave-journals.com/iaor](http://www.palgrave-journals.com/iaor) and provide feedback which will help us improve the final product. If you complete our brief user questionnaire, you'll also be entered into a draw for an iPod Nano.

The Beta Version of IAOR Online contains more than 20,000 indexed abstracts from the years 2002-2007, which for trial purposes is sufficient for a realistic test of literature searching. The full version of IAOR Online – launching January 2009 – will contain more than 55,000 indexed Operations Research and Management Science abstracts from 1989 to the present, and will be updated weekly from the current literature.

Go to [www.palgrave-journals.com/iaor](http://www.palgrave-journals.com/iaor) to register your free user account, and get searching...don't forget to fill out the survey and enter the prize draw – your feedback will help us to improve to final product to provide the best possible service to our users.





▲ The tables for the dinner



▲ Mike Trick orchestrating the "parade"



▲ The Dancers at the Gala Dinner



▲ The Jazz Band – Stix Hojeng



▲ Jeff Griffiths representing the UK



▲ Jean-Charles Billaut from France receiving certificate from Elise del Rosario, France and the UK were two of the first countries to join IFORS

▲ Hans Ittmann, Chair of the Local Organising Committee



▲ David Ryan from New Zealand – "the country with the second best rugby team in the world(!?)"

▲ The party and the dancing continued till late!





# VI ALIO/EURO Workshop on Applied Combinatorial Optimization

<http://alioeuro2008.dc.uba.ar/>

The VI ALIO/EURO Workshop on Applied Combinatorial Optimization will be held from December 15th to the 17th of 2008 at the campus of the Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Buenos Aires, Argentina.

## Abstract Submission

Authors are invited to submit an extended abstract no longer than 6 pages on letter-size paper using at least 11-point font. Instructions for electronic submissions are posted at the conference web page <http://alioeuro2008.dc.uba.ar/>.

Extended abstract submission begins on June 1st and ends on July 31st. August 30th authors will be notified whether or not their paper has been accepted.

The Association of Latin-Iberoamerican Operational Research Societies (ALIO) and the Association of European Operational Research Societies (EURO), both within the International Federation of Operational Research Societies (IFORS), organize their joint sixth conference devoted to Combinatorial Optimization. The main purpose of the ALIO/EURO Workshops of Combinatorial Optimization is to bring together Latin American and European researchers and to stimulate activities and discussions about methods and applications in the field of combinatorial optimization. Researchers from other countries are obviously welcome to participate.

*Previous editions of ALIO-EURO Workshop on Applied Combinatorial Optimization were:*

- Rio de Janeiro, Brasil, 1989.
- Valparaiso, Chile, 1996.
- Erice, Italy, 1999.
- Pucon, Chile, 2002 (<http://www.inf.puc-rio.br/alioeuro2002>)
- Paris, France, 2005 (<http://www.infres.enst.fr/~charon/alio>)

**Main topics in this conference will be:**

- Approximation algorithms
- Bio-informatics
- Complexity
- Graph Theory
- Game Theory
- Integer Programming
- Logistics
- Metaheuristics
- Mathematical Programming
- Networks

## Publication

A selection of full papers will be published in a special issue of the Journal International Transactions in Operational Research (edited by Celso Ribeiro), published on behalf of IFORS (The International Federation of Operational Research Societies), Blackwell Publishing.

## Confirmed plenary talks

- The following invited speakers have been confirmed so far:
- Martine Labbé (Université Libre de Bruxelles, Belgium)
- Celso Ribeiro (Universidade Federal Fluminense, Brazil)
- Jayme Swarcfiter (Universidade Federal do Rio de Janeiro, Brazil)
- Paolo Toth (University of Bologna, Italy)
- Gustavo Vulcano (New York University, U.S.A.)
- Andrés Weintraub (University of Chile, Chile)

## Important Dates

June 1st, 2008: Opening of paper submission

July 31st, 2008: Abstract submission deadline

August 30th, 2008: Notification of paper acceptance

Dec 15-17, 2008: The VI ALIO/EURO Conference on Applied Combinatorial Optimization

## Conference Chairs

- Isabel Méndez-Díaz (Universidad de Buenos Aires, Argentina)
- Graciela Nasini (Universidad Nacional de Rosario, Argentina)

Paula Zabala (Universidad de Buenos Aires, Argentina)

**For further information please contact:**

<http://alioeuro2008.dc.uba.ar/> ■

## *The first announcement of the International Network Optimization Conference INOC 2009:*

*INOC is the conference of the European  
Network Optimization Group (ENOG), a  
working group of EURO.*

INOC 2009 will be held in Pisa, Italy, from the 26th to the 29th of April 2009. The conference is intended to be a forum for researchers and practitioners working in the area of Network Optimization. The aim is to present recent developments in theory, computational studies and application settings.

**Plenary speakers will be:**

- Daniel Bienstock, Columbia University (Usa).
- Martine Labbé, Université Libre de Bruxelles (Belgium).
- Federico Malucelli, Politecnico di Milano (Italy).
- James B. Orlin, Massachusetts Institute of Technology (Usa).

A collection of full papers will be selected for publication in a special issue of Networks, to be edited by Luis Gouveia and Maria Grazia Scutella'.

**For more details, please see the web site of the conference:**

<http://www.di.unipi.it/INOC2009/>

**For further information about the conference, you can also e-mail:**

[inoc2009@di.unipi.it](mailto:inoc2009@di.unipi.it)

**Maria Grazia Scutella'**  
*Conference Chair*



# CALL FOR PAPERS

*International Journal of Mathematics in Operational Research (IJMOR)* (<http://www.inderscience.com/ijmor>)

*International Journal of Mathematics in Operational Research (Print):*  
ISSN 1757-5869

*International Journal of Mathematics in Operational Research (Online):*  
ISSN 1757-5850

## DESCRIPTION

IJMOR is a fully refereed journal generally covering new mathematical theory and applications in operational research and management science models and techniques for solving problems in manufacturing and service organizations. The key problem areas include marketing, design, engineering, production, logistics, procurement, finance and accounting, information systems and supply chain.

Operational research has become one of the most indispensable tools in business and military applications. Considering the advances in information technology and global operations, modeling and analysis play a major role in abstract representation of business systems and data analysis and, subsequently, in the generation of relevant information for making more accurate decisions that will support productive functioning of different systems and, in turn, the whole organizational competitiveness. There is a need to identify and develop suitable mathematics for developing operational research models and solution techniques taking into account the volume of data available and its analysis. This will help efficient analysis of data for obtaining accurate information to make best decisions.

IJMOR will act as a forum for exchange of fundamental and innovative applications of mathematics within OR/MS.

## OBJECTIVES

IJMOR aims to help professionals working in the field of mathematics, operational research and management science, industrial engineering, information systems, and business, academic educators, industry consultants, and practitioners to contribute, to disseminate and to learn from each other's work. A global business perspective and its implications are emphasized. IJMOR will raise the awareness of importance of applications of mathematics in operational research and management science focus on excellence in developing operational research and management science techniques, models and solution methodology to solve problems in the information-intensive global society provide insights regarding the latest operational research and management science techniques

and applications, and offer a networking forum for academics, mathematicians, operational research and management scientists and practitioners, professionals and entrepreneurs.

## READERSHIP

IJMOR is a forum to help academics and researchers, applied mathematicians, practitioners, and operations and management science professionals, in all areas of business applications. It will enable academics and practitioners working in the field of applied mathematics, and mathematical theory and applications in operational research and management science, to discuss important mathematical ideas and applications, and disseminate information for mutual learning and pursue fundamental research in operational research and management science.

## CONTENTS

*IJMOR publishes original papers, review papers, theory and methodology papers, industrial papers, technical notes, and book reviews. Special Issues devoted to important topics in mathematics of operational research and management science are welcome.*

## SUBJECT COVERAGE

*Suitable topics include, but are not limited to:*

- Mathematical theory and applications in operations research
- Applications of mathematics in management science
- Innovative applications of mathematics in optimization
- Mathematics in developing computational theory and applications
- Algorithms for efficient solution methodology
- Mathematics of discrete, continuous and stochastic optimization
- Stochastic theory and models
- Mathematical programming
- Dynamic programming
- Stochastic programming
- Simulation techniques
- Control theory and methodologies in operational research
- Mathematical of inventory theory and models
- Marketing models and optimization
- Operations research mathematics in procurement, manufacturing and distribution
- Mathematical models of operations research and management in finance and accounting
- Queuing theory and applications
- Transportation theory and applications
- Applied mathematical techniques in data mining and storage management

- Location theory and applications
- Artificial intelligence and expert systems
- Network theory and applications
- Game theory and applications
- Decision theory and support systems
- Reliability
- Scheduling theory and applications
- Statistical techniques and tools in operational research and management science
- Telecommunication networks
- Supply chain management modeling and analysis
- Machine learning
- Financial modeling and analysis

## SPECIFIC NOTES FOR AUTHORS

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. IJMOR is seeking manuscripts from both academics and practitioners (mathematical theory and applications in operational research and management science, operational research management science theory and models).

All papers will be refereed through a double blind process by a mix of academics and practitioners depending on the subject. Criteria for acceptance of all papers include originality, contribution to various aspects of mathematics in operational research and management science.

All papers are refereed through a double blind process. A guide for authors, sample copies and other relevant information for submitting papers are available on the Submission of papers web-page.

You may send one copy in the form of an MS Word file attached to an e-mail (details of file formats in Author Guidelines) to Prof. Angappa Gunasekaran, below, with an email copy only to:

## EDITOR-IN-CHIEF

**Professor Angappa Gunasekaran**  
*Director, Business Innovation Research Center (BIRC)*

*University of Massachusetts - Dartmouth  
Department of Decision and Information Sciences*

*Charlton College of Business  
285 Old Westport Road, North Dartmouth,  
MA 02747-2300, USA*

*E-mail: [agunasekaran@umassd.edu](mailto:agunasekaran@umassd.edu)*

*For more information on the journal and the submission process, please visit the web site of IJMOR: <http://www.inderscience.com/ijmor>*





# EMO 2009 - Deadline extension and 2nd Call fo Papers

5th International Conference on "Evolutionary Multi-Criterion Optimization"

April 07-10, 2009. Nantes, France

Home Page: <http://www.emo09.org>

## NEWS

- Submission DEADLINE EXTENDED: October 15, 2008
- MCDM Track
- Keynote and Tutorial Speakers
- First day open to EU/ME members, free of charge

Please see below for more details.

## THE EMO CONFERENCE SERIES

EMO is an International conference series devoted to Evolutionary Multi-Criterion Optimization. This conference brings together researchers and practitioners from different disciplines of Computer Science, Operational Research, Optimization Engineering, Mathematical Programming and Multi-Criteria Analysis. Theoretical results and algorithmic developments in the field of EMO will be covered, including practice and applications of EMO in real-life situations.

## EMO 2009, NANTES - FRANCE

Nantes (Brittany, West of France) will host EMO in 2009: the Fifth International Conference on Evolutionary Multi-Criterion Optimization (EMO'09), "where optimization technologies meet EMO". Previous conferences in the series were held in Matsushima (Japan) in 2007, Guanajuato (Mexico) in 2005, Faro (Portugal) in 2003, and Zurich (Switzerland) in 2001.

The conference will take place in the Faculty of Sciences, University of Nantes, which is located downtown along the Erdre river. The event is organized in collaboration with Ecole Centrale de Nantes, Ecole des Mines de Nantes, University of Angers, University of South Brittany, and the National Center for Scientific Research.

## MCDM TRACK

To foster the interaction between the EMO community and other scientific communities, papers on all aspects of multiobjective optimization and/or multicriterion decision making are invited for a special MCDM Track, which will be an integral part of the EMO Conference. As such, guidelines for submission are the same as for the main conference track, as is the peer-review procedure.

MCDM Track Chair: José Figueira (IST, Portugal)

## SUBMISSION/PUBLICATION

All contributions submitted for presentation at the conference will be selected on the basis of a full paper. Authors are invited to submit original, full-length papers (maximum 15 pages). Further information and instructions may be found on the conference web site

under « Author Instructions ».

All papers submitted will be reviewed by the international programme committee. All accepted papers (1) will be included in the EMO'09 proceedings, published by Springer as a volume of the Lecture Notes in Computer Science (LNCS), and (2) will be scheduled for either oral or poster presentation at the conference.

## KEYNOTE AND TUTORIAL SPEAKERS

So far, the following invited speakers have confirmed their participation in EMO'09. Additional speakers will be announced on the conference website as confirmation is received.

### KEYNOTE ADDRESSES

**Kathrin Klamroth (University of Wuppertal, Germany)**

<http://www.math.uni-wuppertal.de/~klamroth/>

*Topic : discrete multiobjective optimization*

**Pascal Van Henteryck (Brown University, USA)**

<http://www.cs.brown.edu/~pvh/pvhHome/Bio.html>

*Topic : constraint programming*

### TUTORIAL

**Thomas Stuetzle (IRIDIA, Université Libre de Bruxelles, Belgium)**

<http://iridia.ulb.ac.be/~stuetzle/>

*Topic : Ant Colony Optimization*

## FIRST DAY OPEN TO EU/ME MEMBERS

The first day of the conference, which will include two two-hour tutorials, will be open to EU/ME members free of charge (conference materials not included). Details on how to request participation as a EU/ME member will become available on <http://www.emo09.org/> in the near future.

Naturally, tutorials are also open to all registered EMO'09 participants (they are included in the registration fee).

## IMPORTANT DATES

- October 15, 2008 - (extended, HARD deadline) Submission deadline of the full papers (up to 15 pages, for reviewing)
- November 15, 2008 - Referee reports available - Notification of acceptance or rejection
- December 15, 2008 - Final camera-ready papers and registration of one author at least per paper accepted
- December 15, 2008 - Deadline of early Registration
- April 07-10, 2009 - The EMO'09 conference

## REGISTRATION

- ACADEMIC Registration (includes reception, conference proceedings, lunches, refreshments, banquet and excursion)
  - early (until December 15, 2008) EUR 380,00
  - late (after December 15, 2008) EUR 500,00
- STUDENT Registration (includes reception, conference proceedings, lunches, refreshments, banquet and excursion)
  - early (until December 15, 2008) EUR 250,00
  - late (after December 15, 2008) EUR 350,00
- NON-ACADEMIC Registration (includes reception, conference proceedings, lunches, refreshments, banquet and excursion)
  - early (until December 15, 2008) EUR 500,00
  - late (after December 15, 2008) EUR 650,00
- OTHERS (Accompanying Person) (includes banquet and excursion)
  - early (until December 15, 2008) EUR 100,00
  - late (after December 15, 2008) EUR 100,00

All registrations (until April 05, 2009) are made through the online registration tool (available on the conference website in September 2008).

## FOR FURTHER INFORMATION PLEASE CONTACT

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