



NEWSLETTER

September 2004

Operational Research Society of New Zealand, Inc.
PO Box 6544, Wellesley St. Auckland, New Zealand, www.orsnz.org.nz

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Newsletter publication dates are March, June, September, and December. Submissions deadline is the 15th of the month for the following month's issue. Send submissions by email to the Newsletter editor, Matthias Ehrgott, newsletter@orsnz.org.nz.

Note from the Editor

In July I agreed to become the new editor of the ORSNZ newsletter. This is the first edition after nearly a year's break. I hope you like the result. I'll do my best to keep up the standard set by my predecessors, but I won't be able to do that without your help. That is I need your input or the newsletter will be a rather slim paper. So please, send me all sorts of stuff that you think is of interest for the society members. Especially, I'd like to receive regular updates of what's going on at Christchurch, Hamilton, and Wellington. If you want to run a regular column (e.g. Puzzle Corner) you are most welcome to do that. I would like to create a section on theses completions and publications by ORSNZ members; all you need to do is let me know about it. I'm looking forward to receiving your contributions for the next issues.

In this issue you'll find the call for papers for our annual conference and information, including general calls for papers, for the Asia Pacific Journal of Operational Research and OR Spectrum. I've also collated some material on initiatives promoting OR, most importantly the "Min and Max, the OR Heroes" campaign initiated by Nicola Petty and Shane Dye.

Matthias Ehrgott

Letter from the President

Yes, finally a long overdue ORSNZ Newsletter – and the reason for the long silence lies entirely with your President who failed to get off his backside and organise a new Newsletter Editor to take over from John Giffin who resigned from the editorship at the end of last year after doing an excellent job in maintaining regular publication of the Newsletter. It is appropriate to take this opportunity to express our thanks to John for his contribution. I also want to thank Matthias Ehrgott for agreeing to take over the unenviable role of Newsletter Editor. At least now you can expect a more reliable and regular newsletter publication as Matthias stirs some action from the President and other members of Council. And of course, I am sure Matthias would welcome contributions for the newsletter from any source including those of you who are troubled by the theme of my message below!

This Newsletter also provides me with an opportunity to acknowledge the contributions of members of the Department of Management Systems at the University of Waikato who took responsibility for managing the affairs of the Society while the Council has been based in Hamilton. In particular, on behalf of the Society, I would like to thank Les Foulds for his contribution as President over the past three years.

Earlier this year I was invited to participate as a member of an International Panel to review Research in Operational Research in UK Universities. The review was commissioned by the UK Engineering and Physical Sciences Research Council (EPSRC), in collaboration with the Operational Research Society (ORS) and the UK Economic and Social Research Council (ESRC).

The terms of reference for the review were: *To assess the standing and potential of research in Operational Research in UK universities.*

The review was held in London over two days in March and the Review Panel was made up of Professor Frank van der Duyn Schouten (Chair) from the Netherlands, Professors Richard Nance and Bill Pier-skalla from the US, Professor Dennis Bouyssou from France, Ms Sue Merchant, Dr Roger Forder and Mr Mark Roper from the UK and me from NZ. The Panel received briefings from the Research Councils and the



Operational Research Society and spent a very interesting day meeting with representatives from most of the OR programmes in UK universities to review and discuss research activities. The official Report of the review is due to be presented at the Annual ORS Conference in early September and I hope that we will be able to obtain permission to reprint the Report in a future issue of the ORSNZ Newsletter.

I found the experience of participating in the Review to be both stimulating and thought provoking. It has certainly given me the opportunity to reflect on the state of Operational Research in New Zealand at least in comparison with what I was able to observe in the UK. Of course such comparisons might seem a little unfair but they do raise issues which I think should be of concern to all OR believers in New Zealand. Our subject does after all have the potential to contribute much to the prosperity of our country but the signs of progress and success are not all positive!

In recent years we have seen an active OR group in what was called the Department of Scientific and Industrial Research (DSIR) and another in the Forest Research Institute (now Forest Research) evaporate and apart from the small OR group at Air New Zealand, it is now difficult to identify OR groups of more than one or two people existing outside the universities. Of course people with OR interests or background might well be appointed in business or industrial roles with a different title but then it is not so easy to describe their contributions in OR terms. Even in the universities we have seen significant change from an OR point of view. With the retirement or resignation of senior OR colleagues at Canterbury and Victoria, the OR programmes in those universities have not been able to maintain their previous strong positions. In fact I have recently been informed that it has proved to be very difficult to recruit suitable people to vacant OR positions. Massey is in a similar situation with little recognised strength in OR and with programme changes in the courses offered at Waikato, it is now not easy to see a strong profile for OR. It is only here in Auckland that we have been able to maintain OR strength but even with a very active teaching and research programme, it is not easy to attract good graduate students to work in the subject area. Another indicator which gives me cause for concern was the very small number of registrations at the Annual Conference in Hamilton last November even though we had the attraction of two outstanding and well known plenary speakers in Professors Saul Gass and Professor Russell Cheng.

So should we be concerned about this situation? If like me some of you are concerned, I would encourage you to share your comments and suggestions with other members of the Society through Letters to the Editor of our Newsletter. And now, having sounded a message of doom and gloom in my first Newsletter contribution, I shall finish by applauding the significant contributions of Shane Dye and Nicola Petty who

have taken the initiative to develop the publicity resources which aim to raise the profile of Operational Research amongst our potential future students. You will find further details of these excellent resources elsewhere in the Newsletter.

David Ryan

The 39th Annual Conference of the ORSNZ in 2004

ORSNZ'04: 'Intelligent Decision Making in the Modern World'

The Engineering Science Department at the University of Auckland is pleased to host the 39th Annual Conference of the Operational Research Society of New Zealand, ORSNZ'04, on Sunday 28 and Monday 29 November, 2004 (with a pre-conference social on the evening of Sat 27 November).

Joint Conference: 9th Annual International Conference on Industrial Engineering

The ORSNZ'04 conference will be running simultaneously with the 9th Annual International Conference on Industrial Engineering Theory, Applications and Practice, at The University of Auckland over the 3-day period Sunday November 28th – Tuesday November 30th, 2004. We are very pleased to be hosting this prestigious international meeting. Attendees at the ORSNZ conference may wish to extend their stay in Auckland to include Tuesday's Industrial Engineering talks. Details of this option will be provided on the ORSNZ conference website, www.orsnz.org.nz/conf.

Call for Papers

We welcome papers on any aspect of operational research, especially practical applications. Please email your abstract, in 200 words or less, in plain text, to the conference organisers at conference@orsnz.org.nz.

Submission deadline for abstracts: 30 September, 2004.

Following acceptance of your abstract, we shall invite you to submit a full-length paper for publication in the conference proceedings. A copy of the proceedings will be given to every attendee at the conference. Full papers must be submitted by email in Postscript (.ps) or Adobe Acrobat (.pdf) format to the conference organisers.

Submission deadline for full papers: 31 October, 2003.

Registration forms, guidelines for the preparation of full papers, and further information about the conference, will be available on the conference website www.orsnz.org.nz/conf.

Student Grants-in-Aid for the ORSNZ Annual Conference, Auckland, November 2004

Full-time students, who are members of ORSNZ, and plan to present a paper at the ORSNZ conference, are eligible for travel assistance from ORSNZ to attend the conference. Applications should be made using the conference registration form (see www.orsnz.org.nz/conf), and should be signed by the student's supervisor or Head of Department to confirm that the applicant is enrolled in a full-time university course. The completed registration form, together with an abstract of the planned paper, should be sent to the conference address above by 30 September, 2003. Grants will be payable at the conference upon production of a GST receipt for the travel expenses.

Young Practitioners' Prize (YPP)

OR practitioners and students who will be under 25 years of age on 28 November 2004 are invited to compete for the ORSNZ Young Practitioners' Prize. Condition for entry is the presentation of a single-authored paper at the 39th Annual Conference of the ORSNZ. When registering for the conference, competitors should request that their paper be scheduled in the YPP session and must provide proof of their eligibility. The total prize money awarded will be \$1,000, split between the authors of the best papers at the judge's discretion.

Andrew Mason

ORSNZ Visiting Lecturer Scholarships

ORSNZ invites nominations for ORSNZ Visiting lecturer Scholarships for visits to New Zealand between September 2004 and June 2005. Each Visiting lecturer must give a talk on some topic likely to be of general interest to ORSNZ members at each of Auckland, Hamilton, Wellington, and Christchurch. Each Visiting lecturer will be invited to write a guest editorial for the Society newsletter. The emolument of each scholarship is up to \$1000. ORSNZ will not normally

consider payment of additional costs to Visiting Lecturers.

Each candidate must be nominated by a current member of ORSNZ, "the Champion". The nomination must include the CV of the nominated Visiting lecturer, the date and location of the hosts of the visit, the name of the Champion and an undertaking by the Champion to coordinate a visit by the nominee to the four above named centres.

Enquiries concerning, or nominations for, scholarships should be sent to

David Ryan
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Auckland

People

Julius von Haast Fellowship for Operations Researcher

A new research fellowship announced by Ministry of Research, Science and Technology Chief Executive Dr Helen Anderson will strengthen New Zealand's already significant science relationship with Germany.

The Julius von Haast Fellowship provides for distinguished German researchers to spend up to 12 weeks over a three year period in New Zealand, working collaboratively with their New Zealand colleagues.

"Working with international partners is an important part of how science works," said Dr Anderson.

"When New Zealand researchers work with top scientists from overseas everyone benefits – the researchers, the organisations in which they work, and New Zealand as a whole."

The inaugural Julius von Haast Fellow is Professor Horst Hamacher from Kaiserslauten University. He will be working with Dr Matthias Ehr Gott from the University of Auckland to improve the quality of cancer radiation therapy and radiosurgery.

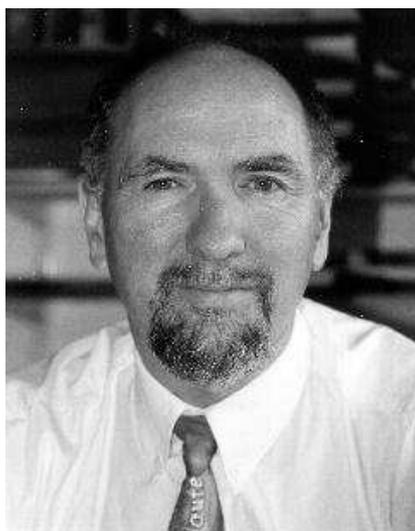
The two researchers hope to decrease the treatment time per patient, thus allowing a better usage of medical facilities.

"The research is likely to benefit both cancer sufferers and radiation therapists," said Dr Anderson.

Professor Hamacher has a vast experience in operations research and has undertaken extensive and world-class work in cancer treatments in recent years.

The Julius von Haast Fellowship is named after Sir Johann Franz Julius von Haast, a German geologist who came to New Zealand in 1858. He spent many

years investigating mineral deposits in the Nelson and Canterbury districts and went on to found the Canterbury Museum at Christchurch where he was Director for fourteen years.



Prof. Horst W. Hamacher

The Fellowship is a counterpart to the programmes of the Alexander von Humboldt Foundation, which support New Zealand researchers to undertake research in Germany.

“The Alexander von Humboldt Foundation is one of world’s most prestigious academic foundations, so it made sense to align our programme with them,” said Dr Anderson.

The idea of a fellowship to support German researchers was first proposed by Professor Terry Healy of Waikato University.

The Ministry was pleased to support the Fellowship as part of its work to promote and strengthen New Zealand’s international science links.

The Fellowship is funded through the Government’s International Science and Technology Linkages Fund, which is administered by the Ministry of Research, Science and Technology.

The value of the Fellowship is \$114 000 paid over 3 years. One new appointment will be made in each of 2004, 2005 and 2006, so there will be three fellows in place each year when the scheme is fully operational.

Royal Society of New Zealand Elections

Nominations for Royal Society of New Zealand elections closed on 25th June 2004. In the Mathematical & Information Sciences & Technologies, where ORSNZ votes, only one nomination (of Professor Gaven Martin) had been received. Gaven Martin was therefore elected unopposed.

Dr Susan Byrne: 1954-2004

It is with sadness that I report to ORSNZ members the death of Dr Susan Byrne on July 29th in Auckland, after a long battle with cancer. Susan studied Mathematics and Information Science at Victoria University, and then pursued a PhD in Nonlinear Programming with Roger Sargent at Imperial College, London. After a five-year period at Massey she joined the Department of Theoretical and Applied Mechanics in Auckland in 1986. Following a growing interest in Operations Management and Systems Thinking she transferred her appointment to the Management Science and Information Systems Department in the Commerce Faculty in 1993, where she remained until having to take leave because of her illness.

Andy Philpott

Chapter News

Auckland News

It has been some time since the last Newsletter and so there is much news to report from the Auckland Branch of ORSNZ. This correspondent has elected to convey “news” from 2004 only, in the hope that older news was conveyed informally at the 2003 Conference.

This year started with some controversy, when Kevin Biggar and Jamie Fitzgerald engaged Geoff Leyland to assist in Holiday Shoppe’s protest defence in the 2003 transatlantic rowing race. Geoff, Andy Philpott, and fourth-year student Ivana Stankovich had developed the weather-routing model used by Holiday Shoppe, and Geoff’s expert witness testimony using this model was critical in demonstrating the lack of substance in the protest. Another victory for OR!

In February Andy Philpott started his three-year term as Head of Department of Engineering Science, and in June the department re-located to new quarters at 70 Symonds Street. We now have two modern floors in a mirror-glass tower block, with excellent facilities for staff and graduate students.

At the end of February Matthias Ehrgott returned from sabbatical leave that he spent at the Departments of Mathematics at the Universities of Copenhagen and Kaiserslautern. He brought with him the good news that Prof. Horst W. Hamacher (well known to ORSNZ members from two previous visits to NZ) has been awarded the inaugural Julius von Haast fellowship of MoRST (see article on page 3). There was also good news for Matthias on his return: he was awarded a promotion to Associate Professor.

In April Andy Philpott visited the University of Chile in Santiago for two weeks. Like Auckland, the University of Chile has a very strong OR group led by Andres Weintraub (who will be an invited speaker at the 2004 ORSNZ Conference), as well as number of

mathematicians, electrical engineers and economists working on game theory models of electricity markets. So there is much of interest there for the New Zealand OR community.

The Department of Engineering Science continues to excel in research. In the PBRF grading exercise, Engineering Science had a higher percentage of A researchers than any other university department in the country, and was second equal out of departments in The University of Auckland on weighted research score. With seven full-time faculty, the Operations Research Group has a critical mass that is becoming able to sustain a consistently strong research record. In recognition of his contributions to building this profile, David Ryan was at the end of last year made a Fellow of the Royal Society of New Zealand, the first Operations Researcher to achieve this honour.

In July the Electric Power Optimization Centre (EPOC) ran its Third Annual Winter Workshop for participants in the New Zealand Electricity Market. This was attended by over 30 industry participants, as well as researchers from EPOC and the EMRG in Canterbury. Though this was not an OR meeting, it is clear from the attendees at this workshop that the electricity industry is a major employer of OR graduates. There were presentations ranging from models for security of supply to models for protection against terrorist attack, each followed by some very animated discussion. The presentations can be downloaded from www.esc.auckland.ac.nz/EPOC/.

We wish to report a particularly good set of final year projects running this year. Those involving OR include:

- Revenue Management For Passenger Transport (Philpott)
- Portfolio Optimisation (Walker/O'Sullivan Jnr)
- Optimisation Of Beam Directions In Radiotherapy Planning (Ehrgott)
- Optimizing Hydro-Electricity Plant Maintenance (Philpott)
- Optimal Traffic Light Control (Walker/O'Sullivan Jnr)
- LP Formulation Of Forestry Inventory Assessment Problems (Mitchell)
- Better Base Locations For The Melbourne Ambulance Services (Mason)
- Optimal Diamond Cutting (Walker/O'Sullivan Jnr/Zakeri)
- Robust Paths In Marine Weather Routing (Leyland)
- Models For Hydro Electricity Security (Philpott)
- Optimal Elevator Control (Walker/O'Sullivan Jnr)
- Locomotive Allocation For Tranz Rail (Ryan)
- Cyclic Roster Construction By Column Generation For Tranz Rail (Ryan)
- Interactive Support For Radiotherapy Planning (Ehrgott)

- Optimization Of Oil Well Placement (Archer/Zakeri)
- Classification Of Investment Portfolios (Ehrgott)

We are busy putting things into place for the ORSNZ conference in Auckland. This year, it is being run concurrently with the 9th Annual International Conference on Industrial Engineering which we are also hosting at Auckland. This 3-day annual conference was last held in Las Vegas, where Andrew Mason gave a multi-media presentation on the attractions of Auckland as the next conference venue. Andrew reports that this conference had a very high standard of presentations, and thus will be of interest to many ORSNZ members. Members attending the ORSNZ conference (running from Saturday evening through to Monday afternoon) may wish to stay for Tuesday as well, thus taking in the 3rd day of the Industrial Engineering conference. The ORSNZ conference web site, www.orsnz.org.nz/conf, will have more information on how you can sign up to both conferences.

Andy Philpott

Canterbury News

Just as there have been several changes in seasons since our last newsletter entry, there have also been several changes in who is, and who isn't around and about the Management Science group at the University of Canterbury.

Both Victoria Hanna and Cita Wood, who taught in our Operations Management programme, resigned on the 30th June. Victoria has taken up a lecturing position in the Department of Management at the University of Melbourne while Cita is working in an Operations Management role in Ashburton and doing some contract consulting in the operations area. These positions have been advertised and candidates are to be interviewed in the coming months.

Don McNickle and Shane Dye are on sabbatical for a year starting 1st July. Don will be visiting the University of Southern Queensland (USQ) in Toowoomba and Loughborough University in the UK. Shane will spend the majority of his time at the University of Duisburg-Essen in Germany while also spending some time in the UK and Norway.

Terri Green and John Raffensperger are going on Erskine leave in the coming six months. Terri is away from mid August to mid October, primarily to investigate new ways of teaching MSCI cases. She is going to be based at the University of Lancaster and will attend the OR Society Conference, OR 46, in York. John is away for two months from July attending teaching workshops in Massachusetts, Florida, and in Poitiers, France.

We have had two new PhD students join us in the last 12 months. Mohammad Babul Hasan is being supervised by John Raffensperger and working on a thesis

entitled "Optimization of Production Planning for Quota Based Fishing and Processing". Greig McDonnell is being supervised by John Giffin and is working on a thesis entitled "The Fundamentals of Competition in an Arc Routing Environment".

Ross James

Waikato News

ORSNZ'03

The Department of Management Systems hosted the Annual ORSNZ Conference in late November. Not only was this conference attended by many NZ-based society members, but there were also a number of overseas attendees. Paul Childerhouse, Chuda Basnet, Les Foulds, and John Scott all presented papers.

Chuda launches into real curry

Chuda Basnet attended the "International Conference on Responsive Supply Chain and Organisational Competitiveness", which was held at Coimbatore, India, during Jan 5-7. Chuda presented a paper titled "A Simulation Study of Job Shops with Sequence-Dependent Setup Times under a Periodic Release Policy". He was also invited to be a member of a panel discussing supply chain responsiveness.

Les que trabalha em Brasil

Les Foulds recently spent three months in the wilds of Brasil, a mere 1000km from Brasilia. During that time he was interviewed on TV, concerning "How investment in transport infrastructure can induce indirect economic benefits", which is what he helped the Brazilian government with. The topic no doubt rocketed up the channel's ratings. He also gave five talks on his current research, at the invitation of the local chapter of the Brazilian Operations Research Society – the last one in Portuguese.

Jim's Jaunt

While on leave, Jim Corner was based mainly in Ohio where he found time to meet up with colleagues at the University of Montana, University of Minnesota, Harvard, University of Virginia, and AFIT (Ohio). He was also hosted at Kent State University - those old enough will recall the incident in 1971 when the Ohio National Guard killed four students there - immortalised in a Crosby, Still, and Nash song ("Tin soldiers and Nixon's coming, we're finally on our own ... four dead in Ohio."). Jim also attended the Academy of Management Conference in Seattle. Jim reports that the highlight of the annual leave component of his trip was a five-day canoe trip in Minnesota's Boundary Waters Canoe Wilderness Area and another five-day canoe trip in Yellowstone National Park.

Paul's Quick Scans and Slides

In addition to his skills at pool and card playing, Paul Childerhouse also brought with him the Quick Scan

supply chain diagnostics tool. It takes four experts one week to examine a company's business processes. There are two outputs; high quality empirical research data on the status of supply chain practices and a route map for the target company to follow in order to improve their supply chain operations. Various quick scans have been conducted by the Department of Management Systems in the last eight months, including Paul and Chuda, together with three postgraduate students, quick scanning the manufacturing processes of a major NZ engineering company in Hawera. During February Paul exchanged the Waikato damp for European snow. He visited his old colleagues at Cardiff University for a week, which just happened to coincide with a Six Nations rugby game at the Millennium Stadium. The following week he attended a conference on Production Economics in Innsbruck, Austria, during which time he was spotted speeding down mountains whilst out of control on a toboggan. Paul's understanding of German was not good enough to understand the warning signs.

Les Foulds

Wellington News

The printing and mailing of this newsletter has been generously sponsored by Hoare Research Software.



Journals – Calls for Papers

Asia-Pacific Journal of Operational Research

The Asia-Pacific Journal of Operational Research (APJOR) has been founded more than 20 years ago and is listed in the Science Citation Index Expanded. APJOR recently expanded from 2 issues to 4 issues annually so as to publish more high-quality papers.

APJOR will place submissions in one of the following categories: General, Theoretical, OR Practice, Reviewer Survey, OR Education, and Communications (including short articles and letters). Theoretical papers should carry significant methodological developments. Emphasis is on originality, quality and importance, with particular emphasis given to the practical significance of the results. Practical papers, illustrating the application of Operation Research, are of special interest.

APJOR is published quarterly in English. Material that has already been published or submitted for publication elsewhere will not be accepted. All papers will be refereed. Decisions on papers will be made by the Editors with the advice of the referees.

We encourage you and your members to preview the journal at <http://www.worldscinet.com/apjor.html> where Vol. 21 No 1 is available for download at no charge till the end of this calendar year.

We are pleased to inform you that special rates are now available for members of Operational Research societies in Asia-Pacific. The special rate for the members of the *Operational Research Society of New Zealand (ORSNZ)* is S\$50 per member (excluding postage). We hope that you will recommend it to your members as it is bound to be of interest to them.

For more information please visit the web site: http://www.worldscinet.com/apjor/mkt/aims_scope.shtml

OR Spectrum - Quantitative Approaches in Management

Published by Springer, Berlin, Heidelberg, New York, Tokyo

OR Spectrum provides an international forum for academicians and practitioners in the field of OR. The aim of *OR Spectrum* as an SCI-rated journal is to publish high-quality, original, applied and theoretical papers, which contribute to Operations Research as a scientific instrument for the development and application of quantitative approaches in management. It addresses all persons from university, industry, business and administration interested in innovative applications of quantitative methods as well as in advances

in theory and techniques with relevance to practice. All contributions are reviewed by at least two referees.

OR Spectrum welcomes submission of papers for regular issues or for scheduled special issues on

- Product Recovery (submission deadline: October 31, 2004)
- Revenue Management (March 31, 2005)

Papers accepted for one of the next issues include:

- H. Meyr: Supply chain planning in the German automotive industry
- J. Rohde: Hierarchical supply chain planning using artificial neural networks to anticipate base-level outcomes
- S.R. Smits, T. de Kok, P.J.M. van Laarhaoven, G.P. Kiesmüller: Evaluation of divergent N-echelon (s,nQ)-policies under compound renewal demand
- E.A. Silver, S. Minner: A replenishment decision involving partial postponement
- I. Papadakis, P.R. Kleindorfer: Optimizing infrastructure network maintenance when benefits are interdependent
- G. Pankratz: A grouping genetic algorithm for the pickup and delivery problem with time windows
- S. Koukoumialos, G. Liberopoulos: An analytical method for the performance evaluation of echelon kanban control systems
- C. Mellentien, C. Schwindt, N. Trautmann: Scheduling the factory pick-up of new cars

The full editorial policy and the current board of editors as well as some additional information about the journal, e.g. on accepted papers and calls for papers of forthcoming special issues, can be found in *OR Spectrum's* web site (www.or-spectrum.de).

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Promoting Operations Research

Efforts to promote the OR profession are under way everywhere. Here is some information about the INFORMS "Science of Better" Campaign, the EURO initiative on establishing OR in Africa, and, last but not least, Min and Max, the OR Heroes

Probably the most important field nobody's ever heard of.

Mark Eisner, Cornell University

INFORMS

Spread the Word About O.R.

The INFORMS Science of Better Campaign is in full swing. You can spread the word about our valuable profession by directing traffic to the new website for prospective users of O.R. You can add this line to the signature in your emails: "Explore Operations Research: The Science of Better at www.scienceofbetter.org" And don't forget to visit www.ORChampions.org for additional help promoting your business, your career, and your profession. Operation Everything: "It stocks your grocery store, schedules your favourite team's games, and helps plan your vacation. A primer on the most influential academic discipline you've never heard of..." appeared in the Boston Globe: Virginia Postrel, "Operation Everything", *June 27, 2004*

<http://www.boston.com/news/globe/>

EURO

Since 2001, EURO has decided to invest in the promotion of Operational Research in Africa, trying to organise, support and improve the presence of our discipline in this continent so near to us and so far at the same time. When we began our efforts towards the promotion of OR in Africa, there was only one OR society in the continent, namely the well-established and efficiently run Operations Research Society of South Africa. To date, five more OR societies have been established including one in Algeria, in East Africa (federating Kenya, Tanzania and Uganda), in Morocco, in Tunisia, and in West and Central Africa (federating Benin, Burkina Faso, Cameroon, Congo (both), Mali, Niger, Nigeria, Senegal, Tchad and Togo). A number of conferences and workshops have also been held or scheduled to take place in the near future, with an increasing participation and impact to the local societies. Our small investment has yielded great results and we are proud of our colleagues in Africa who have been able to do so much with so little. You can see more at <http://www.euro-online.org/africanOR>.

Alexis Tsoukiàs
President Elect of EURO

Introducing Min and Max, the O.R. Heroes



Anyone involved in Operations Research is aware of the blank look that comes after someone asks what you do or what you teach and you reply "Operations Research" or "Management Science". Then when you try to explain, the look goes from blank to confused, then polite. The discipline is not known to many people, difficult to explain, and even more difficult to put into poster form. This set of problems led to the creation of Min and Max, the O.R. heroes.

In July 2003, Nicola Petty and Shane Dye, after several attempts to work through the ORSNZ, formed an independent group, along with Andy Philpott. The mission was to inform high school students about Operations Research as a career and option for study at University. The information campaign was begun because they perceived that many capable students do not find out about Operations Research until they are well into their University studies and this can limit the options they have for taking the subject further.

Operations Research is useful and interesting, with diverse applications. But it is this diversity that makes it so difficult to represent pictorially. People have an idea what a doctor or a barrister at work look like; an engineer wears a hard hat, and a teacher is surrounded by students. However Operations Research does not have a commonly recognised image. A montage of photos showing various applications was used in an earlier poster, but provided little help in explaining what Operations Research is. This problem was addressed in a brain-storming session at Canterbury; the idea of cartoon heroes was born, and Min and Max, the O.R. heroes were on their way.

In Min and Max, the O.R. heroes, we have gender balance and multi-racial representation. They are a little older than the target audience, and they solve real world problems. Posters in the form of comic strips will show their exploits in various areas, beginning with the electricity sector, and soon to be followed by fast-food and possibly the health sector. Min and Max have their own website at www.minandmax.org.nz. The posters will adorn the walls of Maths classrooms throughout New Zealand.

Once students have had their interest piqued by the poster, they can read the brochure and take it home to their parents to convince them that O.R. is a worthwhile area of study and career. A side benefit here is that the parents also will become aware of O.R. which may lead to further consulting and employment opportunities.



Seed funding was provided by various O.R. groups at four universities, and an artist was contracted to put the ideas onto paper. At present the first poster and the brochure are nearly ready for distribution to every high school in New Zealand, the contributing universities, and various other venues. The main hold-up is funding. It is hoped that by the time this appears in print, a sponsor will be found for the first run of posters, and that ORSNZ will provide sponsorship for printing and distributing the brochure.

If anyone feels they can help with arranging poster sponsorship for a later poster, it would be greatly appreciated. Min and Max, the O.R. heroes, have the potential to provide a vibrant, interesting face to our discipline, and to encourage a healthy supply of excellent graduates to further the good of New Zealand.

To find out more and see the first poster and brochure in their penultimate form, visit www.minandmax.org.nz.

Nicola Petty

Meetings Calendar

**Symposium on Operations Research (OR2004),
Tilburg, The Netherlands
September 1, 2004 - September 3, 2004**
<http://center.uvt.nl/congres/>

**4th International Symposium of Data Envelopment Analysis, Birmingham, UK
September 5, 2004 - September 6, 2004**
<http://www.deazone.com/DEA2004/>

**Fourth International Workshop on Ant Colony Optimization and Swarm Intelligence, Brussels, Belgium
September 5, 2004 - September 8, 2004**
<http://iridia.ulb.ac.be/~ants/ants2004/>

**XV Meeting of the EURO Working Group on Locational Analysis, Saarbrücken, Germany
September 5, 2004 - September 8, 2004**
<http://www.orl.uni-saarland.de/EWGLAXV>

**International Conference of Numerical Analysis and Applied Mathematics 2004 (ICNAAM 2004), Chalkis, Greece
September 10, 2004 - September 14, 2004**
<http://www.uop.gr/~icnaam/>

**3rd International Conference on Artificial Immune Systems, Catania, Italy
September 13, 2004 - September 16, 2004**

<http://www.artificial-immune-systems.org/ICARIS-2004/icaris2004.htm>

**2nd Workshop on Approximation and Online Algorithms (WAOA 2004) Bergen, Norway
September 14, 2004 - September 17, 2004**
<http://www.ii.uib.no/algo2004/waoa2004/>

**Autonomous Computing and Agents for Business and Engineering Systems, Wellington, New Zealand
September 20, 2004 - September 24, 2004**
<http://www.aba-rd.org/>

**15th Mini-EURO Conference: "Managing Uncertainty in Decision Support Models", Coimbra, Portugal
September 22, 2004 - September 24, 2004**
<http://www.inescc.pt/mudsm2004>

**The 12th Biennial Computational Techniques and Applications Conference and Workshops (CTAC 2004), Melbourne, Victoria, Australia
September 27, 2004 - October 1, 2004**
<http://www.conferences.unimelb.edu.au/CTAC2004/>

**7th Annual International Colloquium on International Engineering Education, Providence, RI, USA
September 30, 2004 - October 3, 2004**
<http://www.uri.edu/iep>

**XII CLAIO (XII Latin-Ibero-American Conference on Operations Research), La Habana, Cuba
October 4, 2004 - October 8, 2004**

<http://www.cujae.edu.cu/eventos/claio>,
<http://www.viajesmercadu.com/eventos04/claio.htm>,
<http://www.dc.uba.ar/alio/index-en.htm>

**IEEE International Conference on Systems, Man & Cybernetics, Washington, D.C., USA
October 5, 2004 - October 8, 2004**

http://becat.engr.uconn.edu/IEEE_CSMC_2003/

**Tenth International Conference on Stochastic Programming, Tucson, Arizona
October 11, 2004 - October 15, 2004**

<http://tucson.sie.arizona.edu/SPX>

**INFORMS Annual Meeting Denver 2004 Denver, CO
October 24, 2004 - October 27, 2004**

<http://www.informs.org/Conf/Denver2004>

**ESMc'2004 (European Simulation and Modelling Conference), Paris, France
October 25, 2004 - October 27, 2004**

<http://www.eurosis.org>

**Fifth International Conference on Operations and Quantitative Management (ICOQM-V), Han yang University, Seoul, S. Korea
October 25, 2004 - October 27, 2004**

<http://icoqm-v.digital.re.kr>

**Decision Sciences Institute Annual Conference
Boston, USA
November 20, 2004 - November 23, 2004**

<http://www.bus.ucf.edu/dsi2004/>

**39th Annual Conference of the ORSNZ, Auckland, New Zealand
November 28, 2004 – November 29, 2004**

<http://www.orsnz.org.nz/conf>

**9th Annual International Conference on Industrial Engineering Theory, Applications and Practice, The University of Auckland, Auckland, New Zealand
November 27, 2004 - November 30, 2004**

<http://www.ijienet.org/ijie04/>

Operations Research in Railroads: Challenges and Opportunities, Fort Worth, Texas

December 5, 2004 - December 7, 2004

<http://www.bnsf.com/workshop.html>

**Winter Simulation Conference 2004, Washington, DC
December 5, 2004 - December 8, 2004**

<http://www.wintersim.org/>

**The Fourth International Conference on Electronic Business (ICEB2004), Beijing, China
December 5, 2004 - December 9, 2004**

<http://www.rccm.tsinghua.edu.cn/ICEB2004/>

**The 6th International Conference on Optimization: Techniques and Applications (ICOTA 2004), Ballarat, Australia
December 9, 2004 – December 11, 2004**

<http://www.ballarat.edu.au/ard/itms/CIAO/ORBNewsletter/ICOTA/welcome.shtml>

International Conference on Computational Methods (ICCM 2004), Singapore December 15, 2004 - December 17, 2004

<http://www.nus.edu.sg/ACES/ICCM2004.htm>

**15th International Symposium on Algorithms and Computation (ISAAC 2004) Hong Kong
December 20, 2004 - December 22, 2004**

<http://www.cs.ust.hk/~isaac04>

**Mathematics for Industry Study Group
MISG2005, Massey University, Auckland, New Zealand
January 24, 2005 – January 28, 2005**

<http://misg2005.massey.ac.nz>

**ANZIAM 2005, Napier, New Zealand
January 30, 2005 – February 3, 2005**

<http://www.math.waikato.ac.nz/anziam05/>

**2005 INFORMS Conference on OR/MS Practice: Applying Science to the Art of Business, Palm Springs, California
April 17, 2005 - April 19, 2005**

<http://www.informs.org/Conf/Practice05>

**17th Triennial Conference of the International Federation of Operational Research Societies 2005, Honolulu, Hawaii
July 11, 2005 - July 15, 2005**

<http://www.informs.org/Conf/IFORS2005/>

*Abstract deadline for the 39th Annual Conference of the ORSNZ
30 September 2004*

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