

# ORSNZ ANNUAL REPORT 2008

## President's Report

This President's report is my first after taking over the role from Professor David Ryan, who stepped down last year after four years service. We are all most grateful to David for his contributions to the society, particularly given the heavy demands placed on his time by his Engineering Deputy Dean duties. David's international standing has helped raise the profile of Operations Research in New Zealand, and contributed to the steady stream of distinguished visitors heading down under, many of whom have contributed at our ORSNZ conferences. David has agreed to stay on as a council member in the APORS/IFORS liaison role, and we are grateful for his continuing contributions.

### Membership

The table below shows our membership figures for 2008. The figures show the count of paid up members, while the bracketed figures show the additional count of members owing subscription fees. A reduced emphasis on collecting fees perhaps explains the increased number of unpaid members, particularly amongst students.

	2008	2007	2006	2005	2004	2003
Corporate Sponsors					2	3
Corporate Members	3	3(1)	3(1)	5(2)	5	5
Corporate Representatives	3		6	5	8	7
Life Members	1	1	1	1	2	2
Standard Members	50 (23)	52 (19)	62 (17)	77 (13)	91	94
Members (overseas)	7 (6)	8 (5)	8 (8)	17 (5)	8	14
Members (no branch)	4 (6)	10 (4)	11 (5)	16 (2)	12	13
Retired Members	8 (1)	7	5	5	5	4
Student Members	14 (30)	23 (16)	26 (18)	35 (19)	41	51
Total Membership	90 (66)	104 (45)	122 (49)	161 (41)	174	193

### Finances

As you will see in the Treasurer's report, I can report that our finances are in a healthy state. I wish to acknowledge the continuing contributions of our treasurer, John Paynter, who dedicates many hours of his time to keeping our financial records up to date. I'd also like to acknowledge the contribution of Lloyd Austin, who volunteered to act as our auditor this year in the absence of our regular auditor Paul Rouse. Auditing is a thankless task that saw Lloyd working weekends and late nights to assist the ORSNZ. We are very grateful to Lloyd for this.

### Visitors

Through its Visiting Lecturer program, the ORSNZ is assisting Assoc. Prof. Ted Ralphs of Lehigh University, USA, and Prof. Anita Schoebel of the University of Goettingen, Germany, to visit NZ. Ted Ralphs will be in NZ in January and February 2009. During his time he will be giving talks in Auckland, Wellington and Christchurch. Anita Schoebel will be in Auckland from 20 October 2008 to mid

March 2009 visiting the Engineering Science department, and will also be giving talks in the ORSNZ branches.

### **Newsletter**

Matthias Ehrgott continues to do an excellent job in putting together the ORSNZ newsletter. We are grateful for the continuing support we receive from HRS in printing the newsletters for us.

### **Council Meetings**

Thanks to the joys of Skype, the ORSNZ Council was able to meet virtually, with officers in Auckland being joined by Mark Johnston from Wellington. We also discussed a number of matters over email.

### **Online Conference Registration and Credit Card Processing**

A new innovation has been the introduction of on-line credit card processing for conference registration. This facility eliminates the normal paperwork required, reducing the load on our treasurer. In addition to his contributions as ORSNZ secretary, I would like to acknowledge the huge effort made by Hamish Waterer in helping integrate the credit card processing into our online conference registration system. Hamish puts in many hours of work each year to set up the conference registration system for the next conference, for which we are extremely grateful. This open source software is developed and maintained by Ulrich Speidel from the University of Auckland. We are very grateful to Ulrich for the ongoing support and development he provides.

### **Edelman Finalist**

One of our ORSNZ members, Mikael Rönnqvist, is to be congratulated on being a finalist for the 2008 Franz Edelman Award for Achievement in Operations Research and the Management Sciences. This is undoubtedly the most prestigious prize in Operations Research. Mikael is one of the contributors behind the project “Operations Research (O.R.) Improves Quality and Efficiency in Social Care and Home Help,” described as a “program that has brought improvements to the complex scheduling of more than 4,000 providers who help the sick and the elderly.” Well done, Mikael.

### **Conference**

We had a successful conference in Auckland in 2007, with excellent plenary addresses by Mike Trick, our visiting scholar, and Gerard Cachon. Mike gave a thought provoking talk on ‘The Science of Better and Better Together’, while Gerard’s presentation covered ‘Game Theory Applications in Operations Management’. The 2008 conference, being organized by Mark Johnston and his Victoria University team, is now just a few weeks away. Without a doubt, being a conference organizer is the most demanding role in the ORSNZ; thanks for all your hard work, Mark. I am looking forward to a most enjoyable and productive two days in Wellington.

Andrew Mason  
President

## **Treasurer’s Report**

The funds available at the start of the period were \$30,844.55. The funds at the end of the period were \$44,814.84. There is an excess of receipts over expenditure of \$13,970.29. This is mainly due to the conference, no student travel grants, no Daellenbach Prize, interest earnings, and the effort to minimise costs. In addition three annual costs (PO Box Rental, IFORS and RSNZ membership fees were not processed in the period – they are paid in the 2008/2009 year; \$230, \$191.46(est), \$334.63, respectively).

2007 conference made a profit, despite the low turnout, mainly due to the high sponsorship obtained by Golbon. Other expenditure (e.g. branch) was under budget due to the low level of activity in the branches during the year. Although one function held was given by Mike Trick to the wider Auckland community.

Over \$30,000 is now held on term deposit is continuing to be rolled over (matures 3 Jan 2007). Three 180-day receipts fell into the 2008 financial year, hence interest income is higher than it will be in 2009.

Liabilities from the previous year include the two subscriptions and PO Box rental. Conversely, one conference fee for 2007 had not been received, nor had some advertising income from the Newsletters.

We are trialling using a BNZ system to automate credit card receipts.

John Paynter  
Treasurer

### **Auckland Branch Report**

The Auckland Branch of ORSNZ continues to operate, but with little recognition as such. As one can see from this report, the activity of the Auckland Branch of ORSNZ this year is indistinguishable from the academic and outreach activity of the Engineering Science Department at the University of Auckland. A catalogue of this activity is listed below.

On February 29, some ORSNZ members participated in the World Gene Day, a sequence of workshops held around the world to commemorate the life and work of numerical analyst. Gene Golub (PhD supervisor of Michael Saunders), who died suddenly earlier this year. The workshop was held in the Department of Engineering Science with contributions from Andy Philpott, David Ryan, John Butcher, Jeff Hunter, Garry Tee, Rosalind Archer and Michael O'Sullivan, followed by a Yum Cha lunch. Details of the workshop can be found at [http://www.math.auckland.ac.nz/wiki/Gene\\_Day\\_in\\_Auckland](http://www.math.auckland.ac.nz/wiki/Gene_Day_in_Auckland).

We had short visits early in the year from ex-ORSNZ member Mark Craddock, now working for International Power in London, and Horst Hamacher from Kaiserslautern, who was here to officiate in the February oral examination for Matthias Ehrgott's PhD student Jenny Shao.

The Branch has also been enjoying the visit of Professor Gerard Cachon from the Wharton School, who is spending a sabbatical year in Auckland. He is enthusiastically contributing to the research of the OR Faculty in Engineering Science in areas ranging from the strategic analysis of airline pricing, to electricity transmission pricing, to modelling pricing-inventory games in dairy products.

Other visitors include Professor Kim Andersen from Aarhus in Denmark who visited Matthias Ehrgott from January to June, to work on problems of common interest in multi-criteria optimization, and Professor Sarah Ryan from Iowa State who visited the Engineering Science Department from March to July. She was working with Tony Downward, Golbon Zakeri and Andy Philpott on strategic behaviour in energy networks (combined fuel and electricity networks).

Also visiting the EPOC group in July were Dr Par Holmberg from Sweden and Dr Eddie Anderson from the University of Sydney. They are both experts in supply-function modelling of electricity markets. The EPOC group held an informal seminar at which Par and Eddie summarized their latest research on supply-function equilibria. This has moved on considerably from the symmetric models used in the 1990s, to models that deal with asymmetric players and different payment mechanisms (such as pay-as-bid). The development of computational algorithms has also advanced. EPOC held their annual industry workshop in September, and are hosting Professor Shmuel Oren from Berkeley in November.

In June and July the Department also hosted David Goodrich from the University of Arizona. David works in hydrology (an important topic in Tuscon) and has been researching methodologies for estimating water-catchment properties (e.g. soil permeability) from stream-flow data. He is also collaborating with researchers at NIWA.

David Ryan, Matthias Ehrgott, Stuart Mitchell and graduate students Oliver Weide, Andrea Raith, and Richard Lusby attended IFORS in Johannesburg in July, and Andy Philpott, Geoff Pritchard and Oddo Zhang attended INFORMS in Washington DC in October.

I have been Auckland Branch chair of ORSNZ now for seven years, and I feel that it is time for a younger person to take on this role. I feel that the Branch should seek to engage more socially with its constituents, and I am becoming less able to do this for various reasons. So this will be my last report in this role.

Andy Philpott  
Auckland Branch Chair

### **Wellington Branch Report**

We have had two branch talks in the last year. Dr Anne Wein (USGS) gave a Wellington branch talk in December 2007 on “Analysis of improved government geological map information for mineral exploration: incorporating efficiency, productivity, effectiveness, and risk considerations.” Craig McLeod (Orbit Systems) gave a great talk to the Wellington branch in April 2008. He spoke on “Vehicle Load

Building: Evolving Solution Techniques” which included some interesting (and very funny) stories about consulting with large companies on loading of trucks for regular short and long haulage.

It is all good news for Operations Research and Management Science at Victoria University of Wellington. Tony Vignaux is celebrating 40 years since joining the university as Professor of Operations Research in January 1968. We are celebrating the inclusion of Operations Research in the name of a new “School of Mathematics, Statistics and Operations Research” which comes into effect on 1st January 2009, together with a new “School of Engineering and Computer Science”. Victoria Management School is expanding with two academic appointments advertised in Operations Management/Decision Science/Systems, John Davies is stepping down from his role as Head of School after many years of dedicated service, and Vicky Mabin has been appointed Associate Dean, Teaching and Learning for Faculty of Commerce and Administration.

We have also been busy organising the ORSNZ’08 conference, which is taking place in Wellington on Monday 24th and Tuesday 25th November at Victoria University of Wellington. For full details and online registration, see the conference website at <http://www.orsnz.org.nz/conf/>. We are fortunate to have Craig MacLeod (Orbit Systems, Wellington) and Prof Anita Schöbel (University of Göttingen) as keynote speakers.

Mark Johnston  
Wellington Branch Chair

### **Christchurch Branch Report**

The Canterbury Branch of the ORSNZ has had a very low key year with no major ORSNZ events. Nicola Petty received an Erskine Grant to spend three months in the US visiting various Universities talking about the innovative teaching she is involved in. Ross James is in the middle of a year-long sabbatical with Dr Terri Green having recently returned from hers. John Raffensperger has two PhD students involved in his water market research. Ranga is well into her research and Antonia has just recently started.

Shane Dye  
Christchurch Branch Chair

### **Newsletter Editor’s Report**

In 2008, two issues of the newsletter have been published: April 2008 (20 pages) and July 2007 (16 pages). I planned an October/November issue before the conference but because of a lack of contributions that seems unlikely to have happened by the time of the conference. I thought it would be a good idea to have a newsletter issue before the conference with the programme.

The printing by Hoare Research Software runs very smoothly and I am grateful to HRS for the continuing support of our society. We have had two adverts in both issues, one each by kinetic, one by Oxford University press (April) and one by Air NZ (July).

We've had problems getting the last newsletter (July) distributed and it went out much later than expected. Unfortunately that meant that the Air NZ ad was pointless and was not paid as a consequence.

As usual, I would like to thank those people who sent more or less unsolicited contributions or allowed me to reprint their articles, thereby sustaining the newsletter: John Scott, Les Foulds, David Ryan, Golbon Zakeri, Fernando Beltran, Lizhen Shao.

Unfortunately, branch chairs have to be reminded often to send news from the different chapters. Overall there seems to be no interest in contributing to the newsletter at all. I would like to discuss whether it should be stopped altogether.

Matthias Ehrgott  
Newsletter Editor