

# The New Zealand Statistical Association

# Newsletter

Number 61 March 2005

# NZSA05, University of Otago, 4-6 July, 2005

You are invited to the 2005 New Zealand Statistical Association Conference, to be held at the University of Otago, Dunedin, 4-6 July 2005.



## **Major Themes**

Statistics at the Frontiers of Science, Bayesian Inference, Large Data Sets.

# **Invited Speakers**

Emery Brown (Harvard Medical School), Satish Iyengar (University of Canterbury), Mark Berman (CSIRO), Renate Meyer (University of Auckland), Kerrie Mengersen (Queensland University of Technology), David Baird (AgResearch).

# Call for papers

We invite abstracts for oral and poster presentations at NZSA05, especially those that relate to one of the MajorThemes. We particularly encourage contributions from young statisticians and from students. Abstract submission is available through the website.

### Venue

All sessions will be held at Salmond Hall, University of Otago. This Hall will also be used to accommodate participants, and is ideally located, being close to campus, the Dunedin Botanic Gardens, shops, bars and restaurants. Motel accommodation is also available close to the venue. The city centre is a 20-minute walk away, along historic George Street. The bed-and-breakfast rate at Salmond will be \$43 per night, which includes rooms made up with fresh linen, towels and soap. A buffet-style dinner will also be available at \$22.50. There will be a conference dinner on the Tuesday night (5th July).

# **Web Page**

http://www.maths.otago.ac.nz/nzsa2005/home.php

### **Contact**

Irene Goodwin, Centre for Applications of Statistics and Mathematics, University of Otago (casm@maths.otago.ac.nz)

### Registration

A registration form is available for download via the conference web page. The registration fees (inclusive of GST) are as follows:

Before April 30, 2005

NZSA Members	NZ\$220
Non-Members	NZ\$270
Students	NZ\$110

After April 30, 2005

NZSA Members	NZ\$270
Non-Members	NZ\$320
Students	NZ\$135

### **Young Statisticians**

The NZSA has some funds available to support students at New Zealand Universities travelling to the conference. The amount available depends on how many students apply and the distance each has to travel. Any student interested in travel support should contact Jennifer Brown (J.Brown @math.canterbury.ac.nz). First year membership of the NZSA is free to students. Prizes for the best student presentations will be awarded by Hoare Research Software.

### **Satellite Workshop**

A 3-day workshop on "Introduction to Hidden Markov Models and their Applications in New Zealand" will be held in Wanaka during the week preceding the conference (29 June to 1 July). This is the first event in an NZIMA Programme that will run workshops and seminars during the second half of 2005.

# **Workshop Web Page**

http://nzsa.rsnz.org/HMM1/index.htm

# **Workshop Contact**

Roger Littlejohn (roger.littlejohn@agresearch.co.nz)

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# President's Column



The Royal Statistical Society is upset (<a href="http://www.mathsinquiry.org.uk">http://www.mathsinquiry.org.uk</a>). An "Inquiry" studying the mathematics curriculum in English secondary schools has recommended that Statistics be dropped from the mathematics curriculum and taught instead as part of subjects

that use Statistics. (The Inquiry was convened by Professor Adrian Smith, FRS, himself a statisticiansee <a href="http://www.rss.org.uk/pdf/press">http://www.rss.org.uk/pdf/press</a> release.pdf.)

One immediate reaction that I have to this is that regardless of the merits of the proposal, it will be easier to implement the first part of the change (dropping statistics from school mathematics) than the second (integrating statistics into the teaching of other subjects). I suspect that, if the recommendation is followed, only the first part will get implemented.

But let's leave *realpolitik* aside for a moment and try to think about where statistics *should* be taught in schools. My impression is that most New Zealand statisticians are now quite emphatic that statistics is *not* part of mathematics and is centred instead around principles for the collection and interpretation of data. Probability, by contrast, clearly is part of mathematics. It *seems* then that there is some justification for the Inquiry's viewpoint that statistics does not belong in the mathematics curriculum.

But what about the other side of the coin: should statistics be taught inside the subjects using it? There are some problems with this. First of all, a very large proportion of teaching in a subject consists of communicating what is known, rather than how it came to be established. Statistics has no part in this, though it often will have helped establish the facts being taught. The most natural place where statistics comes in is in interpreting experimental results. Experiments are an important part of the science curriculum but they are expensive in resources and in staff and student time and can be somewhat stressful experiences from which much has to be learnt. I remember finding the calculations involved in tracking error in a Physics experiment to be formulaic and arcane.

OK - I won't go on any further because I will overrun my column. What I really wanted to say was this. There are lots of issues in NZ High School Education today. For example, internal assessment versus external examinations and comparing achievement with a standard or with the achievements

of one's classmates. And in New Zealand, just as in the UK, there is debate about the way in which statistics is taught at secondary schools and how this will change as the system continues to be tinkered with.

The NZSA has an Education Committee that is involved in the process of educational change. But I do not think that the rest of us should merely sit back and leave the task to them. As statisticians and as parents we have a big stake in the educational system and the debates that surround it. If you have anything to contribute on any issue you should not hesitate to let the Education Committee (Secretary Lesley. Hooper@stats.govt.nz) know about it. (And I'd be quite interested in any comments myself! - maj@stats.waikato.ac.nz)

Murray Jorgensen

# NZSA Visiting Lecturer

Professor CR Rao is the 2005 NZSA Visting Lecturer. See <a href="http://nzsa.rsnz.org/visiting-lecturer-2005.shtml">http://nzsa.rsnz.org/visiting-lecturer-2005.shtml</a> for details of his visit, and contact Prof. Jeff Hunter (j.hunter@massey.ac.nz) for any further information.



# **Public Itinerary**

14 March: U. Otago seminar.

15 March: U. Canterbury seminar.

17 March: Victoria U. seminar.

18 March: Massey U. Palmerston North seminar.

22 March: WCAS workshop (see below).

23 March: U. Auckland seminar.

29 - 31 March: Public Lecture and 14th IWSM, Massey U., Albany (see page 4).

# Data Scrutiny and Data Mining: WCAS One-Day Workshop

Professor C R Rao

Emeritus Holder of the Eberley Family Chair in Statistics and Director of the Center for Multivariate Analysis at Penn State College of Science

Tuesday 22 March, 2005 McMeekan Centre, Ruakura, Hamilton Details are on the website: http://www.stats.waikato.ac.nz/

# **NZSA Website**

The NZSA website, now hosted by the Royal Society of New Zealand at <a href="http://nzsa.rsnz.org/index.shtml">http://nzsa.rsnz.org/index.shtml</a>, has recently been updated. Please send any feedback to Roger Littlejohn (roger.littlejohn@agresearch.co.nz).

# **Editorial**

This issue of the newsletter brings a lot of updated conference news, as we head into a very intensive month of conferences. Best wishes to all the organizers in New Zealand, Australia and New Caledonia for the smooth running of their meetings.

Our own conference is also coming up in just over three months in Dunedin. There will be a strong focus on Statistics in Science. Members have also indicated that there are statistical topics in Education they wish to address in depth, as would be expected since these issues have had a high profile in the media over recent months. In addition to the details given on page 1, there will also be a Monday night activity planned for young statisticians, which will be right into Dunedin's famous student culture. Details will soon appear on the conference website.

I am grateful to William Warren, a member of 50 years standing who is now resident in Canada, for the historical reminiscences he sent (pages 8-9), and to David Vere-Jones for providing a photo taken during Boris Gnedenko's visit to Australasia.

Thanks also to Graeme Wake and Ken Russell for material they supplied on January's MISG at Albany. Their particular point is that it would be great to have more participation from statisticians at future MISGs.

Roger Littlejohn



NZSA Visiting Lecturer, C.R. Rao, presenting his seminar on Cross Examination of Data at University of Otago on 14 March.

# Len Cook and the Royal Wedding

Former NZ Chief Statistician, now National Statistician and Registrar General for England and Wales, Len Cook (right), has dismissed eleven legal objections to the wedding of Prince Charles and Camilla Parker Bowles.



See <a href="http://nzsa.rsnz.org/">http://nzsa.rsnz.org/</a>

Newsletter61/Len Cook.htm for links to this story from a variety of news sources or Google it - I got 4510 hits.

At the 55th Session of the ISI, Len will become one of three Vice-Presidents of the Institute.

# **Submissions to the Newsletter**

The Newsletter welcomes any submissions of interest to members of the New Zealand Statistical Association. News about New Zealand statisticians, statistical meetings, statistical organisations, statistics in education, or statistical curiosities are suitable for inclusion. Letters that raise issues of importance to statistics in New Zealand are also welcomed. Photographs of recent gatherings and new appointees are of particular interest. Electronic submissions are preferred.

Next deadline 12 August, 2005.

# **Advertising In the Newsletter**

The Newsletter accepts advertising of interest to statisticians in New Zealand. Advertising is placed subject to space considerations. Personal advertising by NZSA members will be published free. Other advertising is \$250 per page, \$140 per half page, and \$75 per quarter page. Other sizes can be quoted on request. All advertising requests should be directed to the editor.

### **Editor**

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# **Newsletter on Web**

An online version of this newsletter is available at <a href="http://nzsa.rsnz.org/Newsletter61/index.htm">http://nzsa.rsnz.org/Newsletter61/index.htm</a>
It will be regularly updated with information and your letters.

Email: roger.littlejohn@agresearch.co.nz

# 14th International Workshop on **Matrices** and **Statistics**



Massey University, Albany Campus, Auckland, New Zealand March 29 - April 1, 2005

The purpose of the Workshop is to stimulate research and foster the interaction of researchers in the interface between statistics and matrix theory in an informal setting. It will provide a forum through which statisticians may be better informed of the latest developments and newest techniques in linear algebra and matrix theory and may exchange ideas with researchers from a wide variety of countries.

# Supported by the NZSA Satellite meeting for 55th Biennial Session of the ISI, Sydney 5-12 April, 2005

The conference will have a wide variety of invited and contributed papers. Participants are recommended to register on the website http://iwms2005.massey.ac.nz.

### **Keynote Speakers**

C R Rao (Pennsylvania State U., USA), Shayle Searle (Cornell U., Ithaca, N.Y., USA), George Seber (U. Auckland), Eugene Seneta (U. Sydney, Australia)

# **International Organising Committee**

George Styan (Chair) (McGill U., Montreal, Canada) styan@math.mcgill.ca, Hans Joachim Werner (Vice Chair) (U. Bonn, Germany), Simo Puntanen (U. Tampere, Finland)

### Chair, Local Organising Committee

Jeffrey Hunter (Massey U., Auckland, NZ) j.hunter@massey.ac.nz

# **Sponsors**

Massey University, NZIMA, RSNZ, NZSA, SNZ, Nokia, SAS, NZMS

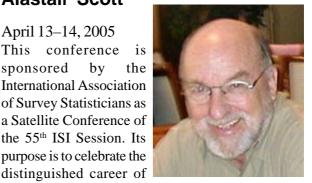
# **Excursion**

An excursion will be held on the afternoon of Wednesday March 30th. This will involve a ferry trip to Waiheke with participants choosing either a visit to a Vineyard for wine tasting or a visit to a local Museum.



# Complex sampling, retrospective sampling and missing data: A Conference in honour of Alastair Scott

April 13-14, 2005 This conference is sponsored by the **International Association** of Survey Statisticians as a Satellite Conference of the 55th ISI Session. Its purpose is to celebrate the



Professor Alastair Scott on the occasion of his retirement from the University of Auckland. Starting his career in the Applied Mathematics Division of the DSIR and after graduate study at the University of Chicago, Alastair was on the staff of the London School of Economics before returning to New Zealand in 1972 and joining the University of Auckland, where he became the founding head of the Department of Statistics when it was formed in 1994. He is a past president and Honorary Life Member of the NZSA.

Alastair has made many fundamental contributions to the analysis of survey data, often in collaboration with J.N.K. Rao and T.M.F. Smith. His 1981 JASA paper with Jon Rao was selected as one of the 19 landmark papers in the history of survey sampling for the 2001 IASS Centenary volume. He has guided the official statistics agencies in Australia and Canada as well as Statistics New Zealand. He has also made fundamental contributions to many other areas of statistics including the design and analysis of retrospective studies extending classical results for case control studies.

The conference is to be held in the Auckland Maritime Museum, immediately following ISI 55 in Sydney. The first day will be devoted to survey sampling and the second to applications and medical and general statistics.

Confirmed invited speakers include:

David Brillinger (University of California, Berkeley), Ray Carroll (Texas A&M University), Ray Chambers (University of Southampton), Wayne Fuller (Iowa State University), Steve Haslett (Massey University), Jack Kalbfleisch (University of Waterloo), Graham Kalton (Westat), John Neuhaus (University of California, San Francisco), Danny Pfefferman (Hebrew University, Jerusalem and University of Southampton), Jon Rao (Carleton University).

Registration details can be obtained from the website <a href="http://www.stat.auckland.ac.nz/iass55/">http://www.stat.auckland.ac.nz/iass55/</a>.



# **IAOS Satellite Meeting**

Wellington, April 14-15, 2005

The International Association of Official Statisticians satellite meeting on challenges in "Measuring Small and Indigenous Populations" will be held at Te Papa Tongarewa/Museum of New Zealand, Wellington, on 14-15 April 2005, and will be hosted by Statistics New Zealand. Te Papa Tongarewa is a high-quality conference venue, situated close to all facilities, and is right on the Wellington waterfront.

While the main focus is on methodological issues, the conference will be of direct interest to economic and social researchers, as the theme encompasses the challenges of measuring small domains in economic, social and population statistics. The conference programme and abstracts of proposed papers can be accessed on the Statistics New Zealand website <a href="http://www.stats.govt.nz/ISIsatellitemeeting">http://www.stats.govt.nz/ISIsatellitemeeting</a>.

The conference programme will consist of four keynote plenary sessions and an array of concurrent sessions. It covers a rich diversity of papers on statistical and indigenous population issues, including statistical methods used to collect information in censuses or other large-scale surveys; measurement and improvement of data quality; the derivation of indicators on indigenous populations, communities or subnational areas; statistical use of administrative data sources; experience with data integration initiatives; small area estimation; other new developments in satisfying the growing demand for disaggregated statistical measures. The conference has drawn participants from Asia, Australia, Latin America, New Zealand, Pacific Islands, Europe and North America, and will provide a valuable opportunity for establishing contacts with national and international experts researching statistical and indigenous population issues.

The registration fee for the two-day conference is \$NZ350 (incl. GST), with student registration just \$NZ50. This includes morning and afternoon teas, and lunches on 14-15 April, and the pre-conference reception on 13 April. The conference dinner will be on Thursday 14 April at the Wellington Brewery Company (\$NZ80). The formal registration form and other information for conference delegates are available on the conference website.

# "Introduction to Hidden Markov Models and their Applications in New Zealand" Workshop

The first workshop in the Hidden Markov Models & Complex Systems Programme will be held at the Lake Wanaka Centre, Wanaka, during the week preceding the NZSA conference (29 June to 1 July). Its emphasis will be to establish a network of practitioners within New Zealand. It will include post-graduate level tutorials, an opportunity for all practitioners to describe their research, and some expert contribution.



# **Invited Speakers**

Emery Brown (Harvard Medical School) Mark Berman (CSIRO) Rolf Turner (University of New Brunswick)

# Call for papers

NZ scientists using or thinking of using HMM methods are invited to give presentations, including a description of the context and the problem the models may help to solve, and any ideas about models and procedures that have been developed.

# Registration

The registration fee is \$200 - this will be partly covered by an NZIMA grant of \$150 for NZ residents. Other costs: workshop dinner (\$50), winery tour (\$10).

# **Logistics**

Some accommodation close to the venue has been reserved through the workshop - see the webpage for details. Participants can fly in through Queenstown or link up with someone who is driving through from a South Island location.

### **Students**

An NZIMA subsidy of \$400 (North Island) and \$250 (South Island) is available to help cover much of the cost for students attending the workshop.

### **Workshop Web Page**

http://nzsa.rsnz.org/HMM1/index.htm

### **Workshop Contact**

Roger Littlejohn (roger.littlejohn@agresearch.co.nz)



# 55<sup>th</sup> Session of the ISI 5-12 April, 2005 Sydney, Australia

Registration is now open for the world's premier statistical conference - the 2005 International Statistical Institute (ISI) Session - scheduled for Sydney, Australia, 5-12 April 2005.

Don't miss this a great opportunity to attend an ISI Session in Sydney and take advantage of this cost effective and enjoyable way to stay in touch with the latest statistical developments.

### Venue

The 55<sup>th</sup> Session of the ISI will be held at the Sydney Convention and Exhibition Centre, Darling Harbour.

# **Scientific Program**

A diverse and cutting edge Scientific Program has been developed for the 2005 ISI Session and includes Invited Paper Meetings, Contributed Paper Meetings, Key Note Speakers, Poster Sessions, Tutorials and Short Courses. Theme days will cover Statistics and Finance, Environmental Statistics and Genomic Data

Geoff Lee, Local Program Committee Chair and Head of ABS Methodology Division said "... the Invited Program is shaping up really well". "The opportunity to attend a Session of the ISI in Australia is a once in a lifetime opportunity".

All the details for the Scientific Program, including the list of Invited and Contributed Paper Meetings, are listed on the 2005 ISI website at <a href="https://www.tourhosts.com.au/isi2005">www.tourhosts.com.au/isi2005</a>

# Keynote speakers confirmed!

Renowned mathematical biologist Lord Robert May, econometrician Professor Clive Granger and Deputy Governor of the Reserve Bank of Australia Glenn Stevens have been confirmed as key speakers at the 2005 Session of the International Statistical Institute (ISI) scheduled for Sydney next April 5-12.

### **Social Program**

The Social Program will be a highlight of the Session and has been designed to provide participants with an opportunity to relax, experience a taste of Australian culture and maximize networking opportunities. See the website for more details.

### **Tours**

A range of mid-Session and pre and post Tours will be provided for delegates and accompanying persons.

### **Register NOW!!**

The final registration form is now available on <u>www.tourhosts.com.au/isi2005</u>. To register please visit the Session website and complete the online registration form.

For more details on the 2005 ISI Session see <a href="www.tourhosts.com.au/isi2005">www.tourhosts.com.au/isi2005</a> or email the conference managers on <a href="mailto:isi2005@tourhosts.com.au">isi2005@tourhosts.com.au</a>.

### **Contact Details**

ISI 2005 Conference Managers GPO Box 128

Telephone: +61 2 9248 0800

Fax: +61 2 9248 0800

Sydney NSW 2001

Email: <u>isi2005@tourhosts.com.au</u>
Website: www.tourhosts.com.au/isi2005

# **Key Dates**

4 March, 2005 – Speakers to email their presentation to the Conference Managers

4 April, 2005 – Registration for the Session

commences

5 April, 2005 – Session opens 12 April, 2005 – Session closes

# **Thredbo Statistical Meeting**

The conference of the Australasian Region of the IBS and GenStat Users Association was held at the lovely Thredbo Village alpine resort, in Kosciuszko National Park, NSW. The conference's major themes were; Model Selection, Multivariate Analysis, Joint Modelling of Discrete Longitudinal Data, Capture/Recapture, MCMC and Splines. For more details, or a copy slides from the talks, check out their website: <a href="http://www.maths.anu.edu.au/thredbo2005/?page=program">http://www.maths.anu.edu.au/thredbo2005/?page=program</a>.

Aside from attending the numerous interesting talks, conference-goers delighted in taking part in the Thredbo Challenge. Here teams gained points for participating in a wide range of activities such as hiking to the summit of Mt Kosciuszko (Aussie's tallest peak! - pictured below with Vanessa Cave, Neil Cox and Esther Meenken at the summit), fishing, swimming, bob-sleighing, tennis, wine-tasting, etc. .... Oh, and of course the ability to exaggerate, or put a spin on, what the team had *actually* done.



The conference dinner, themed "A Man from Snowy River" certainly saw many a Statistician let their hair down, and was perhaps the cause of a few jaded faces the following morning. Still when there's a bush band providing the entertainment, it would be a crime not to enjoy oneself!

Vanessa Cave

# ASC/NZSA 2006

Planning is continuing for the 2006 joint conference between the SSAI and the NZSA, to be held in Auckland, from July 3-7, 2006.

The Program Committee chaired by William Dunsmuir from the University of New South Wales (w.dunsmuir@unsw.edu.au) is currently working on plans for sessions and invitations to speakers.

Professor David Donoho of Stanford University has accepted our invitation to be a keynote speaker at the conference.

I am very interested in any suggestions from members regarding possible sessions and invited speakers. If you have any suggestions please email me (d.scott@auckland.ac.nz).

I consider the provision of short courses and/or workshops to be a very important adjunct to the traditional conference format and I would be very interested in receiving suggestions as to possible topics and presenters for these.

David Scott

# In Memoriam

2004 saw the passing of a Gentle Lady of Statistics. In March, Fay Sharples died quite unexpectedly, despite having been dogged by ill-health for a



number of years. She is sorely missed in a number of circles, not just among statisticians.

Fay was born and educated in Britain. She gained a degree in chemistry from Bedford Lodge in London. In the sixties she and her husband David moved to NZ with their two daughters, Sally and Katrina. David worked as a GP in Hamilton and Fay decided to return to study, completing a Masters in Statistics from U. Waikato. Following her graduation, she worked part-time in the Dept of Maths and Stats, first as a Lecturer and then as a Senior Lecturer. She continued in this role until her retirement, due to ill-health at the end of 1994.

Her main contribution to the University was her desire to help and encourage the weaker students in their endeavours to "get to grips" with Statistics. Her gentle manner put many students at ease. Many people who were on campus during her years here will also remember her cat Tosca, who became the "Cat-in-Residence". His visits to the campus, where he made friends with all and sundry, were quite legendary.

Fay was also involved in many activities outside the university. She is well remembered for her contributions to the Federation of University Women, and she was also a member of the Alumni Association and the Chamber Music Society. Following her retirement, she continued with these activities as much as her health permitted. Before her illness, she enjoyed many happy days sailing with her family and spending time at her holiday home in Raglan. She was an avid reader, devouring books at an amazing rate and embraced digital camera technology with a passion.

She is survived by her husband David, daughters Sally, a lawyer in Baltimore, and Katrina, a statistician in Dunedin, and also three grandchildren.

Judi McWhirter

# Reminiscences

To mark my 50 years of membership in the NZSA, it seemed to me fitting that I record some reminiscences of my early days in the Association. I cannot claim to be one of the real pioneers of statistics in New Zealand, but I was not too far behind. I joined the NZSA in 1954, only 5 years after its first conference. During my visit to New Zealand in 1997, Stan Roberts asked me if there was anything I could contribute to "A History of Statistics in New Zealand" that he was preparing. Subsequently I did send Stan some material; I should, perhaps, have sent more. Reading through the History brought back many more memories; it is debatable whether these would, or even should, have found their way into the History, but I would like to reiterate some of these in the hope that readers of the Newsletter will find them of interest or amusement. Before going further I must state my deep appreciation for the time and effort that Stan put into the compilation of the History; few people have been so dedicated to a project carried out for the benefit of others. I regret that Stan had passed on before I could thank him personally.

The History mentions my secondment, in 1954, from the Forest Research Institute, in Rotorua, to what was then the Applied Mathematics Laboratory. I was fresh out of Auckland University College with a M.Sc. in mathematics, to which I had added, as part of an uncompleted B.A., the unit in Mathematical Statistics, under Frank Haight. As I recall, this was the second year that it was offered and there were only two of us doing the course for credit. I still have copies of the examination papers and would have to conclude that it was a fairly substantial program; it contained elements of three or four courses, as the subject would be taught today. Although I passed, I had little appreciation as to what the subject was really about. I could derive the t distribution but had no idea what it was for. In those days I viewed the subject as another branch of mathematics to be absorbed, rather than as a separate discipline that uses mathematical tools. Evan Lewis had just put in his resignation as Forest Biometrician and, for the want of any other viable candidate, it seemed to be felt that I had the background to be groomed as his replacement.

AML was at that time at 21A Courtenay Place. The A was significant; it corresponded to a recessed entrance that I initially walked past at least three times before finding it. I was not alone in this. Bill Taylor, who was more or less my mentor in those months, told the following. Telephone rings; Bill Taylor: "Applied Mathematics Laboratory, Taylor here". Voice: "I have a delivery for you – where are you?" Bill Taylor: "Where are you calling from?" Voice:

"From the phone booth in Courtenay Place". Bill looks out the window, "Ah yes, I see you".

Although I interacted primarily with Bill Taylor, I was also guided by Bob Williams, Stan Roberts and, in particular, John Darwin and Peter Whittle. Hamish Thompson, like myself a Takapuna Grammar School old boy, returned to New Zealand from Manchester shortly before I was recalled to Rotorua.

It was in those six months in Wellington that I first met Ken Seal. He arrived with a nice time series of whitewear losses, which, for some reason, Bill Taylor passed on to me. Had I known more about time series I would no doubt have undertaken a spectral analysis or, at least, constructed a correlogram. However, in my ignorance, I simply lined the data up with the days of the week, morning or afternoon, and found that most of the losses occurred on Friday afternoons or Monday mornings – the exception was Tuesday mornings, after a long weekend, for which the losses were, if anything, even worse.

In the History, Ken refers to the set of experiments at Amalgamated Brick and Pipe that resulted in the doubling of the rate of production, reduced loss, the use of less rare material and an improved final product. I remember visiting him one day when I happened to be in Auckland. Fortuitously it was the day of the first of their major breakthroughs. Ken was even more effervescent than usual: "Oh, I am so glad that you came today". It was successes like this that enabled him to build up that small and effective group he refers to in the History. I cannot recall ever coming across a stronger advocate for the use of statistical methods in industry – and not just his own industry or firm.

There is a loose connection between Ken and the visit by Sam Wilks in 1956. On the evening of the day that Prof. Wilks gave his presentation at the annual meeting of the NZSA, he and Mrs Wilks were, of course, the guests of honour at the traditional cocktail party, which, not surprisingly, was extremely well attended. When Sam and his wife had to leave, the crowd dissipated rather rapidly, leaving a number of opened liquor bottles that the few of us remaining felt should not be allowed to go to waste. In addition to Ken and myself, there were, as I recall, Shayle Searle, Errol Jones, Al Rae and Vince Barry (from FRI, and later CSIRO). Memories of the evening are rather vivid; suffice it to say that the following morning I was unable to face breakfast but somehow managed to stagger into the meeting on time.

A few days later Wilks and his wife visited Rotorua, so I volunteered myself as a guide, the FRI being adjacent to the Whakarewarewa Thermal Area. He was most interested in seeing boiling mud pools but, after the rains of the previous few days, these were rather dampened down and not performing up to expectation. Anyway, I scurried around and finally found a mud pool that was bubbling away reasonably well and led the Wilks to it. Sam took out his camera and moved in to take a close-up shot. At this point the pool decided to excel itself and splattered him with mud. I felt as if I wanted a crack in the ground to open into which I could disappear, but Sam turned around with a big grin on his face and said "Wasn't that something, wasn't that something?" The following day I received a letter of thanks.

About three years later, as a first-year Ph.D. student at the UNC, Chapel Hill, I attended the annual meeting of the ASA in Washington DC. Wilks gave the Wald lecture. At the end of his presentation I moved in his direction with a view to reintroducing

myself. He was in conversation with Jerzy Neyman (right) but must have caught sight of me out of the corner of his eye. He broke off his conversation with Neyman, strode over to me, shook my hand and then asked if it would be OK if he finished



his conversation with Neyman before coming back to talk with me. I never did find out whether my fellow students and faculty from UNC were duly impressed by this.

I also had the pleasure of playing host to B.V. Gnedenko, along with David Vere-Jones (both pictured below with Mary Vere-Jones and Ludmilla Seneta), when he visited the Rotorua area. Although Gnedenko had some command of English, David had become so accustomed to providing translation that, when we visited the Wairakei geothermal power project, he put Gnedenko's comments into Russian for my benefit.

I arranged a visit to the small O.R. Group that New Zealand Forest Products had set up at the Kinleith Mill at Tokoroa. Somehow the brass upstairs learned of the visit by a distinguished Russian and put on an elaborate afternoon tea for us. During this, one of the management-level types approached Gnedenko and said something like "Before the war



in 193X, I was involved in putting in a mill at XXX and the engineer I worked with was YYY; I wonder if you know him?" My thoughts were something along the line "What is the matter with this guy?' coupled with a feeling of embarrassment. However, Gnedenko simply replied "Yes, I will be sitting on committee with him in Moscow next week."

Finally we visited Prof. Sawyer of the Department of Mathematics at the newly formed University of Waikato. There were a number of questions between Sawyer and Gnedenko. One question by Prof. Sawyer prompted a seemingly endless conversation in Russian between David and Gnedenko at the end of which David turned to Sawyer and said, "He says yes".

I was privileged to have come into statistics at a time when many of the builders of the subject were still active. I was fortunate enough to have been at Chapel Hill (North Carolina) towards the end of its "golden age". Harold Hotelling was still giving lectures. (The story is that he agreed to come to Chapel Hill and set up the Department of Statistics under the condition that he was paid more than the football coach, thereby becoming the highest paid member of the university faculty.)

Gertrude Cox headed the Institute of Statistics. It has been said that she never forgot a face or a name to go with it, and I am prepared to believe it; although I had very little contact with her, several years later at the IBS meeting in Sydney in 1967, she knew exactly who I was and what I had done. We were 'encouraged' to take courses at NCSU, in Raleigh, even to the extent that we could use the departmental car whenever available, and if not they paid us mileage. Raleigh students also traveled to Chapel Hill, where I was studying under R.L. Anderson. Among the distinguished statisticians who visited the department while I was there were M.G. Kendall, Harold Cramer, Geoff Watson, Jim Durbin and, at NC State, R.A. Fisher. While I was waiting for my final oral and since I was the one student available with an NC driver's license I was assigned to pick up N.L. Johnson at the Raleigh-Durham airport.

But it was not just statisticians that came to Chapel Hill; there were performances by several of the top entertainers of the day, but, more memorable were the addresses I attended by John Kennedy, Martin Luther King Jr., Linus Pauling, Henry Cabot Lodge (Nixon's running mate in 1960) and, at nearby Duke University, Adlai Stevenson. Finally, as a delegate to the Williamsburg International Assembly, I listened to, met and chatted with, then, Senator Hubert Humphrey. Well, that's enough name-dropping, although I could be tempted to write about my 50 years of (mis)adventures in statistics.

William Warren

# **Education Committee**

The statistics paper in the controversial 2004 Scholarship exams seems to have avoided the problems and debate surrounding many other areas such as the sciences and the languages. The percentage of students gaining scholarships in statistics is roughly comparable with previous years (2.7% in 2004, 3.7% in Bursaries 2003) and anecdotal feedback from some teachers indicates they were happy with it. This has been in part due to the influence the NZSA has been able to have. Our good relationship with both the Ministry of Education and the NZQA has allowed us input into these as well as the NCEA assessments. We have also been able to have significant input into the development of the new Mathematics and Statistics curriculum.

Here are some details. In this first Scholarship exam, 315 students achieved the Scholarship award in the subject now called 'Statistics and Modelling'. That is 2.7% of the 11,674 who entered NCEA Level 3 in the subject. For Maths with Calculus, 242 students achieved Scholarship; 3.3% of 7,347. Over all 27 subjects, 2.1% achieved Scholarship.

If you'd like an interesting little activity, please find the 2004 Scholarship 'Statistics and Modelling' exam (see EdLinks), and send us your comments. We hope you'd all pass it!

The scheduled NCEA Level 3 and Scholarship subjects both ran for the first time last year, and hence therefore are now scheduled for review. We are represented on the review panel for 'Statistics and Modelling' by Alasdair Noble. For NCEA Level 3, we'll be seeking to make it easier to teach and checking for anomalies (like whether we should teach students to fit straight lines to time series). For Scholarship, we'll be seeking to preserve and enhance the 'statistical thinking' focus. The 'standards' for all these make interesting reading. We'd love to get your comments. See EdLinks.

The review of the curriculum has got to a stage where a review of the world literature in statistical education has been done, and the curriculum document is being drafted. Our representative, Maxine Pfannkuch, is leading the group that is writing the statistics strand. That's one of the three strands in the new maths curriculum. We were impressed that the Ministry's February conference for numeracy facilitators had time devoted to statistics, and a plenary speaker (Jane Watson from Tasmania) who is a leading statistical educator. Maxine addressed this conference also, and Alex Neill added to our presence. It is great that so many of our suggestions have been actioned, but we need to keep actively involved in the writing process to ensure statistics is

given a fair go.

Our NZSA-sponsored speaker at the NZ Association of Maths Teachers conference in Christchurch in September is Helen Chick, of Melbourne. She shares our views that statistical education can be "useful, fun, manageable, non-threatening, full of fascinating possibilities, interactive and in a state of exciting change!"

Our goals for the year include strengthening links with the rest of NZSA; something we can't do on our own, but we're planning some initiatives.

Mike Camden

# **EdLinks**

# Level 3 NCEA external assessments and standards (stats and calculus materials)

http://www.nzqa.org.nz/ncea/assessment/exemplar/index.html

Search:

Mathematics / Assessment materials / level 3
Mathematics / Achievement standards / level 3

# The scholarship paper

http://www.nzqa.org.nz/qualifications/ssq/scholarship/subjects/subjects05.html

### **Internal assessments for NCEA**

http://www.tki.org.nz/e/community/ncea/resources.php

Choose: Mathematics

### Statistics about exams

http://www.nzqa.org.nz/qualifications/ssq/statistics/index.html

### Matrix for NCEA Maths

http://www.minedu.govt.nz/index.cfm? layout=document&documentid=7019&data=l

# **Accessing ANZJS online**

# **Blackwell Synergy**

Members will shortly receive instructions and a new password from Blackwell Publishing on how to log-on to the *Australian and New Zealand Journal of Statistics* online directly through Blackwell Synergy (www.blackwell-synergy.com) - for fast and reliable access everytime.

# **StatsWeb**

See <a href="http://nzsa.rsnz.org/newsletter/News60.pdf">http://nzsa.rsnz.org/newsletter/News60.pdf</a> page 9 for instructions.

Check with your library about access to ANZJS online through the subscriber-based providers Ingenta, Ebsco, SwetsWise or OCLC.

# **ANZJS**

The homepage for ANZJS is now <a href="http://www.statsoc.org.au/Publications/ANZJS.htm">http://www.statsoc.org.au/Publications/ANZJS.htm</a>.

Steve Haslett is now fully involved as a Theory and Methods Editor. The number of Theory and Methods papers submitted to ANZJS continues to be high although the acceptance rate is not, and there are to be two 'bumper' issues published. Applications papers are being submitted rather less frequently.

Chris Lloyd (Melbourne Business School), Managing Editor since 2001, will retire from this role

later in 2005. Many thanks to him for his sterling work over a substantial period, in which the future format of the journal has been comprehensively reviewed. The process of finding a suitable replacement for him is well underway, but further nominations would be gratefully received and



seriously considered. Chris outlines the list of duties for the Managing Editor (ME):

- 1. Be the first point of contact for authors. All submissions are to be submitted electronically to the ME.
- 2. Maintain a diverse board of associate editors, matched to the profile of submissions being received by the journal.
- 3. Be the first point of contact for the Copy Editor.
- 4. Keep basic statistical records for the journal, especially on submission and acceptance rates and time to review.
- 5. Prepare an annual report for the Central Council of SSAI.
- 6. Be a member of the Executive Council of SSAI.
- 7. Participate in meetings of Executive Council of SSAI.
- 8. Maintain contact with the publisher, Blackwell, and participate in any negotiations with the publisher.
- 9. Write the citation for the annual Inaugural Editors Award for the best paper and to drive the process of selecting the best paper.
- 10. The ME would ordinarily also serve as a Theory and Methods editor.

# New Zealand Statistician on CD

The New Zealand Statistician was the official journal of the NZSA between 1966 and 1997. In 1998 the New Zealand Statistician merged with the Australian Journal of Statistics to form the Australian and New Zealand Journal of Statistics.

The scanning of the complete 69 issues (Volumes 1-32) of the *New Zealand Statistician* was subsidised

# the New Zealand Statistician

PUBLISHED BY THE NEW ZEALAND STATISTICAL ASSOCIATION (INC.)

Volumes 1-32 1966-1997

by a grant from the Campbell fund, established through a bequest from Professor J T Campbell.

Copies of this CD with the pdf and postscript files for each issue are available from Harold.Henderson@AgResearch.co.nz:

Current members \$5

Past members \$25

Non members and libraries \$55

The full index of articles is at <a href="http://nzsa.rsnz.org/archive">http://nzsa.rsnz.org/archive</a> NZS.shtml in excel format and in pdf format.

You can use filters to search by author, title, year within the excel file. To see a particular article within the CD, click on its hyperlink <u>open file</u> to open the pdf of its issue.

Harold Henderson

# Join the NZSA

A membership application / change of address form is available at <a href="http://nzsa.rsnz.org/form.php">http://nzsa.rsnz.org/form.php</a>

### **New members**

A warm welcome to 15 new members of the NZSA, 11 of whom are new student members from NZ or Australia who receive free first year's membership.

Echo Wang Xiaoni Ma Sumita Pinge Reza Pakyari Qin Song Mark Wheldon Julie Wolak Chris Wang Glenda Young Hiu Yan Celia Chan Alokananda Maitra Pauline Stuart Michael Manning Vishal Goundar Debbie Leader

# Conference "Brief"

See Gordon Smyth's Australasian conference list <a href="http://www.statsci.org/conf/index.html">http://www.statsci.org/conf/index.html</a>
Details for planned conferences and workshops are given below.

# **Data Scrutiny and Data Mining**

McMeekan Centre, Ruakura, Hamilton

March 22, 2005

Presenter: Professor C.R. Rao

Web: from <a href="http://www.stats.waikato.ac.nz/">http://www.stats.waikato.ac.nz/</a>

Email: kdevoy@waikato.ac.nz

# 14th International Workshop on Matrices and Statistics

Massey University, Albany Campus, Auckland

March 29-April 1, 2005

Web: <a href="http://iwms2005.massey.ac.nz">http://iwms2005.massey.ac.nz</a> Email: <a href="massey.ac.nz">j.hunter@massey.ac.nz</a>

# Issues for Official Statistics for Small Countries (especially Island Nations) IAOS Satellite meeting

Noumea, New Caledonia March 31-April 2, 2005

Web: www.stat.fi/iaos/future\_activities.html

Email: IAOS2005@spc.int

# Statistics Education and the Communication of Statistics. IASE Satellite meeting

Sydney, Australia April 4-5, 2005

Web: http://www.stat.auckland.ac.nz/~iase/

conferences.php?show=iase2005
Email: bphillips@swin.edu.au

# **55th Session of the International Statistical Institute**

Sydney Convention and Exhibition Centre April 5-12, 2005

Web: http://www.tourhosts.com.au/isi2005/

Email: isi2005@tourhosts.com.au



# ISBIS 4 - International Symposium on Business and Industrial Statistics

Cairns, Australia April 13-16, 2005

Web: http://www.action-m.com/isbis4/ Email: isi2005@tourhosts.com.au

# Complex Sampling, Retrospective Sampling and Missing Data (to mark the retirement of Alastair Scott). IASS Satellite meeting.

Maritime Museum, Auckland

April 13-14, 2005

Web: http://www.stat.auckland.ac.nz/iass55/

Email: c.wild@auckland.ac.nz

# Measuring Small and Indigenous Populations IAOS Satellite meeting

Te Papa Tongarewa/Museum, Wellington April 14-15, 2005

Web: http://www.stats.govt.nz/ISIsatellitemeeting

Email: ISIsatellite@stats.govt.nz

# Introduction to Hidden Markov Models and their Applications in New Zealand

Lake Wanaka Centre, Wanaka

June 29 - July 1, 2005

Web: <a href="http://nzsa.rsnz.org/hmm1/index.htm">http://nzsa.rsnz.org/hmm1/index.htm</a>
<a href="mailto:Email: roger.littlejohn@agresearch.co.nz">http://nzsa.rsnz.org/hmm1/index.htm</a>
<a href="mailto:Email: roger.littlejohn@agresearch.co.nz">Email: roger.littlejohn@agresearch.co.nz</a>

# Fourth Statistical Reasoning, Thinking, and Literacy International Forum (SRTL-4)

University of Auckland, Auckland

July 2-7, 2005

Web: <a href="http://www.stat.auckland.ac.nz/srtl4/">http://www.stat.auckland.ac.nz/srtl4/</a>
Email: <a href="mailto:m.pfannkuch@auckland.ac.nz">m.pfannkuch@auckland.ac.nz</a>

### NZSA 2005 Conference

University of Otago, Dunedin

July 4-6, 2005

Web: http://www.maths.otago.ac.nz/nzsa2005/

Email: igoodwin@maths.otago.ac.nz

# Recent Advances in Biostatistics, Bioinformatics and MCMC

University of New South Wales, Sydney July 7-8, 2005

*Web*: <a href="http://web.maths.unsw.edu.au/~scott/symposium/">http://web.maths.unsw.edu.au/~scott/symposium/</a>

Email: biomcmc@maths.unsw.edu.au

# **20th International Workshop on Statistical Modelling**

Swiss Grande Hotel, Bondi Beach, Sydney July 10-15, 2005

Web: http://www.uws.edu.au/about/acadorg/clb/

sqmms/iwsm2005

Email: k.matawie@uws.edu.au

# **Estimation and Modelling Procedures for HMM and Related Models**

University of Auckland, Auckland December 5-8, 2005

Web: http://www.statsresearch.co.nz/hmm/

index.html

Email: nicholls@math.auckland.ac.nz

# MODSIM05 - 16th Biennial Congress on Modelling and Simulation. Management Control and Decision Making for Ecological Systems

Melbourne

December 12-15, 2005

Web: <a href="http://www.mssanz.org.au/modsim05/">http://www.mssanz.org.au/modsim05/</a>

Email: pkp@maths.uq.edu.au

# Mathematics-in-Industry Study Group 2006

Massey University, Albany, Auckland January 30 - February 3, 2006
Web: http://misg2006.massey.ac.nz
Email: g.c.wake@massey.ac.nz

# ICOTS 7 - Working Cooperatively in Statistics Education.

Salvador, Brazil July 2-7, 2006 Web: http://

www.maths.otago.ac.nz/icots7/

Email: batanero@ugr.es

# IcoTs?

# ASC/NZSA 2006

Auckland, New Zealand July 3-7, 2006

Email: d.scott@auckland.ac.nz

### IBC 2006

Montreal, Canada July 16-21, 2006

Web: http://www.ibc2006.org/welcome.html

Email: IBC2006@nrc-cnrc.gc.ca



# **Awards**

# Hidden Markov Models and Complex Systems

Under the auspices of an NZIMA Programme, a series of workshops and seminars will be conducted throughout New Zealand in the second half of 2005, bringing together statistical practitioners who use Hidden Markov Models and related methods to analyse data from a wide variety of applications. The aim of the Programme is to augment the research programmes of New Zealand scientists working with HMM methods.

David Vere-Jones (Emeritus Professor at VUW and Director of Statistical Research Associates) is the Programme Director.

The Programme will host invited speakers who have made substantial contributions to the theory and practice of HMM methods and will also



provide funds for post-doctoral and post-graduate research. Applications are now closed for the post-doctoral fellowships, but are still open for post-graduate scholarships (see <a href="http://www.statsresearch.co.nz/hmm/research.htm">http://www.statsresearch.co.nz/hmm/research.htm</a>).

Details are available from the Programme webpage <a href="http://www.statsresearch.co.nz/hmm/index.html">http://www.statsresearch.co.nz/hmm/index.html</a>. For further information contact David Vere-Jones (<a href="dvj@mcs.vuw.ac.nz">dvj@mcs.vuw.ac.nz</a>).

# **Campbell Estate Fund**

The NZSA were the recipients of a very generous donation (\$48,000) from Professor Campbell's estate.

There is roughly \$1500 funding available each year for special projects that are in the realm of Professor Campbell's interests. Refer to <a href="http://nzsa.rsnz.org/funding.shtml">http://nzsa.rsnz.org/funding.shtml</a> for more details.

Applications are received twice a year (April/October) and are invited for funding for projects in 2005/06. There is no formal application process but please supply details of your project, the full project budget, the amount you are requesting, a short statement about why your project is within Professor Campbell's interests, and your full contact details.

Please send your applications to the Secretary, (<u>judi@stats.waikato.ac.nz</u>), NZSA, PO Box 1731, Wellington. For more details contact Jennifer Brown (<u>j.brown@math.canterbury.ac.nz</u>) or Harold Henderson (<u>Harold.Henderson@agresearch.co.nz</u>).

Jennifer Brown

# **Local Scene**

# **Lincoln University**



Alison Lister (left) takes a year's leave from teaching computing to return to a prior life as a biometrician. Alison was a Biometrician with MAF from 1976 to 1982, then variously at Lincoln College, Massey University (PN campus), U. Canterbury and

Lincoln again. She has been appointed Consulting Biometrician with the Bio-Protection and Ecology Division at Lincoln University.

Richard Sedcole

# Proteus Wildlife Research Consultants

David Fletcher had a busy end to 2004, helping DoC with preparation of a Population Management Plan for Hooker's sea lions. He carried out a review of approaches to modelling the population of sea lions, some of which get killed by the squid trawl fishery operating around the Auckland Is. David and Bryan Manly (now based in Brazil) were also asked to provide guidance on the allocation of bycatch observers on fishing boats throughout NZ waters. Having cleared the decks on these two projects, David is looking forward to focussing on working with the Ministry of Fisheries on the sustainability (or otherwise) of seabird bycatch around New Zealand. There will be plenty of interesting statistical challenges arising out of this work, as well as a number of political issues that get mixed in with the science!

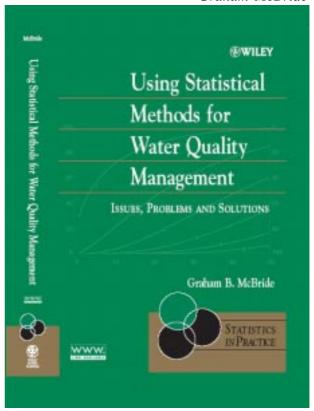
Darryl MacKenzie has been busy in the last few months. In November he ran a 3-day workshop in Dunedin on recently-developed site occupancy models which enable estimation and modelling of the probability that a site is occupied by a species given imperfect detection. This was attended by biologists from NZ and Australia. In December he ran a second workshop for the end-of-year meeting of the US Geological Survey's Amphibian Research and Monitoring Initiative near Orlando, Florida. Presently he is completing his first book "Occupancy Estimation and Modeling" co-authored with Jim Nichols, Ken Pollock, Andy Royle, Larissa Bailey and Jim Hines, which was due at the publishers in January. One thing that did occur in January as planned for Darryl (just) was the birth of his third son Oliver on the 31st. All are doing well although sleep is in short supply.

David Fletcher

# **NIWA**

Graham McBride has been beavering away on a book on statistical methods for water quality management, having received an invitation from Wiley to write it after a talk he gave at the 2000 JSM. It is due to be published in April.

Graham McBride



# Massey University, Palmerston North

Steve Haslett has again been traveling to strange and unfamiliar territories, most recently Vietnam and Azerbaijan on a World Bank project involving small national surveys of water and sanitation providers. The project plan is to use these studies to set up a toolkit which will be a template for future surveys in other countries. He reports that the local cuisine was excellent in both cases. He has now returned to yet another strange and unfamiliar territory: first year teaching.

Steve and Geoff Jones are also completing a project for the World Bank and the National Statistical Coordination Board of the Philippines, producing small-area estimates of poverty incidence for the Philippines for use in aid targeting. They spent part of last year in Manila working with NSCB staff. The food was quite good here too, but the national habit of snacking every two hours was difficult to keep up with.

Doug Stirling recently won a Massey Teaching Excellence Award for his web-based teaching software CAST. He is currently working on a Rockefeller Foundation-funded project to develop a version of CAST for Africa and will be on sabbatical at the University of Reading from June until January adding chapters about multiple regression and multivariate analysis. He has been invited to run a Workshop at the Applied Statistics 2005 conference in September in Slovenia.

In February Ganesh and Geoff Jones attended and presented papers at the Regional Biometrics Society Conference in Thredbo, Australia. They made up half of the "Palmy Pirates" team who astonished everyone by coming from nowhere to take third place in the Thredbo Challenge (along with Andrew Wallace and John Koolaard, in action below).



This is perhaps the first Local News in which it is not reported that Mark Bebbington has been overseas. He has however been promoted to Associate Professor, for which we congratulate him.

Ganesalingam has now almost recovered from the physical effects of the tsunami in which he and his family were caught while holidaying in Sri Lanka just prior to the International Sri Lankan Statistical Conference in December. He would like to thank the many well-wishers who contacted him.

David Alexander, having just achieved his doctorate, has now achieved parenthood as well, being the proud father of Daniel (7lb 8 oz). He is currently on parental leave. The switch from first year teaching to changing nappies has no doubt been traumatic.

Although still working at Landcare, Greg Arnold is reducing still further, to 20%, his involvement in the university, confirming the old adage that "old statisticians never retire, they just tend to zero (almost surely)".

Geoff Jones

# **University of Auckland**

Our PhD students have been exceptionally busy recently. Monique Mackenzie and Andreas Berg successfully defended their theses, and Yuichi Hirose submitted his, all within the space of a week. Debbie Leader was awarded a TEC Enterprise Scholarship, in partnership with Pacific Edge Biotechnology Ltd,

to do her PhD with Mik Black and Brian McArdle. Sarah Song was awarded an NZ International Postgraduate Research Scholarship for her PhD with Mik Black and Yong Wang. As if all this wasn't enough, James Reilly and Mat Pawley are both the proud new fathers of baby girls, and Andreas Berg is a proud expectant father.

Our biggest news has been the richly deserved appointments of Alan Lee and Chris Triggs as professors in the department. We are still, of course, reluctant to let their predecessor Alastair Scott retire completely. In a last-ditch effort to keep him, the university bureaucracy stepped in and lost his retirement notice. The happy consequence: he remains with us for another month!

Staff out and about include Mik Black, who attended the ANU BioInfoSummer meeting and the Otago Genomics Facility Microarray Meeting, as well as the International Conference on Bioinformatics here in Auckland in September. Ilze Ziedins was an invited participant to a month-long programme on Queueing Theory at The Royal Swedish Academy of Sciences, Stockholm, in November. Renate Meyer organised a successful workshop on Bayesian Inference and MCMC at the University of Auckland in February.

Staff and grad students wound down before the summer break by challenging each other to a Paintball

match. After two hours of fierce (see for example Mike Forster, right and page 23) warfare it was looking like stalemate, until Brian McArdle launched a heroic sting raid and captured the enemy flag — with the invaluable assistance of the Marti Anderson Getaway Outfit. Better luck to the students



for next time, but the staff are quietly confident (read "gloating furiously") for another victory next year!

And finally, our departmental manager Sharon Walker found herself fielding more than the usual workload this week. As she walked out of the building,



a giant 2kg bunya nut fell from an Araucaria tree and missed her by millimetres. She paused to inspect the UFO, whereupon she was narrowly missed by a second one! The department is looking into alternative ways of expressing our appreciation for Sharon.

Rachel Fewster

# **University of Cantebury**

Unfortunately, Satish Iyengar decided not to stay with us as Professor of Statistics, but he is continuing strong links with the department and other NZ institutes. Satish will be back in June/July for the upcoming NZSA conference and hidden Markov Models workshop in Wanaka.

Marco Reale for the second consecutive year spent three months (October to December) visiting the department of statistical sciences at the University of Naples "Federico II", where he taught a course on time series analysis improving his statistical Italian noticeably.

Jennifer Brown visited USA in October to attend the Computational and Environmetrics Workshop in Chicago and to visit a collegue, David Smith in West Virginia. At the conference she presented a poster on uncertainty analysis for NZ forest carbon credits from the Kyoto Agreement. She worked with David on a survey design for early warning of weed invasion into National Parks. She also attended the NZ Ecological Society conference in September held in Invercargill to present her talk on sampling for biodiversity. This was in the middle of a week's skiing holiday in Wanaka and she can confirm that a winter's day in Invercargill is no match for a winter's day at Treble Cone ski field.

Jennifer is busy developing a new graduate course on GLM's and R, but only for a few weeks (Marco will take over for rest of semester) because in April she is away to UK and France to work with Joe Perry from Rothamsted. Joe visited Canterbury last summer and Jennifer and Joe will continue work on spatial aggregation of beetles, and no doubt talk about cricket.

Marco and Jennifer are pleased to be jointly supervising Carla Meurk for a Masters thesis on the application of graphical models on ecological time series data. Charles Hu commenced a MSc in March 2004 with Irene Hudson and Dr Cochrane (forestry) on animal movements for deer management. NZIMA continues to fund Jean Gong's PhD research on causal inference. Jean and Irene have established a strong link with an ex-UC student, James O'Malley, now at Harvard. Jean will trial our theory on compliance data from the Sydney Clinical Trials Centre and possibly Pfizer.

Irene herself has just returned from a busy sabbatical, and is gearing up to present her work at various conferences, including the ISI 2005 and IWSM 2005. 2004 was a very rewarding year for Irene and her postgraduate students. Linda Moore (right) was awarded a high distinction and the Sir James Hight Memorial Prize in History for her thesis

"Gender voting in the 1800 and 1900's in NZ", which was jointly supervised with Prof Miles Fairburn from our history department. The prize is awarded annually for excellence in history to a Master's student who also displays an outstanding love of



learning. The thesis takes the unusual course of considering gender in relation to accounts of electoral politics and voting in early 20th century NZ. Linda trialled five methods for ecological inference, and as such her work is a significant NZ contribution (the first quantitative contribution) in this area.

Kyoko Fukuda obtained a high distinction for her thesis "New Improved Methods for Application & Interpretation of SSA: A case study of climate and air pollution in Christchurch, NZ". Since then, Kyoko was awarded a UC PhD scholarship which she will commence in April working on statistical environmetrics with Irene and fellow researchers in forestry and geography. In March 2004, In Kang commenced a PhD on wavelets, which is now building on initiatives Irene and Prof Glasbey (BioSS, Edinburgh), our recent Erskine visitor, forged with UC physics on brain imaging.

Irene is also thrilled to attend IWSM 2005 and see 4 of her students present papers: J. Gong (PhD) on "A Bayesian Causal Cox Model (CCM) for Allor-Nothing Compliance"; S. Kim (PhD) on "MTD analysis of flowering & climatic states"; K. Fukuda (PhD) on "Use of SSA to characterise site-specific differences, & global & local climate impacts on air pollution 1998-2002" and I. Kang (PhD) on wavelets.

Carl Scarrott

# **AgResearch**

What's in a name? Opinions in our group vary from "who cares?" to "the name matters!" The question has arisen with the recent restructuring of AgResearch so that we are now part of a slighter larger "section" consisting of 16 biometricians, 5 bioinformaticians and 6 mathematical biologists. On a historical note, in the beginning we were a section (Biometrics, MAF), then we became a group (Stats & Bioinf), now we are a section again. So we've been debating a new name since December. Some of the more interesting suggestions were Bio<sup>3</sup>, BioInfoMathoStatoMatics, Bio(statis|mathema|informa)tics and Numbers-R-Us. My personal, closet-bound favourite was The Third R (for 'Rithmetic). With each of us being suitably creative, consensus was impossible, so we took a holiday for Xmas. Suitably refreshed, we have now

agreed upon the title of Bioinformatics, Mathematics and Statistics Section. Kind of unexciting, but at least it's reasonably descriptive.

On the conference scene, five of the biometricians went to the Biometrics/GenStat conference at Thredbo in February. David Baird ran a preconference workshop on "Design and analysis of microarray studies using GenStat" and gave an invited paper on "The analysis of nuclear magnetic resonance data". Peter Johnstone spoke on "Density estimation from distance sampling using splines" and Lilian Morrison presented on "Immunity to gut nematodes in sheep". Neil Cox and Vanessa Cave were the other two attendees. Being up in the "mountains" it wasn't too hot for the Kiwi contingent, but the Queenslanders complained about the cold. Most folk got to climb to the top of the mountain or took the chairlift up and walked down. The wine-tasting competition gave some trouble, and it was decided that tasty was the wrong word for describing cheap (under \$A10) wines.

Harold Henderson's work over the last decade with Data Desk graphics has culminated in the publication in JABES (Dec 2004) of a 30-page editor's invited article entitled "Interactive and dynamic graphics in statistical consulting" (<a href="http://www.agresearch.co.nz/downloads/graphics/">http://www.agresearch.co.nz/downloads/graphics/</a>). After a similarly long gestation period, a paper by Graham Wood and myself on the geometry of the linear model p-value has been published in JRSS-A in Jan 2005 under the obscure title "The ubiquitous angle".

This year our new Bioinformatics, Mathematics and Statistics Section will have its inaugural annual get-together at Ruakura, Hamilton, from 21 to 23 March, with the middle day spent at the C R Rao workshop.

Dave Saville

# **Crop and Food Research**

The summer is over, the harvest is ended, and again we are farewelling biometricians. After nearly nine years with us, John Koolaard shifted to AgResearch Grasslands at the end of January. The wailing and gnashing of teeth registered on seismographs as far away as Christchurch. At John's farewell it emerged that his greatest claim to fame was being involved in the early days of the system used to project general election results from ward results.

Then Maaike Bendall decided that she was enjoying being a full-time mum, and she would not be coming back from parental leave. By the time Ruth Butler and Andrew Wallace headed off to Australia for the Biometrics/GenStat conference at Thredbo, I was worrying that one of them might decide they liked it and stay...

Fortunately, although the view from the top of Mt Kosciuszko was impressive, they did return, and we were only left looking for two new biometricians. More about that next bulletin, but it was heartening to see a good field of Kiwis amoung the applicants.

Duncan Hedderley

# **Wellington Statistics Group**

The WSG, a local group of the NZSA, continues to meet regularly. Attendance at the early evening meetings remains pretty good (typically 20 to 30 people, sometimes more) and the evenings often continue with up to a dozen or so people dining together.

Since the NZSA Conference on 1 July 2004 in Wellington, in reverse chronological order there have been WSG talks given by:

Tim Ball, Statistical Consulting for Continuous Improvement, February 2005: "Golden Opportunities - A Case Study"

Estate Khmaladze, VUW, December 2004: "Probability and Statistics in Tbilisi, Georgia in retrospect: 1963-1983"

Robin Willink, Applied Mathematics, Industrial Research Ltd, November 2004: "Statistical methods in metrology (measurement science)"

Robert Davies, Statistics Research Associates Ltd, September 2004: "Crash Risk and Road Surface Characteristics"

The next WSG meeting will be after Easter, in early to mid April 2005, addressed by Mark Weatherall from Wellington School of Medicine and Health Sciences, on "Graphical sensitivity analysis with different methods of imputation for a trial with probable non-ignorable missing data". Of course, CR Rao will also be speaking in Wellington in mid-March, during his "NZ tour".

Anyone who does not presently receive WSG announcements and who wishes to be informed of future events is welcome to contact the WSG Convenor, John Haywood: <u>John.Haywood@mcs.vuw.ac.nz</u>.

John Haywood

# Massey University, Albany Campus

Jeff Hunter was an invited speaker at the CMA National Research Symposium - A Celebration of Modelling and Applied Probability, in honour of Joe Gani's 80th birthday, organised by the Centre for Mathematics and its Applications at ANU Canberra, Australia, December 14-15, 2004.

We are all busy preparing for the IWMS conference to be held here at the end of March.

Paul Cowpertwait

# **Victoria University**

The current news from the Stats/OR group at VUW is mostly about who is or has been on Research and Study (R&S) leave or away at conferences, since the number of people in Wellington has been very small over the summer. Megan Clark was first out of the blocks and has been on R&S leave since September 2004. Now back in Wellington, but still on leave until April 2005, Megan visited Memorial University of Newfoundland and McMaster University in Hamilton (both Canada), London South Bank University (UK) and Freie Universitat Berlin (Germany). Thus Megan replaced most of Wellington's summer by winter elsewhere, although before Christmas that wasn't too bad a swap!

John Haywood had quite a short period of R&S leave from October 2004 to January 2005, but spent the time in Wellington and, among other things, that meant he got to enjoy Helen Haywood's 2nd birthday party early in December. John will be presenting a paper at the NZ Econometrics Study Group 2005 summer meeting in Christchurch, 11-12 March.

Stefanka Chukova has R&S leave from December 2004 to June 2005. Stefanka is visiting colleagues at U. North Carolina, U. Michigan (Ann Arbor), General Motors R&D Center (Michigan) and Kettering U., before attending a conference in Bulgaria. An important event that occurred early in Stefanka's leave was the birth of her first grandson Kian, who was born with no problems on 14 December 2004. We all hope Kian's first few months have gone smoothly, and are looking forward to a lengthy update on his progress when Stefanka returns. Before her R&S leave Stefanka went to a conference in Hiroshima, Japan in late August 2004. When Stefanka does return to NZ, she'll have quite a heavy landing, since she'll be taking over immediately as Program Director for Stats and OR from Shirley Pledger, who has been in that role since Megan started her leave.

Surprisingly(?), Shirley is showing no signs of a love of the power that comes with the job, and in fact seems even more keen than the rest of us for Stefanka to return! Shirley recently presented a paper at the Thredbo Statistical Meeting. While there Shirley went up Mt Kosciuszko, a high point (literally and metaphorically) in Kosciuszko National Park. Those familiar with Mt Kosciuszko will note that I wrote "went up", rather than "climbed".

Also in February 2005, Richard Arnold attended COBAL2 - the Second Meeting of the Bayesian Society of Latin America - held in the Baja California in Mexico. Richard presented a poster on determining tectonic stress using earthquake data. Dong Wang was away from December 2004 to early February

2005, working at RMIT (Australia) and also attending conferences in Sri Lanka and Australia.

Ivy Liu has R&S leave from November 2004 to June 2005. Ivy was initially based at Purdue U., West Lafayette, Indiana. However Ivy was planning to move around a bit during 2005, before returning to VUW for the last month or so of her leave.

Estate Khmaladze was away for January 2005 and a couple of (separate) weeks in February. Estate presented papers at the International Conference on the Future of Statistical Theory, Practice and Education (Hyderabad, India), the Annual all-Indian Conference in Probability Theory, the Second Bachelier Colloquium on Stochastic Calculus and Finance, in honour of Albert Shiryaev's 70th birthday (Metabief, France), and the NZIMA international conference on Geometry: Interactions with Algebra and Analysis (Auckland). Estate was especially disappointed that this last conference coincided with our enrollment in person week, so he didn't get the chance to sign lots of students into our first year papers. At least, I think he said he was disappointed, but it's possible I misheard.

We are pleased to be currently hosting Prof Guennady Martynov from the Russian Academy of Sciences, Moscow, who is visiting Estate Khmaladze for about six weeks. Prof Martynov is a well known specialist on goodness-of-fit theory, and the theory of Cramer-von Mises tests in particular. While at VUW, Prof Martynov is working on the development of a web page dedicated to goodness-of-fit theory and the online implementation of modern testing methods. He also gave a seminar at VUW on new results for Cramer-von Mises goodness-of-fit tests.

The group is excitedly looking forward to the arrival of two new staff around the middle of the year; an Operations Research lecturer and a Consulting Statistician. There'll be more details on these appointments in the next Newsletter. Finally, while Stefanka is on leave we are very grateful that Prof Moshe Haviv is visiting us from the Department of Statistics, Hebrew University of Jerusalem, for the first half of 2005. Moshe is taking half of two of our Operations Research courses between March and June in Stefanka's place, and we're very pleased to have him on board.

John Haywood

# Statistical Education News

### **International News**

ICOTS-7, Working Cooperatively in Statistics Education, Salvador (Bahia), Brazil, July 2-7, 2006. The International Association for Statistical Education (IASE) and the International Statistical Institute (ISI) are organizing the Seventh International

Conference on Teaching Statistics (ICOTS-7) which will be hosted by the Brazilian Statistical Association (ABE) in Salvador (Bahia), Brazil, July 2-7, 2006. Most of the 54 Invited Paper Sessions (arranged into 9 different Topics) are complete. In addition 4 Special Interest Group Meetings (3 of them in both Portuguese and Spanish) have been arranged for those interested in discussing a particular theme.

Call for contributed papers and posters: Contributed papers and posters dealing with any aspect of statistics education are welcome. Contributed papers will be arranged in a variety of sessions, taking into account the proposals received. An optional refereeing process will be arranged for those wishing their papers to be refereed. Those interested in submitting a contributed paper should contact either Joachim Engel (Engel Joachim@phludwigsburg.de) or Alan McLean (alan.mclean @buseco.monash.edu.au) before September 1, 2005. Those interested in submitting a poster should contact Celi Lopes (celilopes@uol.com.br) before February 1, 2006. Detailed guidelines for authors, deadlines and other information are available at the ICOTS web site at <a href="http://www.maths.otago.ac.nz/icots7">http://www.maths.otago.ac.nz/icots7</a>. More information can be obtained from Carmen Batanero (batanero@ugr.es).

IASE Satellite to ISI-55, 4-5 April 2005, Sydney: The theme is Statistics Education and the Communication of Statistics. Many New Zealanders are participating in this conference. At the ISI conference Chris Wild will step down as president of IASE and become the past-president of IASE. Chris has done a magnificent job as president and has really put New Zealand on the map with the establishment of the IASE website on the Auckland Statistics Department homepage.

The IASE has a website at <a href="http://www.stat.auckland.ac.nz/~iase/">http://www.stat.auckland.ac.nz/~iase/</a>. It has a publications page from which over 500 papers from IASE publications and proceedings can be located and downloaded. There is information about IASE forthcoming activities and links to conference websites. The new *Statistics Education Research Journal* can also be accessed from this website. The November 2004 publication was a special issue focused on Research on Reasoning about Variation and Variability.

In 2004 IASE had a Roundtable conference on curricular development in statistics education in Lund, Sweden. The papers from this conference will soon be available on the IASE website. IASE also organized a topic session on research and development in the teaching and learning of probability and statistics at the 10<sup>th</sup> International Congress on Mathematical Education in Copenhagen. These ICME-10 papers are available on the IASE website.

In July 2004, a book entitled "The challenge of developing statistical literacy, reasoning and thinking", edited by Dani Ben-Zvi and Joan Garfield, was published by Kluwer. This book presents and synthesizes cutting edge research on different aspects of statistical reasoning and applies this research to teaching at all levels.

### **Local News**

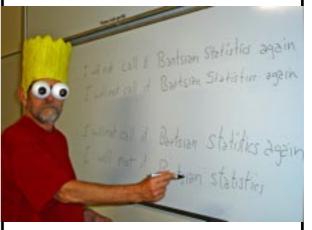
The Fourth Statistical Reasoning, Thinking, and Literacy International Forum (SRTL-4) will be held in Auckland on 2-7 July 2005. This is a small residential conference which will have in-depth discussions and presentations on *reasoning about distributions*, including the viewing of primary research data. About 20 international researchers from the USA, Japan, UK, Israel, Australia, and NZ have been invited to participate (<a href="http://www.stat.auckland.ac.nz/srtl4/">http://www.stat.auckland.ac.nz/srtl4/</a>).

Rachel Cunliffe and Andrew Balemi will be running a statistical literacy workshop in Wellington in April under the auspices of Statistics New Zealand. The workshop is part of a professional development programme for improving state sector statistical skills.

Matt Regan, Ross Parsonage and Rachel Cunliffe ran their annual very successful Year 13 statistics workshops for teachers in November. See <a href="http://www.stat.auckland.ac.nz/~u47510x/teachers/index4.php">http://www.stat.auckland.ac.nz/~u47510x/teachers/index4.php</a>.

Maxine Pfannkuch

# Caption contest



# Statistics Education in Practice Who is that dude?

All entries will be placed on <a href="http://nzsa.rsnz.govt.nz/Newsletter61/caption.htm">http://nzsa.rsnz.govt.nz/Newsletter61/caption.htm</a>. Enter by email to <a href="mailto:roger.littlejohn@agresearch.co.nz">roger.littlejohn@agresearch.co.nz</a>.

Last issue (Christchurch Connection in Cairns) got some goodies, check out the webpage. My favourite was:

"Only ZZ Top's guitarist refuses to remove shades and beard for charity" by Jim Young

# **University of Waikato**

Greetings from the Waikato. It has been a while since I have contributed to the NZSA newsletter and there has been much happening, so forgive me in advance for any errors and omissions.

In April of 2004, the department hosted a successful workshop by Professor Peter Green of the University of Bristol, entitled "Structure and uncertainty: statistical modelling, stochastic systems and Bayesian computation." On Tuesday 22 March 2005, we will be presenting another one day workshop, entitled "Data Scrutiny and Data Mining". The presenter is the NZSA Visiting Lecturer, Professor C R Rao from Penn State University, USA. A link to details of the workshop and registration can be found at <a href="https://www.stats.waikato.ac.nz">www.stats.waikato.ac.nz</a>.

Last year saw the successful defense and graduation of our two PhD students Carole Wright and Khangelani Zuma. Carole's thesis was entitled "Variety Trials in 2-dimensional layouts" and Khange's thesis was "Sexual Network Random Effects Model of Migration and Spread of HIV and other STIs in South Africa". Congratulations also go to Bill Bolstad for the successful launch of his book "Introduction to Bayesian Statistics" which was released in April.

On the visitor front, we again enjoyed a visit from Ken Russell and also Dave Johnson from Loughborough. Dave was with us for all of the second semester. He was involved with some teaching in our department, but he was here primarily to work with Nye John and David Whitaker on the revisions for the second edition of their book "Statistical Thinking for Managers" which is currently with the publishers.

Now, for a little on the "comings and goings" of members of our department. Lyn Hunt was on leave for the second half of 2004. During this time, she visited Melbourne and also Brisbane, where she was working with Kaye Basford. Murray Jorgensen went to the United States in October, where he presented papers in Chicago and also at Colorado State University, in Fort Collins. Nye John and Dave Whitaker attended IBC in Cairns in July and Dave was also a participant at the NZORS conference held in Auckland in November. In May, James Curran went to Vienna where he attended the R conference. He also attended the Bruce Weir Symposium in Raleigh North Carolina and was an invited speaker at the NCSU Summer School Statistics Genetics, also in Raleigh. In June, James went to the JBRC Workshop on Identification in Edinburgh and was on leave for the rest of the year to work in Birmingham for the Forensic Science Service. In December, Bill Bolstad went to the 3<sup>rd</sup> Winter Workshop on Statistics

and Computer Science – Scientific Application of Bayesian Analysis in Ein Gedi, Israel. Bill also attended the NZSA conference in Wellington in July 2004, along with Judi McWhirter and Murray Jorgensen. At the AGM Murray was elected President of the Association and Judi was elected Secretary.

Finally, Dave Whitaker (below with Nye John and Emlyn Williams) is currently on Sabbatical Leave and in his absence, Nye is acting Chairperson of the department.



**Recent seminars in the Department:** 

Rosemary Bailey (*Queen Mary University of London*) "Hasse diagrams to describe the structure of designed experiments".

Jacques Poot (*Population Studies Centre*, *University of Waikato*) "On the use of meta-analysis in economics".

Nye John (*Department of Statistics, University of Waikato*) "Inverse of the Information Matrix".

David Johnson (*Business School, Loughborough University*) "Teaching Statistics with Microsoft Excel".

Peter Davis (*Department of Sociology*, *University of Auckland*) "Social facts and social stats: applications in quantitative sociology".

James Curran (*Department of Statistics*, *University of Waikato*) "Some issues surrounding the interpretation of Low Copy Number (LCN) DNA evidence".

Murray Jorgensen (*Department of Statistics*, *University of Waikato*) "Estimating a density of microbial densities".

Harold. Henderson (Statistics, AgResearch Ruakura) "Dynamic Graphics in Statistical Consulting".

David Ryan (Department of Engineering Science, University of Auckland) "Robustness Issues in Aircrew Tours of Duty Optimisation".

Ray Hoare (*Hoare Research Software Ltd - Hamilton*) "Why do we need ANOTHER statistics program?"

Colin Aitken (*School of Mathematics, University of Edinburgh*) "Evaluation of Trace Evidence in the form of Multivariate Data".

Michael Bulmer (*Department of Mathematics*, *University of Queensland*.) "Virtual Worlds for Teaching Mathematics and Statistics".

Judi McWhirter



# NZSA 2005 University of Otago, 4-6 July

Go, trav'ler, unto others boast
of Venice and of Rome,
Of saintly Mark's majestic pile,
and Peter's lofty dome;
Of Naples and her trellised bowers,
of Rhineland far away.
These may be grand, but give to me
Dunedin from the Bay.
(Thomas Bracken)







# **MISG-05 Needed Statistical Input**

The ANZIAM Mathematics-in-Industry Study Group held in Massey University, Auckland in January 2005 (see <a href="http://misg2005.massey.ac.nz/">http://misg2005.massey.ac.nz/</a>) was presented with two problems (out of a total of seven) which had a particularly strong need of expert statistical input. These are described below:

# 1. Development of empirical relationships for metallurgical design of hot-rolled steel products. (New Zealand Steel Ltd, Glenbrook).

See http://misg2005.massey.ac.nz/problems/problem2.html

"An empirical model is required which relates the mechanical properties of hot-rolled coil products produced by New Zealand Steel to product and processing variables such as chemistry, and rolling and coiling temperature."



# 2. Factors associated with trends in bare ground in high country. (Environment Canterbury, Christchurch).

See <a href="http://misg2005.massey.ac.nz/problems/problem4.html">http://misg2005.massey.ac.nz/problems/problem4.html</a>

"Environment Canterbury anticipates obtaining a mathematical model that identifies and describes the main effects and interactions of the factors influencing short and long term ground cover trends in the high country. Such a model would be invaluable for identifying land management options that could be applied to help ensure soil conservation in the Canterbury high country tussock grassland ecosystems."



This served to underline the experience many of us have - that the first encounter many industries have with the quantitative sciences is: "I have all this data, what does it mean?" In both cases the organisations had put aside the immediate goal of finding a more mechanistic / modelling-based algorithm. In one case (NZ Steel) subsequent effort was directed a little towards finding a more physically based model, but this was not their major goal.

MISG was fortunate that it had attracted senior well-known statisticians who had independently recognised this need for these problems (Associate-Professors Ken Russell (University of Wollongong) and David Scott (University of Auckland) among others, and they provided key leadership in the analysis and resolution of these problems. We acknowledge their leadership in this respect and suggest that future MISGs may have similar such requirements, and invite the statistical community to participate (It's free and interesting!) [6 members of NZSA were among the 125+ international participants at MISG2005 - Ed.] For further details see <a href="http://misg2005.massey.ac.nz">http://misg2005.massey.ac.nz</a>. The next ANZIAM MISG is being held in the same venue early in 2006. See the notice elsewhere in this newsletter.

Graeme Wake, Centre for Mathematics-in-Industry, Massey University, Auckland.

# Mathematics-in-Industry Study Group 2006

Massey University at Albany, Auckland, New Zealand, 30th January -3rd February 2006 http://misg2006.massey.ac.nz

It immediately precedes the Applied Mathematics Conference ANZIAM2006, in Mansfield, Victoria.

# **Recordings from the ANZIAM MISG 2005**

The Centre for Mathematics in Industry at Massey University, Auckland, NZ has available a set of DVDs of the formal presentations of the Monday and Friday sessions of MISG2005. We can place bulk orders for these at just \$NZ 24 + GST (= \$NZ 27) for each set. They include the power point and video presentations of "Problems" and "Solutions" of the seven problems packaged together, and the opening ceremony. These were produced professionally. Four discs with: 2 Problems & Solutions on each disc.. They are excellent for promotional purposes. Orders to Professor Graeme Wake, Centre for Mathematics in Industry, Massey University at Albany, P.B 102904, North Shore MC, Auckland, New Zealand. Please include cheque (made out to Massey University) or Visa/MasterCard details with each order. E-mail g.c.wake@massey.ac.nz.

# **Reflections on MISG-05**

The 2005 Mathematics-in-Industry Study Group took place at the end of January at the Albany Campus of Massey University. You probably heard about it. It was opened by Dr Michael Cullen, Deputy PM of NZ, who suggested that it was time for New Zealand to put behind it the traditional reliance on inventors with number 8 fencing wire, and to bring a scientific and mathematical approach to bear. (Dr Cullen is not responsible for my paraphrasing of his reported remarks.) Naturally, the press 'beat up' these comments.



MISGs have occurred annually in Australia or New Zealand for a good number of years. Companies can, for a modest fee, propose a problem for solution, and enjoy the input of some very able people who (hopefully!) either solve the problem or advance its solution by several giant steps. In the past, statisticians have not usually attended MISGs and most problems have been viewed as requiring Applied Mathematics for their solution. It is unclear whether the absence of statisticians caused, or was caused by, this view!

This year I was one of a small group of statisticians who attended MISG 2005. It was instantly apparent from reading the list of seven problems that at least two of them were heavily statistical in nature: they essentially required the fitting of multiple regression models in which several of the explanatory variables were categorical. The applied mathematicians were painfully aware of their inadequacies in this regard, and the statisticians were made very welcome.

On the positive side, I enjoyed the camaraderie of working with other researchers, both statistical and mathematical, and was highly impressed by the extreme professionalism of my group's facilitator (take a bow, Heather North) and industry contact (Jeromy Cuff). It was also great to catch up with some mathematicians whom I'd known in Wellington over 20 years ago. However, it was depressing to realise how little Statistics most applied mathematicians knew (after all, a 'one-way ANOVA' is pretty basic stuff), to wonder how they might have got on without statistical help, and also to wonder whether there might have been unrecognised situations like this at past MISGs. I was also conscious that there was very little by way of computing support available, and my group would have been completely lost without the laptops, and clever work, of Barry McDonald and Ray Hoare.

Of the seven problems posed, I feel that at least partial solutions were obtained for six of them, and perhaps the seventh does not have a solution. New Zealand industry, and the Canterbury High Plains, will be the better for our efforts. MISG has succeeded again.

Elsewhere in this Newsletter, there is an invitation from Graeme Wake for statisticians to attend the next MISG. I encourage you to give this serious thought. Graeme is an energetic and enthusiastic organiser who recognises the need for statisticians (even Australian statisticians), and I am sure that you will be made very welcome. We need to increase the profile of Statistics amongst our mathematical colleagues and in industry, and this is a very good way to do so. I suggest that you check the program to be sure that there are some problems with a statistical bent before registering, and take a laptop loaded with your favourite statistical software if you can.

Lastly, can you justify asking your employer for support to attend MISG 2006? If you're a PhD student needing real experience, or a beginning statistician who would like to dip your toe in the consulting water in a supportive environment, the answer is definitely 'yes'. If you're an experienced consultant who has already fitted lots of regression models to messy data, then MISG 2005 needed you, and MISG 2006 probably will, too, but I'm not sure that there's an easy way to justify your attendance. Altruism, perhaps?

Ken Russell



# **Data Miner**



# With the release of *STATISTICA*™Data Miner, StatSoft has claimed a leading position in the development of statistical software.

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### It's inclusive...

Use basic statistical, graphics and visualisation procedures at any stage of your analysis, because Data Miner is built as an extension of the *STATISTICA* statistics program. For instance, tabular output from a neural network model can be used as input to graphing or statistical operations.

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### It's fast...

Comparisons with similar software show important speed advantages for *STATISTICA* Data Miner.

# It includes deployment facilities...

STATISTICA Data Miner is built with deployment in mind - and is supplied with a variety of deployment tools, at no extra cost.

# BEATER Comments and part for part of p

### It's programmable...

Like the whole of *STATISTICA*, Data Miner is fully programmable in *STATISTICA* Visual Basic, so you can easily customise it and incorporate it into your existing corporate computing environment.

# Build up to it...

If you are not ready for full-scale data mining yet, but are doing some analysis, start off with *STATISTICA* and add tree analysis or neural networks, before implementing a full data mining solution to your business.

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### See for yourself...

You can see an animated slide show that covers the main points, at www.hrs.co.nz/slideshows.aspx.

# More information...

For more information, contact Darrel Amarasekera on 0800 477 776, email darrel@hrs.co.nz or visit our website www.hrs.co.nz/statistica\_dataminer.

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