

## NZSA2007 Conference -Canterbury Tails

#### University of Canterbury Wednesday 4th July

You are warmly invited to attend the 58th Annual Conference of the New Zealand Statistical Association.

#### Venue

Mathematics, Statistics and Computer Science building, University of Canterbury.

#### Themes

Papers are invited from any area of probability and statistics. Student presentations are especially welcome.

The conference is immediately followed by a Conference in Honour of Professor John Deely, the former Chair of Statistics at Canterbury, to be held on 5-6 July 2007. This promises to be a well-attended and lively event, with many of John's students, colleagues and friends from around the world expressing a strong desire to join in honouring a muchloved member of the international statistical community. See the main conference entry below.

Two sessions are set aside for Statistics Education. The talks arranged will be of immediate interest to high school teachers, with the aim of providing material and real data that will be useful in the classroom. A nominal registration fee only is required to attend these sessions.

#### **Abstract Submission**

Abstracts may be submitted online in plain text format, see the conference website for details.

#### **Invited Speaker**

John Deely is currently Emeritus Professor of Statistics. University of Canterbury after more than 28 years and is currently a much admired visiting lecturer at the Department of Statistics, Purdue University, having won the David S. Moore Service Teaching Award in



2004. John is a key proponent of the Bayesian paradigm, becoming a leader in this endeavour and providing the first NZ stronghold here in Canterbury when he arrived in the late 1960's. John has inspired numerous generations of statisticians (including our own Murray Smith and Frank Lad of course) and is still doing so today, so be prepared!

#### Welcome Speech

The welcome speech will be given by Professor Roy Sharp, Vice Chancellor of University of Canterbury.

Published by the New Zealand Statistical Association (Inc.), P.O. Box 1731, Wellington, New Zealand. The views expressed by contributors to this *Newsletter* should not be attributed to the New Zealand Statistical Association.

#### **Conference Website**

Further details about the conference can be found at: <u>http://www.math.canterbury.ac.nz/nzsa2007</u>.

#### Registration

See the conference website for more details. Registrations will be accepted online with various payment options. An early bird registration discount will apply before 30 April. Student registration will receive a 50% discount. Members of the NZSA and the SSAI receive a discount.

#### **Conference Dinner**

Hosted at the splendid University of Canterbury Staff Club close to the conference venue at 7pm.

#### AGM

The NZSA AGM will be held at 5-6pm on 4 July at the conference venue.

#### **Organising Committee**

Carl Scarrott (Chair), University of Canterbury

- Marco Reale (Registrations), University of Canterbury
- Dominic Lee (Treasurer), University of Canterbury
- Jennifer Brown (Sponsorship), University of Canterbury
- Easaw Chacko (Committee), University of Canterbury
- Ian Westbrooke (Education), Department of Conservation
- Rebecca Bangma (Young Statisticians), Statistics New Zealand
- Mik Black (Committee and Deely Conference), University of Otago

#### **Key Dates**

30 April Deadline for Early Bird registration discount

- 15 May Deadline for abstracts
- 15 June Deadline for full refund of registration fee (only 50% refund up to 30 June)
- July 4 NZSA2007 Conference

#### **Accommodation and Travel**

Delegates are asked to make their own arrangements. An extensive list of suitable accommodation providers and travel/tourism information is provided on the conference website.

#### Contact

You are welcome to contact the NZSA2007 team at <u>nzsa2007@gmail.com</u>.

## Conference in Honour of Professor John Deely

Mathematics, Statistics and Computer Science Building, University of Canterbury, Christchurch, New Zealand.

#### July 5 and 6, 2007

You are warmly invited to attend a conference in honour of Professor John Deely, former Chair of Statistics, and Emeritus Professor of the University of Canterbury.



John Deely illustrates his allegiance with the aid of a passing bus.

#### Plenary speaker: Professor James O Berger

Jim Berger is regarded internationally as one of the leading proponents of Bayesian statistics and statistical decision theory. He is currently the Arts and Sciences Professor of



Statistics at Duke University, and Director of the Statistical and Applied Mathematical Sciences Institute. Professor Berger is a member of the USA National Academy of Sciences, and has previously served as president of the Institute of Mathematical Statistics (1995-1996), chair of the Section on Bayesian Statistical Science of the American Statistical Association (1995), and president of the International Society for Bayesian Analysis (2004). We welcome Jim's long-awaited return to New Zealand, and are particularly grateful to him for reorganizing his schedule to help us honour his long time friend, Professor John Deely.

#### Invited speakers include:

Professor Ronald Christensen (University of New Mexico).

Professor Jayanta K Ghosh (Purdue University).

Professor Wesley O Johnson (University of California, Irvine).

## **Invited Speakers**

#### **Professor Ronald Christensen**

Ronald Christensen is Professor of Statistics at the University of New Mexico. He is well known for his work on the theory and application of linear models having linear structure. He is the author of numerous technical articles and



several books and he is a Fellow of the American Statistical Association and the Institute of Mathematical Statistics. His research interests include: Linear Models, Bayesian Inference, Loglinear and Logistic Models, Statistical Methods.

#### Professor Jayanta K Ghosh

Jayanta K Ghosh is Professor of Statistics, Purdue University; former Nehru Professor/Director of the Indian Statistical Institute and President of the International Statistical institute; Fellow of the IMS, past editor of Sankhya, and author of the book *Bayesian* 



*Nonparametrics*. His current research interests are: Bayesian Analysis, Asymptotics, Reliability and Survival Analysis, High Dimensional Model Selection and Classification, Bioinformatics.

#### **Professor Wesley O Johnson**

Wesley Johnson is Professor of Statistics, University of California, Irvine and a Fellow of the American Statistical Association. Professor Johnson is mainly interested in developing Bayesian statistical methods for biostatistical and epidemiologic applications. He



is currently involved with collaborative efforts to develop asymptotic posterior distribution theory for mixed models, Bayesian methods for assessing diagnostic test accuracy and for estimating prevalence when no gold standard test is available.

Submitted papers and posters will also be welcomed.

Additional details regarding registration, accommodation and abstract submission will be placed on the NZSA2007 website as they become available: <u>http://www.math.canterbury.ac.nz/</u>nzsa2007.

Please contact Dr Mik Black (<u>mik.black@stonebow.otago.ac.nz</u>) for further information.

# Adrian Baddeley Workshop in April

The Waikato Statistics Workshop for 2007 will be held on Wednesday 11th April at the University of Waikato. This is the Wednesday just after Easter.

The speaker is Professor Adrian Baddeley of the University of Western Australia. A Fellow of the Australian Academy of Science, winner of the Pitman Medal and the Hannan Medal, he is a specialist in statistical ways of interpreting spatial and geometrical information.



Two topics will be covered in the workshop.

#### Morning lectures:

#### **Analysing Spatial Point Patterns in R**

This part of the workshop will cover the following topics: spatial point pattern data, the spatstat package, exploratory methods, spatial point process models, model-fitting, model diagnostics and simulation. The diagnostics include new definition of residuals for point process models developed jointly with Martin Hazelton, Jesper Moller and Rolf Turner and plots based on them.

#### **Afternoon Lectures:**

## Stereology: Sampling 3-dimensional objects and images

One of the basic techniques used in microscopy is an application of statistical principles of survey sampling.

Suppose we want to infer the composition of a solid material (such as a biological tissue, a rock, or a metal) from thin slices of the material. An expensive solution is to reconstruct the solid geometry of the material using computed tomography, or serial section reconstruction. But there is a far simpler and easier technique, based on elementary principles of random sampling, called "stereology". The sampling method can even be superefficient, that is, it can be more accurate than "exact" three-dimensional reconstruction.

Some of the greatest mistakes in twentiethcentury science were committed or perpetuated through a failure to understand principles of sampling inference. Stereology also helps to identify such methodological errors in microscopy. Some examples will be discussed.

When available further details of the workshop will be available from the Waikato Department of Statistics home page <u>http://www.stats.waikato.ac.nz</u>.

Murray Jorgensen

#### President's Column



19 February 2007

It is Sunday morning. I am listening to Chris Laidlaw interview a medical researcher. They are discussing developments and breakthroughs in the treatment of colon cancer. I wonder at the marvels of science and the dedicated,

brilliant work that has gone into it. The researcher continues, "Undoubtedly the most influential single event in medical science in the twentieth century was the discovery of the randomized, double blind, placebo-controlled crossover trial". "Gosh," I think, "Sounds like us."

A statistical methodology the jewel in the crown of medical science. Wow!

Statistics is a Cinderella amongst the Sciences, cleaning, sweeping, bringing order, but rather illequipped for the Ball. Xiao-Li Meng (who was a keynote speaker at ASC/NZSA 2006) referred to our "deficiency in 'self-promotion'" in his pitch to be Vice-President of the ASA (AmStat News, March 2006), writing that he would push for "deserved market value" across the board.

Perhaps the fact that he was not elected to the position indicates that we are still in "pumpkin mode". Or perhaps it is that we value "the value of what we do".

Actually, we did have another moment in the spotlight, when Jeff Hunter received the Campbell Award and Honorary Life Membership of the NZSA at the Royal Society Awards Dinner in November, for his many services to Statistics in New Zealand. It was a very special evening, and we were honoured to be a part of it.

And on the subject of randomized control trials, there is a nice satirical piece by Smith and Pell (2003) in the British Medical Journal (327:1459-61) decrying the fact that parachute usage is based only on observational data, a very amusing read.

Caveat: I think I have some of the details of the radio programme wrong, as it was several months ago, and the producer has no record of such an interview. However, the quote is reasonably accurate. If anyone can give me more accurate details, I will correct it online.

### Editorial

I subscribe to a couple of statistics-oriented email lists (allstat and anzstat). Occasionally someone posts a question on statistics. Very, very occasionally, it's on a topic I think I know something about, and I fire off a quick reply. At these times, I'm visited by an image of the statistical



community as a giant brain, and myself as one little neuron relaying messages from one part to another. It's nice to imagine the buzz of messages gradually coalescing into new thoughts, maybe new theories or new ways of analyzing data.

A sound, healthy brain is one with lots of good connections, so that messages can be relayed efficiently and appropriately, enabling great thoughts to be made. A less efficient brain is so full of messages about Nigerian bullion and jobs in the pharmaceuticals industry that it can hardly think straight. So good communication requires good connections, and good relaying decisions.

This newsletter is also a communication, but of a rather slower sort than the hastily-written email. Perhaps, stretching the medical analogy, more like a hormone. I hope you find something in here to stimulate you.

I'd like to thank all the members who have contributed articles and photographs. (They will have noticed that I don't usually thank them by return email, for non-proliferation reasons as above). In this issue two ongoing dialogues are continued, one on the future of the Australia and New Zealand Journal of Statistics, the other on the place of Statistics in the National Curriculum. The achievements of some of our members are celebrated in the Awards section. And the Local News keeps you up to date with recent developments in other parts of the "brain". But the main business in this issue is the forthcoming NZSA conference in Christchurch on 4th July, followed by a two-day conference on 5-6th July in honour of John Deely. This an opportunity to make, or to strengthen, some of those connections I was talking about. See you there!

Geoff Jones

Roger Littlejohn

## Submissions to the Newsletter

The Newsletter welcomes any submissions of interest to members of the NZSA. 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 24 August, 2007.

## **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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Email: g.jones@massey.ac.nz

## **Newsletter on Web**

An online version of this newsletter is available at <u>http://nzsa.rsnz.org/Newsletter65/index.htm</u>

It will be regularly updated with information and your letters.

Email: g.jones@massey.ac.nz

## NZSA Membership rates

Given rates apply from April 2007 - March 2008 and are in NZ\$.

	NZ	Overseas				
Ordinary	75	80				
Student & Retired	37.50	42.50				
No paper journal	-5	-5				
(electronic only - see next column)						
SSAI Member	45	50				
(journal funded fr	om SSAI n	nembership)				

## Join the NZSA

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

## **New members**

A warm welcome to 8 new members of the NZSA who have joined since September 2006, taking our current membership to 403.

Regular members: Rachel Harrison, Sheryn Canter, Michelle Wood, Edward Abraham, Mark Wohlers.

Student members: Marissa Isidro, Pritibha Singh, Michael Hayward.

## **Campbell Bequest Fund**

The NZSA was the recipient 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 <u>http://nzsa.rsnz.org/</u> <u>funding.shtml</u> for more details.

The fund has now grown to over \$59,000 with accumulated interest since 2001.

Applications are received twice a year (April/ October) and are invited for funding for projects in 2007/8. 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>fletcher@maths.otago.ac.nz</u>), NZSA, PO Box 1731, Wellington.

For more details contact Jennifer Brown (j.brown@math.canterbury.ac.nz) or Harold Henderson (harold.henderson@agresearch.co.nz). Jennifer Brown

# DVD: "Statistics in Research: A Visual Teaching Resource"

This DVD edited by John Harraway (University of Otago) and filmed at and subsequent to the NZSA 2005 Conference in Dunedin, is now available through the CASM Unit, University of Otago. For more information and an order form see <u>http://www.maths.otago.ac.nz/downloads/statsinresearch.pdf</u>. This project received some funding from the Campbell fund.

## Accessing ANZJS online

Members will be emailed this month with instructions and their password from Blackwell Publishing on how to log-on to the *Australian and New Zealand Journal of Statistics* online directly through Blackwell Synergy (<u>www.blackwell-</u> <u>synergy.com</u>).

## Awards

## Campbell Award and Honorary Life Membership of NZSA – Jeff Hunter

Professor Jeff Hunter has received the Campbell Award, the highest award of the New Zealand Statistical Association, to recognise his contributions to statistical research and education, and his services to the profession of statistics. The award was presented at the Royal Society of New



Zealand awards dinner on 15 November 2006 (attended by Roger Littlejohn, Harold Henderson and Steve Haslett).

Jeff's research has been in Applied Probability, focusing on Markov and semi-Markov processes, generalized matrix inverses, queueing theory and twodimensional renewal theory.

He has been the Professor of Statistics at both Massey University, Turitea and Albany Campuses, and was both the Founding Dean of the Faculty of Information and Mathematical Sciences at Massey University, Palmerston North and the Foundation Head of the Institute of Information and Mathematical Sciences at Massey's Albany Campus.

He served on the New Zealand Statistical Association Executive for 13 years and was President over 1995-97. He was the NZSA representative on the RSNZ Committee on Mathematical and Information Sciences over 1993 – 1997 and served as its Chair over 1997 – 2002. Over the period 1997-98 he was Chair of a Review Committee to investigate the "State of the Mathematical Sciences in New Zealand".

In 1993 Professor Hunter was elected as a Member of the International Statistical Institute. For his services to the Mathematical Sciences he was awarded a Bronze New Zealand Science & Technology Medal in 2003. In 2005 he gained an earned D.Sc. degree in Applied Probability from Massey University.

He has also been awarded Honorary Life Membership of the New Zealand Statistical Association.

## Waksberg Award - Alastair Scott

Alastair Scott has won the 2006 Waksberg Award from the American Statistical Association and the Statistical Society of Canada for his work on survey sampling. The award was established by the journal Survey Methodology in honour of



Joseph Waksberg, who has made many important contributions to survey methodology. Each year, as part of the Waksberg Invited Paper Series, a prominent survey researcher is chosen to author a paper that reviews the development and current state of a significant topic within the field of survey methodology, and reflects the mixture of theory and practice that characterizes Waksberg's work. Alastair's paper "The Analysis of Population-based Case Control Studies" was presented as the 2006 Waksberg Lecture at Statistics Canada's 23rd International Methodology Symposium on 3rd November, and was published in the December issue of Survey Methodology.

## Marsden Fund Awards- Alastair Scott, Chris Wild and Alan Lee; Mik Black

Congratulations to Alastair Scott, Chris Wild and Alan Lee of the University of Auckland who have been awarded a total of \$600,000 over three years for the project "Model fitting with complex sampling structures".



Chris Wild

Congratulations too to Mik Black, now in the Biochemistry Department of the University of Otago, who has won a two-year Fast Start award of \$70,000 per year to investigate "Bayesian models for personalised medicine".



**A** 

## **Statistics Education News**

## International News

IASE Satellite Conference Assessing Student Learning in Statistics will be held just before the 56th ISI Biennial Session at Guimaraes, Portugal. These IASE Satellites are attracting increasing numbers of statistics educators. Papers are currently being refereed. For more



information see: <u>http://www.stat.auckland.ac.nz/~iase/</u> conferences.php?show=iasesat07.

#### International Statistical Literacy Project (ISLP).

This project, chaired by Juana Sanchez, UCLA (USA), involves an international collaboration among statistics educators to communicate information to people interested and involved in Statistical Literacy or who want to teach it. The ISLP website (<u>http://</u><u>www.stat.auckland.ac.nz/~iase/islp</u>/) is rich in resources with web pages on general resources and definitions, assessment, reports useful for teaching statistics, learning materials from national and international statistical offices, listings of statistical literacy projects around the world, and children's censuses.

**New Books**. Two statistics education books were published in 2006. Both these books give a good overview of recent statistics education research at the primary and secondary school levels and are good resources for teachers of statistics.

- Watson, J. M. (2006). *Statistical literacy at school: growth and goals*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Burrill, G., & Elliott, P. (Eds.) (2006). *Thinking and reasoning with data and chance; Sixty-eighth Yearbook*. Reston, VA: National Council of Teachers of Mathematics.

A good website for keeping up to date with new resources is: <u>http://www.augsburg.edu/statlit/</u>.

Joint ICMI/IASE Study, Statistics Education in School Mathematics: Challenges for Teaching and Teacher Education. The International Commission on Mathematics Instruction (ICMI) Executive committee invited IASE to cooperate in a joint study focused on statistics. The invitation was accepted by IASE, which proposed to merge the Study Conference with IASE's next Roundtable Conference to be held in 2008 in Monterey, Mexico. Carmen Batenero is chair of the International Programme Committee (IPC) of the joint study. Planning is underway for this study, which will result in a book being published in 2010. Meetings of the IPC were held at ICOTS-7 and further meetings are planned for ISI-56. For more information see: http://www.ugr.es/~icmi/iase\_study/

**SRTL-5 Forum**. The 5th International Forum on Statistical Reasoning, Thinking and Literacy will be held in England at the University of Warwick, 11-17 August 2007. The focus of the Forum will be on Reasoning about Statistical Inference. For more information see: <u>http://srtl.stat.auckland.ac.nz/</u>.



Institute of Education, Warwick University, UK

## Local News

School curriculum. The feedback process for the draft of the National Curriculum has finished and the feedback is being analysed. Several summary reports have been developed on the curriculum in general and some detailed feedback has been received, particularly from secondary teachers, from nzmaths and meetings of lead teachers (HOD's) in Auckland. Many of the issues are to do with detail of the achievement objectives, professional development and the connection of the curriculum to NCEA. Vince Wright, project director for the mathematics and statistics curriculum, is charged with finalizing the curriculum by mid-May. Also, during 2007, he is bringing groups of people together to write some exemplars of activities students should be able to achieve at each level. Please contact me (m.pfannkuch@auckland.ac.nz) if you think you could make some contribution to the writing or monitoring (i.e. checking the correctness of the ideas and language) of the statistics and probability exemplars.

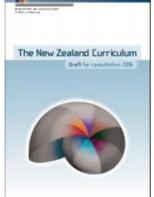
**Masters Theses in Statistics Education**. Three students at The University of Auckland have recently completed their masters theses in statistics education.

- Lynda Merriman: Using media reports to develop statistical literacy in Year 10 students.
- Megan Jowsey: Statistical investigations across the curriculum Year 13 Biology.
- Joanne Woodward: Statistical thinking as modelled by two Year 10 teachers when teaching informal inference using box plots.

Maxine Pfannkuch

## NZSA Education Committee

Our Association has been very active in responding the new draft to curriculum for primary and secondary schools that was released last year. Members of our Education Committee and many others have been meeting regularly, and have finalised a number of responses to the draft. You



can view these on our website which is located at <u>http://nzsa.rsnz.org/index.shtml</u>. The following are some of the submissions relating to the Statistics component of the Curriculum that are on the website.

New Zealand Statistical Association (general comments)

Statistics New Zealand (general comments)

Video Conference Group (cover note)

Video Conference Group (comments by curriculum category)

NZSA Education Committee (online feedback form)

The first three of these are letters written to support the NZSA response to the draft, and are by our President, by the Government Statistician (Brian Pink), and by Chris Wild who was on the video conference group, led by Maxine Pfannkuch, that prepared the NZSA submission. The fourth is our detailed submission on the statistics strand of the draft curriculum prepared by the video group. Finally there are some short comments on the overall draft curriculum document prepared by the Education Committee.

We have given permission to the Ministry of Education to publish our submission in its entirety on their online learning centre to enable others to "access, analyse and learn from our feedback" (their words, not ours!).

Several members of the Education Committee attended and presented at the National Numeracy Conference 2007 (colloquially referred to as the Numeracy Hui). This was the swan song for Pauline Stuart, who is off to Qatar for eighteen months. The Hui predominantly focused on numerical and increasingly on algebraic thinking, but we continue to press for statistical thinking to also become a more integral part of the Numeracy Projects.

Alex Neill

## **Conference Brief**

See Gordon Smyth's Australasian conference list http://www.statsci.org/conf/index.html

#### SSAI Young Statisticians Conference

ANU, Canberra April 13-14, 2007 Web: <u>http://www.statsoc.org.au/Conferences/</u> 2007YSConf.htm

#### Modelling Invasive Species and Weed Impact

Hanmer, Canterbury April 16-20, 2007 Web: http://www.math.canterbury.ac.nz/bio/ NZIMA/ Email: J.Brown@math.canterbury.ac.nz

#### NZSA 2007

University of Canterbury, New Zealand July 4, 2007 Web: http://www.math.canterbury.ac.nz/nzsa2007 Email: nzsa2007@gmail.com

#### **Conference in Honour of Prof John Deely**

University of Canterbury, New Zealand July 5-6, 2007 Web: <u>http://www.math.canterbury.ac.nz/nzsa2007</u> Email: <u>mik.black@stonebow.otago.ac.nz</u>

## Workshop for Women in the Mathematical Sciences in NZ

Long Bay, Auckland November 5-7, 2007 Email: <u>v.kirk@auckland.ac.nz</u>

#### **Biometrics by the Beach**

Coffs Harbour, NSW December 2-6, 2007 Web: http://www.biometrics.org.au/conf/

## ISBA2008 Conference of the International Society for Bayesian Analysis

Hamilton Island, Queensland July 21-25, 2008 Web: http://www.maths.qut.edu.au/asba/docs/ isba08/ Email: c.alston@qut.edu.au

## **Conference Report - DSC2007**



DSC 2007, a workshop on Directions in Statistical Computing, was held at Auckland University on February 15 and 16. The conference attracted over 60 researchers from the USA, Europe, and Asia as well as New Zealand. There were 39 scientific presentations, many of which had a connection to the R project for statistical computing, but with several notable exceptions, including plenary talks on Lisp and J as platforms for statistical computing research. The full scientific program is available on the conference web site (<u>http://www.stat.auckland.ac.nz/</u><u>dsc-2007/</u>) and the proceedings of the conference will be published in a special issue of the journal Computational Statistics.

Auckland turned on spectacular weather for the event, which was particularly welcome for the group that waited an extra hour for the bus that took us to the conference dinner! Many overseas visitors took the opportunity to explore and enjoy the city and the country both before and after the conference, with Queenstown a particularly popular add on.

Many thanks to the R Foundation, the Bioconductor Foundation, the NZSA, and the National Science Foundation for providing financial support that was used to assist with travel and accommodation for local graduate students, early career and PhD students from the USA, and several core members of the R project. Thanks also to Shobha, Sharon, Nancy, and Werner from the Department of Statistics for hours of time spent producing conference packs, feeding and watering the guests, and keeping the internet junkies online.



Paul Murrell

#### DSC2007: A Student's View

Although I have attended and presented at a number of conferences already, this was my first genuinely international conference and I was looking forward to hearing the thoughts of statisticians from further afield than Australasia and looking forward to getting feedback on my own research from a new audience. An international conference in your home city may not be quite as exciting as flying to an exotic location but it did provide a more convenient opportunity to present a work in progress to an academic audience.

The conference offered a range of papers, ranging from the philosophical to the applied, with a number of speakers offering their own vision for the future of statistical computing. The first day seemed to focus on discussions of the one letter variety, (R, J, C etc) which I'm sure would have seemed quite odd to the uninitiated.

Although my own area of interest, Social Simulation, was somewhat removed from most of the talks, I found the talks by Patrick Wessa and James Harner, each of whom was using R as the back-end of a web based application, to be particularly interesting. I learned a lot about what R can do (and also what it can't) through the two days and I also enjoyed Duncan Temple Lang's two talks which were both very interesting (and entertaining).

The presentation of my own work went smoothly although I wondered whether some of the audience were thinking more about the one day cricket (I had the online score up before I started) as there were fewer questions than I had expected. I look forward to my next opportunity to present, hopefully with a more substantial body of work.

No conference would be complete without some form of social gathering. We had an enjoyable dinner at Docksiders, opposite Kelly Tarlton's, although the bus that had been organised as transport failed to show up (which was not so bad for those of us who were already at the venue enjoying the wine and view). I thoroughly enjoyed meeting many of the overseas attendees during the evening found the networking opportunity to be as valuable as any of the talks.

I would like to acknowledge the organisational work of Paul Murrell and Sharon Walker at the University of Auckland for ensuring the conference ran smoothly and the NZSA for its contribution towards the registration fee.

Lyndon Walker



## ANZJS

Since the last newsletter, a lot of discussion has been going on concerning the ANZJS, firstly within an NZSA workgroup that has reported to Exec, then more recently between representatives of NZSA and SSAI by teleconference.

These discussions culminated in a meeting that was held on 28 February in Brisbane, and attended by representatives of both Societies and Blackwell. We went through the Annual Report of the journal in detail, and discussed the updated Blackwell – SSAI/ NZSA contract, which is due for rollover at the end of the year, the appropriate structure for non-editorial management of the journal, the Wiley-Blackwell merger, and trends in the industry.

The SSAI recently obtained a legal opinion on the draft contract, and Blackwell has reassured us about issues that it raised. The main change is that it will cover a 3-year term, to the end of 2010. Over the intervening period, we plan to hold general discussions on publication models.

The journal's Annual Report is available through our website. The main features listed in the report are

- The smooth transition of the journal to full production by Blackwell.
- $\cdot$  The journal's impact factor jumped 50% to 0.573.
- Members of both Societies were able to choose to receive the journal either online only or as online and print for the first time in 2006.
- Access to the journal reached an all time high with 3540 institutions able to access the journal through a combination of direct subscriptions, consortial arrangements or through licensed databases.

For the last 10 years the non-editorial management of ANZJS has been under the name of ASPAI (Australian Statistical Publishing Association Incorporated), but in reality it has all been done through SSAI. Various options have been discussed as to how to replace ASPAI. The currently favoured option does not involve a separate entity (such as ASPAI) at all, but rather a Memorandum of Understanding between SSAI and NZSA, and a high level of communication between us.

I have only touched on the main issues of a very complex and positive process. Please contact me with any questions or feedback. And, of course, submit your manuscripts to ANZJS – the statistical value of impact factors would appear to be a subject that is ripe for discussion.

Roger Littlejohn

### Statistician

#### AgResearch - Applied Biotechnologies Vacancy No AGR505

We are looking for a committed and experienced professional with tertiary qualifications in Statistics/ Biometrics to enhance the quality and relevance of science in our Institute.

In this position you will be part of a national team of 26, statisticians, mathematical biologists and bioinformaticians, and be based at our Grasslands campus at Palmerston North. This is a permanent position.

You will be an advocate for statistical principles within AgResearch; you will work collaboratively on projects, and will provide statistical training and advice to science staff. These capabilities are essential for our science discovery.

We are seeking a person who has:

- Ability to effectively use several statistical packages (e.g. R, GenStat, SAS)
- Experience in statistical consulting and research
- Demonstrated knowledge and experience in experimental design and a wide range of statistical techniques
- Well developed writing, speaking and interpersonal skills
- Demonstrated ability to work co-operatively and effectively in a team environment, and ability to work independently
- Ability to work on a number of projects, establish priorities, and meet conflicting deadlines
- Problem solving ability
- Initiative

If you possess the above skills, we would like to hear from you. To find out more about this position please contact John Koolaard by email john.koolaard@agresearch.co.nz or alternatively phone +64 6 351 8249.

For a job description and application form please contact Linda Murray, Phone +64 3 489 9011 or email <u>linda.murray@agresearch.co.nz</u>. Alternatively the job description and application form can be found at <u>http://www.agresearch.co.nz/recruitment/</u>.

For general information on AgResearch please visit our website at www.agresearch.co.nz

Applications close 30th March 2007 and should be sent to Linda Murray at the following address or by email -

Linda Murray, AgResearch

Invermay Agricultural Centre, Private Bag 50034 Mosgiel, Dunedin, NEW ZEALAND Email: <u>linda.murray@agresearch.co.nz</u>

## **Local Scene**

## AgResearch

Our deepest sympathy goes to David Baird and his three girls who lost a much loved wife and mother, Karen, in November, after being diagnosed with a brain tumour early in the year. David worked only part time from home last year while he nursed Karen. Karen did some part-time work with our group at Lincoln many years back, in the pre-AgResearch, MAF days. Her friendly, cheerful nature will be missed by her many friends.

On the conference scene, five of us from our group attended the Australasian GenStat/StatGen Conference at Victor Harbor, near Adelaide, in December. Peter Johnstone and Dave Saville occupied 67% of the second session, giving talks entitled respectively "Statistics, the Law and the Thieving Fishers" (a brilliant topic for a sweltering Aussie afternoon) and "Regression errors in 'x' case study" (not heavy duty, but less mirth-generating...). Next morning, David Baird talked on (GenStat) "Workbooks and other spreadsheet enhancements" and Roger Littlejohn talked on "Hidden Markov models" (in case you can count, the fifth attendee was John Koolaard). That night, many of us went blue penguin spotting, and the following night we visited a winery for the conference dinner. All in all, it was a good, well-organised conference at a good venue.

Dave Saville

## Lincoln University

Panic and horror strikes at the heart of statistical advicees as Alison Lister hands in her resignation to follow husband Peter to Melbourne. Alison has been a statistical consultant in the Bio-Protection and Ecology Division at Lincoln University since being drawn from

computing to return to statistics two years ago. She (a) will be very much missed and (b), as fellow lunch-time joggers will testify, won't be easy to replace.

Richard Sedcole

## **University of Otago**

The department welcomed Peter Dillingham as a new lecturer in statistics in February 2007. Peter has degrees in mathematics and statistics from the University of Alaska Fairbanks. Moving south, he worked in biostatistics and ecological statistics at the University of Washington, affiliated with the Schools of Medicine and Aquatic and Fisheries Sciences. He arrived in New Zealand after travelling halfway around the world from Dublin, happy to find the same weather.

David Fletcher is settling back in to teaching again after his sabbatical in 2006, and can still feel the benefits of having done only research in the last year. He presented a poster at the EURING mark-recapture conference, based on joint research with local ecologist Murray Efford, entitled "The effect of senescence on estimation of adult survival rate when age is unknown". He also organised an evening trip for EURING delegates to the titi (sooty shearwater or muttonbird) colony at Taiaroa Head, one of the study sites for the project on sustainable harvesting of titi chicks that David is working on with colleagues from the Zoology department at Otago. As well as getting a good look at the birds coming back to their burrows, McNaught's comet came into view as everyone headed back to the bus to return to town - a spectacular end to a thoroughly enjoyable evening.

Irene Goodwin

## Crop & Food

At the start of December, Andrew McLachlan, Andrew Wallace, Duncan Hedderley and Ruth Butler went to South Australia for the GenStat/StatGen conference. Highlights included some genuinely summery weather; John Nelder explaining Hierarchical Generalised Linear Models; and Ruth talking about field trials on scent lures for insect pests (Well, that's what she said they were - the aerial photograph looked suspiciously like runway markings for UFOs.)



Meanwhile, Esther Meenken got to the UK without incident, and is doing well on the MSc Biometry course at Reading University. Ruth Butler will be heading Reading-wards in March, for the next contact period on her DStat (professional doctorate in statistics), catching up with her supervisor, and studying Survival Analysis. Andrew McLachlan's travel plans are both more and less ambitious; he is part of the Crop & Food Relay For Life team, which is aiming to walk the distance between Palmerston North and Christchurch.

Duncan Hedderley

#### **Forest Research**

*NZ Forest Research Institute (Ensis and Scion)*: Forest Research (formerly known as FRI or NZFRI) has formed a joint venture (Ensis) with our CSIRO counterparts. As a result of this and the diversifying of research interests into the field of 'biomaterials', staff now work under one of two brands: Ensis, the forestry joint venture, and Scion, the rest.

We have 3 statisticians, Mark Kimberley, Mina van der Colff and Rod Ball, this side of the Tasman.

Association mapping in plants: The book, "Association mapping in plants", N.C. Raguzie et al. editors, with chapters by Ensis/Scion staff has been published by Springer. The book is a joint venture between Australian and New Zealand plant science researchers - the editors and authors are current or

former staff from HortResearch, Ensis/ Scion, and Agriculture Victoria. The 'down under' connection is completed with a preface by Bruce Weir (Univ. of Washington).



The book, which covers experimental and statistical techniques for association mapping (finding population level associations between genetic markers and traits), was the best selling title at the Springer stand at the recent Plant and Animal Genome conference in San Diego in January. See <u>http://www.springer.com/west/home/life+sci/life+sci+bestsellers?SGWID=4-40341-22-173665631-0</u>.

Statistical methods, including Bayesian methods for experimental design and analysis, are covered in Chapters 7 (H. N. De Silva and R. D. Ball) and chapter 8 (R. D. Ball). The statistical methods are not limited to plants, and include re-analyses of published data sets from human genetics (e.g. Alzheimer's disease), Bayes factor calculations for common tests (e.g. TDT test and variants), and an MCMC application.

Association mapping in Finland: Rod Ball was an invited lecturer in a doctoral course on association mapping in Oulu, Finland (150km from the arctic circle), organised by the Finnish national graduate school for Population Genetics in December. The course included 'students' from the university and research institutes in the area, as well as Sweden (1), and Italy (3).

The following week he visited Mikko Sillanpää (also a lecturer in the course) at University of Helsinki to work on Bayesian methods for statistical genetics, and on the way back visited Edgar Kublin and Matthias Schmidt in Freiburg, Germany to work on spline models in forestry, and sampled skiing in Austria (Stubai Glacier) and Switzerland (Grindelwald, Zermatt). Global warming was a frequent topic - there was no snow in Oulu in December and little in the rest of Europe. Ski events, trips on ice breakers, and visits to Santa's reindeer were all hit hard.

Rod Ball

## University of Auckland

The department has celebrated a number of notable successes recently. Alastair Scott, Alan Lee, and Chris Wild won a \$600,000 Marsden grant on the topic "Model fitting with complex sampling structures". Alastair Scott won the 2006 Waksberg Award from the American Statistical Association and the Statistical Society of Canada for his work on survey sampling, and gave invited addresses at five international conferences in 2006. James Curran and Chris Triggs were co-authors of the paper that won the 2006 PW Allen award of the Forensic Science Society, for the best paper published in Science and Justice in 2005. Their work reported on the distribution of glass fragments following experiments with firearms and hammer, and we can only imagine what might have happened to the judges' windows had they not won the prize.

Continuing a departmental teaching tradition, Matt Regan won a Dean's Distinguished Teaching Award, and Rachel Fewster won a university Early Career Teaching Excellence Award. These awards are the latest in a series of seven teaching awards for the department at national, university, and faculty level since 2002 - a legacy of head of department Chris Wild, who has been behind each of them, sometimes even preparing the application without the applicant's knowledge! Chris's term as HoD has just come to an end after four years of exemplary leadership. Welcome back to the job for incoming HoD Alan Lee!

Recent contract successes include \$500,000 for Marti Anderson for ecosystems research contracts, primarily from the Auckland Regional Council, and \$115,000 for Alan Lee from Statistics New Zealand. Russell Millar won funding from the University Research Fellowships Fund, in a very competitive process, to complete his book "Applied Likelihood Methods: with examples in R and SAS". Ilze Ziedins won the university's first Solander Fellowship to spend a month at Lund in Sweden.

The department's PhD students have celebrated several successes recently. Richard Umstaetter and Wayne Stewart have successfully defended their theses. Richard has taken up a postdoc at the NASA Jet Propulsion Laboratory (JPL) at Caltech, and

Wayne is now a full time senior tutor in our department. Rat researchers Steven Miller and James Russell have added several new successes to their names. Steven won a top prize in the Faculty poster competition, and his research was featured in a fullpage article in the New Zealand Education Review in September, entitled "Tu rattus turpis" (You dirty rat). James won first prize for a student presentation at the Australasian Wildlife Management Society Conference, and the prize for best publication by a new researcher at the New Zealand Ecological Society Conference, in addition to a Solander Travel Grant to visit Sweden later this year. The rat work of the Rodent Invasion group involving James Russell, Steven Miller, and Rachel Fewster gained headline status in the January issue of Marsden Update, and even made it to the inner pages of the Dominion Post in February. This exposure is most likely due to the

group's flagship emblem: a postcard of a Norway rat in the Bay of Islands, created by Stephen Cope, in which Northland tourism concerns have



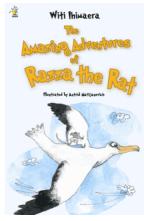
consistently failed to take an interest.

Russell Millar continued his high-profile media quest to explain probability to the masses, giving an excellent interview to Eva Radich on National Radio in November. Among other nuggets of wisdom, Russell explained that the diminishing profits reported by Sky City Casino could have been due to its hosting of the ASC/NZSA conference last year. The casino's profit margins will have overlooked the crisis of a week's occupation by statisticians, none of whom visited the gaming tables once!

Ross Parsonage organised the department's Annual Teachers' Workshop Day for secondary school teachers, with nearly 200 participants from as far afield as the Bay of Plenty and Hawkes Bay. Maxine Pfannkuch's work in designing the new school curriculum for statistics was a major driver for the success of the day and the exceptionally large attendance.

In other activities, the department's position as the Home of R has been reinforced by Ross Ihaka's R Programming Workshop in November, and the Directions in Statistical Computing workshop in February with over 60 international participants. Marti Anderson and Sharon Browning have both been jetsetting around the US and Europe, giving and attending workshops. George Seber was the guest of honour at the international EURING conference in Dunedin. Patricia Metcalf co-authored no fewer than 60% of the articles in a November issue of the Journal of the New Zealand Medical Association!

And finally, an unexpected collaboration with the English department hit the headlines in November, when for the first time **Statistics** department research became the topic of a children's book and play! "The Amazing Adventures of Razza the Rat", by Witi Ihimaera, was inspired by James Russell's adventures



with "lost, stolen or strayed" radio-tagged Norway rat Razza. The story was performed by the children of Sunnynook Primary School in December. Reeling from the shock of being portrayed in the book as an elderly balding scientist, and on stage as a 9-year-old girl, James submitted his PhD and fled to the South Island, where he hasn't been heard of since...



Sunnynook performance, with James Russell at back and Witi Ihimaera at front.

Rachel Fewster

## Wellington Statistics Group

The Wellington Statistics Group (WSG), a local group of the NZSA, continues to meet regularly. The Group receives regular sponsorship from the Ministry of Social Development, Statistics New Zealand, Statistics Research Associates Ltd, and Victoria University of Wellington. Since the last NZSA Newsletter, and before the now-traditional 'summer break', there were WSG talks given by:

- 12 October: Dimitar Christozov (American University in Bulgaria) and Stefanka Chukova (Victoria University of Wellington), "Estimation of the mean cumulative function from automotive warranty data: a stratification approach".
- 1 November: Len Cook, Former NZ Government Statistician (1992-2000) and Head of the UK Office

for National Statistics, the Registrar General of England and Wales, and the first UK National Statistician (2000-2005), "What might official statistics in the Antipodes learn from the British statistical system, and vice versa?"

- 22 November: Estate Khmaladze, Victoria University of Wellington, "On distributions that do not follow asymptotic theory and other anomalies".
- 28 November: Nanny Wermuth, Chalmers/ Gothenburg University, Sweden, "Distortions of effects".

David Harte took over as Convenor of WSG from John Haywood at the start of December 2006, when John started a 12 month sabbatical as a Visiting Scholar at the UCLA Department of Statistics. John had been WSG Convenor since August 2001, when the group first met and when John agreed to convene an interim 'steering committee'.

Anyone who does not presently receive WSG announcements and who wishes to be put on the WSG mailing list can subscribe at the WSG general information web page, hosted by the School of Mathematics, Statistics and Computer Science at VUW: <u>http://www.mcs.vuw.ac.nz/mailman/listinfo.cgi/wsg.</u>

John Haywood

## Victoria University

This news entry from VUW is a little lighter than usual, since John Haywood has been living in Santa Monica, CA since December 2006, so he's found it harder than usual to 'encourage' people to give him their news. However, John is enjoying his sabbatical time as a Visiting Scholar at the UCLA Department of Statistics, and also enjoying the winter weather in Santa Monica. One day recently, it rained; this prompted Helen (now aged 4) to say, "But it never rains here!" on the way to preschool. She was correct that this winter has been quite a lot drier than normal: only 0.85 inches of rain at LAX so far this year (to Feb 22), compared to the average 5.33 inches. (The web is a wonderful source of data!)

Dong Wang is also on sabbatical and has been travelling widely since July 2006, including occasional returns to Wellington for brief periods. Dong returns from leave at the end of April 2007. Ivy Liu will be hosting Bhramar Mukherjee (Department of Biostatistics, University of Michigan) again in 2007 (probably around May-June), as she did in 2006. While in Wellington, Bhramar will give a short course about applying Bayesian procedures to solve problems in Genetic Epidemiology, which she delivered at the JSM in 2006.

Shirley Pledger attended the EURING 2007 conference at Otago University in mid-January and seems to have had a great time. To quote Shirley: "The conference was a delight - thank you to the Otago organisers. You may wonder why a statistician attends a European Union for Ring Banding Conference, and why the conference is in New Zealand. It has lots of capture-recapture modelling, and the biologists and statisticians have copied the birds in not recognising European borders." Shirley's international leadership in capture-recapture methods has also been further recognised by an invitation to present at the Recent Developments in Capture-Recapture Methods and their Applications Conference in Reading UK in July. On the same trip she has also been invited to spend a week at the Max Planck Institute for Demographic Research in Rostock, Germany.

Estate Khmaladze has a new PhD student, Haizhen Wu, starting his research currently. Haizhen won a targeted PhD scholarship and joins Giorgi Kvizhinadze in Estate's group of PhDs; Giorgi commenced his research in August 2006. Estate was an invited speaker in early January at the International Indian Statistical Association 2007 Conference in Cochin, India. Estate has also been invited as a key note speaker to one of the programs being held later in 2007 to mark the Platinum Jubilee celebration (75 years) of the Indian Statistical Institute.

John Haywood

### **University of Canterbury**

Carl and the organizing committee are busy putting together the final details of the NZSA2007 conference; see the main entry for more details.

Jennifer Brown attended a course on Correspondence Analysis in Sydney in Dec 2006 and is now very enthusiastic about the method. She has a student, Lisa Henley, now using the technique for analysis of child-development.

The department supported a number of summer scholarship students in statistics, who worked on a range of projects:

- Application of bayesian networks to modelling movement of children among IQ groups with age (Lisa Henley)

- Modelling track-user behaviour and satisfaction of a popular NZ walking track (Kathryn Baldwin).

- Application of support vector machines for classification (Olivia Son)

- The distributions of change points in long memory processes (GuanYu Zheng)

Congratulations to our graduates who were employed with Statistics NZ this year.

In November, postgraduate students and staff from the UoC and Otago descended on Queenstown for the inaugural South Island Mathematics & Statistics Postgraduate (SIMASP) Conference. This successful conference allowed participants to present their work in a friendly environment and to build networks with students from other departments.

The NZIMA programme on Modelling Invasive Species and Weed Impact is organising a 5 day workshop in Hanmer in April 2007. Up to 6 international mathematicians and statisticians, along with about 35 New Zealanders, will be invited. The workshop's format will be introductory sessions by New Zealand weed managers outlining the current issues and problems in weed management in NZ, followed by sessions from the international invitees on the latest developments in relevant mathematical and statistical tools. Each day, in the follow-up sessions, the workshop attendees will identify the gap between the knowledge that can be gained from the current mathematical models and what is needed by NZ weed managers. The NZIMA programme goal is to bridge that gap by stimulating relevant research amongst NZ mathematicians and statisticians. More information is at http://www.math.canterbury.ac.nz/ bio/NZIMA/

Dr John Newell from the National University of Ireland, Galway has officially become an Adjunct Senior Fellow, as part of on-going plans to foster greater links and cooperation between our respective departments. Congratulations John and glad to have you on board.

Carl, Dominic and Marco are commencing a research program with their PhD students, Xin Zhao and Marina Zahari, looking at using high resolution physiological measurements to understand longer term health outcomes for preterm babies. For which they are also busy roping in willing honours students!

Carl Scarrott

## Massey University, Albany

Jeff Hunter received the Campbell Award for his contributions to statistical research, education and services to the profession (see also awards section). Well done Jeff! Although Jeff's retirement is imminent, he is keeping very busy, publishing work and presenting papers, recently at the New Zealand Maths Colloquium in Hamilton.

The University advertised last year for a new Chair in Statistics to replace Jeff's position. Despite all expectations the university has been unsuccessful in making an appointment. We wait to see what transpires! Our senior tutor Marie Fitch has been kept rather busy over the summer; according to Marie the numbers in our summer school program for Business Statistics reached a record number, up by around 25% from the previous year.

Our congratulations go to Beatrix Jones and Danny Walsh on the birth of their first child Albert.

Paul Cowpertwait

## Massey University, Turitea

Our graduate student room has become rather crowded of late, following the arrival of Ting Wang (China), Marisa Isidro (Philippines), Tilman Davies (Australia), and Joyce Leung and Brigid Betz-Stablein (Palmerston North). Another arrival from across the Tasman is Jonathan Marshall, who is here on a Massey University postdoctoral scholarship to work with Professors Martin Hazelton (Stats) and Nigel French (Epicentre) on smoothing relative risk surfaces in epidemiology. A much loved staff member has finally retired after 7 years of invaluable service - Louie, Jonathan Godfrey's guide dog.

Ricardas Zitikis visited again in October to work with Chin Diew Lai and Mark Bebbington. Ricardas contributed an amusing and thought-provoking seminar to the Palmy Statisticians Day which, along with David Baird's keynote address, helped to make it another enjoyable and successful meeting. We currently have a sabbatical visitor from Korea, Dr Yoo Young-Ho, who will work with Ganesalingam.

Doug Stirling spent some time at Nestlé in Lausanne, Switzerland in late September, working on the new chocolate version of CAST. At the same time Steve Haslett was in Nepal giving the final presentation of the poverty mapping project for the World Food Programme and World Bank.

Geoff Jones had an unexpectedly easy time this summer, when extramural enrolments in Business Statistics inexplicably dropped by 25%.

Two staff members are currently on sabbatical: Mark Bebbington in Palmerston North, and Alasdair Noble in Southampton. Alasdair is pictured below doing some serious research.

Geoff Jones



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