



## 15th Australian Statistical Conference

3 - 7 July 2000

Adelaide Hilton International  
Hotel

### Call for papers

Abstract submissions for contributed papers are due by 30 April 2000. Abstracts must be submitted electronically through the Web site

[http://  
www.sapmea.asn.au/  
15ASC.htm](http://www.sapmea.asn.au/15ASC.htm)

(See Submit an Abstract)

All abstracts will appear in the Proceedings and be acknowledged to the submitting author. Oral presentations will be allocated 20 minutes, plus 5 minutes question time.

### Major Themes

Large and Complex Data Sets

Medical and Pharmaceutical  
Statistics

Image Analysis

Industrial Statistics

### Invited Speakers

Professor Mark Berliner  
(Ohio State University)

Professor Adrian Baddeley  
(Uni of Western Australia)

Professor Dennis Cook  
(University of Minnesota)

Professor Garrett Fitzmaurice  
(Harvard University)

Professor Jerome Friedman

Dr Kerrie Mengersen  
(Queensland Uni of Technology)

Professor David Moore  
(Purdue University)

Professor Jon Rao  
(Carleton University)

Dr Peter Thomson  
(Statistics Research Associates Ltd)

Professor Donald Rubin  
(Harvard University)

Professor Bimal Sinha  
(University of Maryland)

### Satellite Workshops

#### Statistical Education Workshop

1-2 July 2000

*Special guest speaker*

Professor David Moore

#### Data Mining Workshop

2 July 2000

*Principal presenter*

Professor Jerome Friedman

#### Survival Analysis

7-8 July 2000

*Principal presenter*

Professor Terry Therneau

### Information and Registration

details are available from:

[http://www.sapmea.asn.au/  
15ASC.htm](http://www.sapmea.asn.au/15ASC.htm)

Further Information is available from the conference organisers:

SAPMEA Conventions  
68 Greenhill Road  
WAYVILLE SA 5034

Ph: (08) 8274 6060

Fax: (08) 8274 6000

Email: [15ASC@sapmea.asn.au](mailto:15ASC@sapmea.asn.au)

### Apology

The editors wish to apologise for the late arrival of the November edition and for any inconvenience this may have caused members in regard to membership renewals.

There were a range of technical problems with new software in November (which will enable us to load the Newsletter to our website) which led to unforeseen delays.

### In this issue

15th Australian Statistical Conference	1	Branch Reports	6
Central Council	2	International Association for Statistical Education	10
Member News	4	Conferences Report	12





**PO Box 85,  
Ainslie ACT 2602  
Phone/Fax (02) 6249 8266  
Email: [ssai@interact.net.au](mailto:ssai@interact.net.au)  
Society Web Page  
<http://www.statsoc.org.au>**

#### **Editors**

**D. E. Shaw**, CSIRO Mathematical and Information Sciences, Locked Bag 17, North Ryde, NSW 1670.  
Email: [doug.shaw@cmis.csiro.au](mailto:doug.shaw@cmis.csiro.au)  
Fax: (02) 9235 3200

**E. Brinkley**, Australian Bureau of Statistics, PO Box 10, Belconnen, ACT 2616  
Email: [eden.brinkley@abs.gov.au](mailto:eden.brinkley@abs.gov.au)  
Fax: (02) 6252 6530

**R. I. Forrester**, CSIRO Mathematical and Information Sciences, GPO Box 664, Canberra ACT 2601  
Email: [bob.forrester@cmis.csiro.au](mailto:bob.forrester@cmis.csiro.au)  
Fax: (02) 6216 7111

#### **Correspondence**

Please direct all editorial correspondence to Edén Brinkley.

#### **Disclaimer**

The views of contributors to this Newsletter should not be attributed to the Statistical Society of Australia, Inc.

#### **Subscriptions**

The Newsletter of the Statistical Society of Australia is supplied free to all members of the society. Any others wishing to subscribe to the Newsletter may do so at an annual cost of A\$10.00 (A\$8.00 if also a subscriber to the ANZJS), for an issue of four numbers.

#### **Advertising**

Advertising will be carried in the Newsletter on any matters which the Editors feel are of interest to the members of the Society. For details of advertising rates, etc. contact the Editors at the above addresses.

#### **Printer**

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#### **DEADLINE FOR NEXT ISSUE:**

14 April 2000

## Central Council

### **ACCREDITATION COMMITTEE - EXPRESSIONS OF INTEREST**

The Central Council of the Statistical Society of Australia Inc. is seeking expressions of interest from accredited members to join the Society's Accreditation Committee for the period July, 2000 to July, 2003. The Committee consists of six members and it should be as representative as possible of the Branches and of areas of statistical expertise. The Central Council is mindful of the need for continuity in membership and the need to bring new members onto the Committee so two positions are to be filled by new members each year.

The Terms of Reference for the Committee and details of the accreditation model are given in the November 1995 Newsletter. Most committee meetings are via telephone conferencing.

Those interested in serving on the Accreditation Committee should send their name and contact details along with a brief outline of their areas of expertise to:

Dr Neville Weber,  
Secretary, SSAI,  
School of Mathematics and  
Statistics, F07,  
University of Sydney, NSW  
2006

Facsimile: (02) 9351 4534

The closing date for expressions of interest is 21 APRIL 2000.

As noted in the Society's Regulations the Nominating Committee of Central Council may act as a search committee.

Neville Weber,  
Hon. Secretary

### **Accredited Members**

The following applications have been approved by the Central Council.

#### **GStat:**

Adrian Barnett  
Michael Johnston  
Christine McDonald

#### **Accredited Statisticians:**

Ingrid Baade  
Peter Baade  
Michael Coory  
Kathryn Haskard  
Ian James  
Susan Linacre  
Allan Lisle  
David Reid  
Therese Shaw  
David Steel  
Fearnley Szuster

Neville Weber  
Secretary, SSAI



# Accreditation

## ACCREDITATION REPORT

### Preparing an Application

After nearly two years of reviewing applications for accreditation, the Committee feels it would be useful to articulate more clearly what it looks for in applications. Our hope is that this will aid prospective applicants to decide whether they are likely to have the requisite qualifications, and if so, to provide suitable documentary evidence.

The Committee's view is that accreditation should provide to employers or to prospective clients a clear signal that this person is competent to undertake professional consulting work as a statistician. As stated in the Information Sheet, accreditation

'... is to be based on a combination of formal qualifications in statistics, relevant practical experience and demonstration of professional competence.'

An Accredited Statistician has also agreed to abide by the SSAI's professional Code of Conduct.

Professional consulting work might take the form of designing experiments or surveys, modelling or analysing data, and it will most certainly require the presentation of the results of such work in reports to clients.

Another important aspect of being a professional is preparedness to refer clients elsewhere if their problems require skills and knowledge outside your own area of professional expertise. The list of accredited statisticians on the SSAI Accreditation Web page web with their associated areas of expertise is useful in this regard.

The assessment process currently operates as follows. All six Committee members review the referees' reports for each applicant. In addition, two members review submitted papers and reports. We sometimes seek additional papers or reports, or even additional referees' reports if none of

the referees is a senior statistician. We are looking for evidence of good statistical practice:

- appropriate use of statistical techniques
- professionalism and competence in applying the techniques
- reporting the work and findings in a professional manner

Just as papers to scientific journals need to provide sufficient detail for others to reproduce the methods, so a professional report by a statistician should include sufficient methodological detail (possibly relegated to appendices) for another statistician to follow what has been done. Papers to refereed journals are certainly acceptable, but those that report only theoretical investigations or simulations are not likely to provide evidence of competence as a practising applied statistician.

Some applicants have had difficulty providing us with reports for reasons of confidentiality. We have developed a set of guidelines that are available from the Society's office and that include provision for applicants to nominate two of the six members of the Committee who should not see the reports sent in. The two assessors would then be drawn from the remaining four and would present their views to the full Committee without disclosing any of the confidential details.

The current members of the Accreditation Committee are:

Michael Adena,  
Nick Fisher,  
Richard Jarrett,  
Lynette Lim,  
Tony Swain and  
Siu-Ming Tam.

### Marketing Activities

**Marketing business plan:** The Accreditation Marketing Committee has commissioned an agency to help

the SSAI as it seeks to market the value and benefits of accreditation to all groups of customers and stakeholders.

The agency will develop a marketing plan with the objectives of:

- increasing awareness of and the value of Professional Accreditation among the target audiences
- assist the Statistical Society in raising sponsorship to fund the marketing campaign.

The main target groups for the marketing activities will be employers of statisticians, major contractors of statistical work, SSAI members, and undergraduates who might be suited to a career in Statistics.

### Professional Accreditation Update

This is a regular column of the Newsletter.

The objectives are:

- to announce names of people recently awarded AStat or GStat status, together with a brief description of their backgrounds and interests.
- to provide current news, such as continuing professional development courses
- to inform members of other initiatives promoting professional accreditation
- to publish answers to queries about Accreditation that may be of general interest

### Enquiries, Comments and Feedback

To find out more about how to apply for Accreditation, or make enquiries or comments about marketing matters please contact Lesley Sieper at the SSAI Office:

phone / fax: 02 6249-8266

e-mail: [ssai@interact.net.au](mailto:ssai@interact.net.au)



### Statisticians Receiving ARC Grants

The recently released list of ARC grants can be found at the web page

<http://www.arc.gov.au/grants.default.htm>

Amongst the statisticians who obtained these grants are:

Associate Professor Vo Anh (QUT) and Professor Chris Heyde (ANU)

“Stochastic analysis of long-range dependent multifractals”.

Professor Geoffrey McLachlan (UQ), Associate Professor Kaye Basford (UQ), Professor Christine McLaren (University of California) and Associate Professor Padhraic Smyth (Australian Catholic University)

“Classification of multiply observed features in terms of fitted densities”.

Professor Alan Welsh (ANU)

“Analysis and modelling of survey and other data containing extra zeroes”.

**Dr Murray Cameron**, a member of the New South Wales Branch of the Society, has been appointed Chief of CSIRO Mathematical and Information Sciences.

Congratulations Murray.

On Australia Day, 26 January 2000, the Governor-General of Australia Sir William Deane conferred Membership of the Order of Australia in the General Division on **Emeritus Professor Joseph Gani**. This government award to individuals recognizes distinguished service to Australia.

The citation refers to his contributions to research in Mathematics, Statistics and Biomathematics, and his efforts aided by his late wife Ruth in launching the Applied Probability Trust, the publisher of four journals, in 1964.

Professor Gani was Head of the Department of Probability and Statistics at the University of Sheffield in the UK between 1965 and 1974, and created the Manchester-Sheffield School of Probability and Statistics in 1967. During his time in the UK, he served as Vice-President of the Royal Statistical Society (RSS) in 1973-4.

In 1974, he was appointed Chief of the CSIRO Division of Mathematics and Statistics in Australia; in 1981, however, he decided to leave Canberra for the USA.

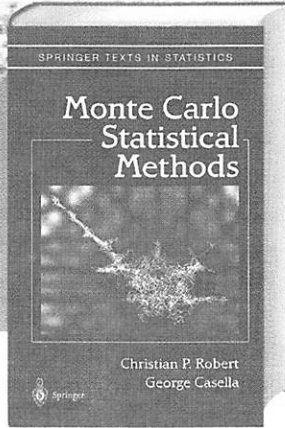
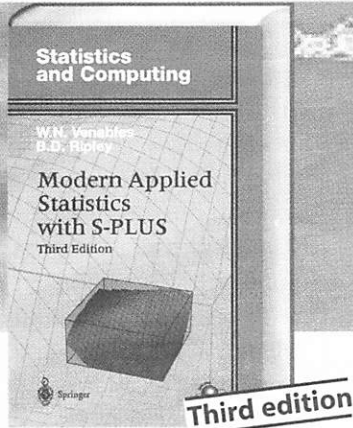
He retired in 1994 from the University of California at Santa Barbara, and is currently a University Fellow in the School of Mathematical Sciences of the Australian National University.

Professor Gani was awarded Honorary Fellowship of the RSS in 1982, and Honorary Life Membership of the Statistical Society of Australia (SSA) in 1983. He was also the recipient of the SSA's Pitman Medal in 1994.

Professor Gani continues to be vitally interested in the activities of the SSA, and is an occasional book reviewer for the ANZJS.



# Springer for Statistics



W.N. Venables, B.D. Ripley

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3rd ed. 1999. XII, 501 pp. 144 figs.  
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ISBN 0-387-98707-X

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Discusses the fundamental ideas which lie behind the statistical theory of learning and generalization. Written in a readable and concise style and devoted to key learning problems.

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R. Shumway, D.S. Stoffer

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2000. Approx. 550 pp. (Springer Texts in Statistics)  
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## Branch Reports

### NEW SOUTH WALES

#### Small Area Population Estimation in the 2001 UK One Number Census

All hail Ray Chambers – the Schwarzenegger of statistics, sultan of the census, the superman from Southampton. That's right, Ray was back, bigger, brighter, bolder, brasher and more bushier bearded than ever.

Breezing into the Sydney offices of a former employer, Ray regaled those at the October meeting of the NSW branch with a talk on the current love of his life, Small Area Population Estimation in the 2001 UK One Number Census (which does not mean that they count the number of single digits in the UK).

Wearing a rather strange tie, featuring a colourful kybosh of koalas, kangaroos and 'kidnas, Ray apologised in advance for any slides that may have been out of order – this was to be his third time giv-

ing the talk in the one day. One can only hope that this is because Ray is such an interesting and enthralling speaker whose services are in high demand and not because he needs the practice.

Ray opened the talk by explaining that the One Number Census was to be a census (i.e. the 2001 census) combined with an integrated undercount adjustment that would lead to a single output dataset (eh?). The experience from the post enumeration survey after the 1991 census was that it failed to find people missed by the census and that the new method would hopefully correct for this.

The undercount was identified at approximately 1.2 million people (although there was no precision on this estimate – shame statisticians, shame!), roughly 2.2% of the UK population, and was highest amongst inner cities (although how you could undercount inner cities is beyond me), young men and elderly women. The aim of the One Number Census is to simplify the pro-

cedures and definitions in the forms for the One Number Census and to use targeted publicity to reduce the undercount.

Ray then went on to discuss the 2001 wish list and to introduce the CCS (an acronym whose meaning I have now forgotten) and to discuss some very detailed issues with the design of the One Number Census. The most interesting point I felt was the "Hard To Count" Index, an idea so simple and yet so appalling named, so open to mockery that I find myself unable to contemplate doing so. So I won't.

It was at this stage that I got a sore finger and had to stop writing, so unfortunately my notes ceased as well, although I can recall with such clarity Ray's "Cotswold Tourist Bureau" spiel. Ahhh lovely.

The big man left soon after, returning to the distant shores of ol' Blighty and the docks of Southampton, transported there for crimes unimaginable. Come back Ray, we miss you...

\*\*\*\* New S-PLUS Module \*\*\*\*

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### Who Counts? Why Count? How Do We Count?

Now, I must admit, that my favourite Sesame Street character is indeed the Count. And fair enough, show me a young statistician these days that can't point to the Count as an influence on their later life. What other role model can there be? So it was that I approached this meeting with high hopes that my childhood hero would stand tall and his number fetish would be revealed as the guiding light to all and sundry. I was to be disappointed.

Professor Lynne Billard came to speak at the final NSW branch meeting of the year, complete with a CV longer than a very long thing and more impressive than a very impressive thing (metaphors escape me at the moment). The basis of her talk was the decennial US census, to be performed next in 2000, and some issues relating to its conduct and results.

Lynne started with a short history of the census and "Who Counts?". The US constitution was written in 1787 and the first census performed in 1790. It counted 3.9 million people (roughly the undercount of today) using Marshals on horseback and took 18 months to complete (although I daresay this timeframe is no reflection on how long it currently takes to holler for a Marshall).

The census consisted of just six questions, focussing on households and including questions on the numbers of slaves and women (Editors note: the rest of this paragraph has been deleted).

In 1839 the American Statistical Association was formed over concerns with the conduct of the 1840 census and in 1850 Lemuel Shattuck (I kid you not) changed the focus from the household to the individual. Later, General Francis Amasa Walker implemented operational and methodological changes. Around the 1940's housewives on foot performed the census, a method that changed in 1970 when mailing was introduced.

Lynne moved next onto "Why Count?". The major reason for performing the

census is apportionment. The number of seats in the House of Representatives is tied to the population, and after the 1910 census this was fixed at 435 seats. Hence after the 1920 census the allocation of seats became a zero sum game, with small changes in population affecting who gets the last seat (a bit like musical chairs is it then?).

Also tied to the census is funds distribution, with almost \$200 billion going to states and local communities. However both of these issues are impacted by the undercount in the census.

The undercount is the core of the debate over the census. In 1870 three cities mounted legal challenges against the census. In 1940 the differential undercount was highlighted due to the fact that there were more registered men of draftable age (or cannon fodder, pick your term) than the census counted. It was found that the undercount varied across race and region.

The talk moved on to discuss the issues of mailback rates and the associated costs and major statistical issues. These issues centred around smoothing models for the variance and how they increase bias but reduce variances and whether the trade off was the right thing to do.

Lynne finished the talk with a few census promotional posters ("This is your future, don't leave it blank") and recounted the political and legal challenges to the census (most notably the recent Supreme Court decision on sampling versus enumeration). In all this was a delightful talk that cannot get the justice it deserves in a few paragraphs from me. Oh well.

The evening continued with the annual nosh-up and quiz. Full credit to Edmund Bosworth for his masterful questions and congratulations to whoever the winners were (I can't remember just now, but we haven't forgotten about your prize even though we did on the night). Hope to see you all in 2000.

Jason Boland

## CANBERRA

### Workshop on Principles and Practice of Sampling and Surveys

The Canberra Branch conducted another highly successful half-day workshop in October 1999, with over 60 people attending. The format of the workshop comprised five half-hour presentations by speakers of different backgrounds, followed by dinner (catered by the Parsley Patch) and the 1999 Ken Foreman Lecture. A short summary of each presentation and the Foreman lecture is provided here, however a more detailed description of each (thanks to Ken Brewer) is available on the Canberra Branch web site, <http://www.ozemail.com.au/~ssacanb/workshop99.html>.

The first speaker for the workshop was Robert Clark (University of Wollongong). He presented a paper, which he had written with David Steel (University of Wollongong), entitled "An Overview of Survey Analysis". He first dealt with the difference between descriptive and analytic statistics, and then dealt with the ways in which survey data might be describable as complex. Complexity can be the result of stratification or clustering, or simply of the dataset being large, but it can also arise through "informativeness."

Informativeness is a concept that derives from the model- or prediction-based approach to sampling inference. Sample designs are informative if the survey variables are dependent on the inclusion probabilities, even after those variables have been conditioned on other known data. Informativeness can be intrinsic (as with non-response) or relative to the analyst's knowledge (as when design information is withheld to protect privacy).

Finally, Robert described the Pseudo-maximum Likelihood (PML) ap-



proach to sample estimation and gave examples of its use.

The following speaker, Ray Chambers (University of Southampton, UK), reported on a joint project that he was undertaking with Fiona Steele (London School of Economics) and James Brown (Southampton), entitled "Underenumeration Adjustment via Controlled Imputation in a One Number Census".

Undercoverage is a serious problem for population censuses. Adjustments are required, and usually more than one set of figures is published. For the UK's 2001 Census, however, only the adjusted set of figures will be provided.

These adjustments will be made using the Census itself in conjunction with a large post-enumeration survey (the Census Coverage Survey or CCS). The population will be divided up into classes with substantially different probabilities of being missed, and the under-coverage of each will be estimated and adjusted for. Ray detailed the three-stage procedure in which households and individuals will be imputed to close the gaps between Census counts and adjusted totals for each local administrative area. He concluded by showing how these adjustments would have affected the 1991 UK Census.

The workshop then proceeded with Frank Yu (Australian Bureau of Statistics, Canberra), who presented work on "Regression weighting in the presence of non-response", that he had jointly undertaken with his former ABS colleague Andrew Storm. This was quite a complicated talk and a succinct report would not do it justice. Hence, those interested in reading about this talk are advised to read the summary written by Ken Brewer, which is provided on the Canberra Branch web site (URL given above).

Malcolm Mearns of Datacol Research Pty Ltd, Canberra was next to speak and

he discussed "Operational issues in Conducting a Survey of Passengers on Public Transport". The survey in question was conducted to measure the customer level of satisfaction with ACTION, the ACT Government's interchange omnibus network. Extensive changes to ACTION's fares, routes and timetabling had been introduced in February 1998, and the survey was held a few months later.

Datacol put in a bid to design, conduct and analyse this survey. Malcolm gave a racy account of the problems encountered in preparing the bid and designing the survey, including the sparsity of relevant framework information and a very short timeline. He then described how a survey questionnaire was prepared, a sample of driver shifts selected, a survey team of university students recruited and trained and an on-bus survey successfully conducted, all in three weeks, and concluded by summarising the results.

The final speaker for the workshop was Mariah Evans (Research School of Social Sciences, ANU). Mariah reported on a study she had jointly carried out with Jonathan Kelley and Peter Dawkins for the University of Melbourne's Institute of Applied Economic and Social Research (IAESR) entitled "Quantitative aspects of the Monetary Value of Job Security". They used data collected by the IAESR's International Social Science Survey Australia (ISSSA) and corresponding data from Finland, Poland and Bulgaria.

They found that the "Scandinavian model" used in Finland offered the most secure jobs, and Bulgaria, "a still largely-unreformed socialist economy in free-fall," the least. Between 1989-90 and 1996-97, the job security level in Australia had fallen from just below the Finnish level to just above that of Poland, "a country whose dramatic, on-going

marketisation makes Australia's restructuring look tame".

The most controversial results from the regression analysis were those relating to the monetary compensation that would be required to compensate for the loss of job security. In order to compensate a lowly paid employee for a fall in job security from the level of a typical full-time government employee to that of the workforce as a whole (once again comparable to the difference between Finland and Poland) required a rise in hourly pay of \$2.07 or 21%.

### The 1999 Ken Foreman Lecture

The 1999 Ken Foreman Lecture was held in conjunction with the Canberra branch October workshop. Associate Professor David Steel of the University of Wollongong was the 1999 Ken Foreman lecturer. David discussed a project that he was undertaking with Mark Tranmer and Tim Holt in the UK, entitled "Analysis Combining Survey and Census Data".

Survey analyses are typically based on individual sample units, but often there are also aggregate data available, usually from administrative sources and geographically based. Disconcertingly, regression analyses of these aggregate data typically yield relationships between variables that are quite different from those obtained from the individual units. The estimated regression coefficients are usually of the same sign but can be very different in magnitude.

This project was devoted to finding ways of obtaining meaningful and useful results from using the two sets of data together. In this way both the "atomistic fallacy" of considering units divorced from their context and the "ecological fallacy" of ignoring individual differences within groups could both be avoided.



In the ideal situation, where the individual survey records could be identified as belonging to particular groups and aggregate data for those groups were also available, the aggregate data were found to be useful either if they contained data on additional groups (over and above those selected for the sample survey) or if they referred only to the sample groups but provided more accurate estimates of group means than were available from the survey. Using individual and accurate aggregate data together was almost as good as having access to all the population data.

In less ideal situations, where the group memberships had been suppressed, the analysis was more complicated and some accuracy was lost, but the aggregate data were still useful. Conversely, a small sample survey of individuals could be used to substantially reduce the "ecological bias" in a study based primarily on aggregate data.

Ken Brewer

#### **1999 Knibbs lecture: Statistics and performance management**

The 23<sup>rd</sup> annual Knibbs lecture was held in Canberra on 25 November 1999 and was presented by Dr Nicholas Fisher of CSIRO Mathematical and Information Sciences. The title of the lecture was "Statistics and Performance Management".

Nick commenced in the traditional way and set the stage, by relating the topic of his talk to Sir George Handley Knibbs Kt CMG, after whom the lecture is named. He did this by paraphrasing Knibbs from his Presidential Address to ANZAAS in 1910: '...it may be remarked that a sound estimate of the measure of productive activity of any people is a desideratum of the first order in this branch of statistics. To attain a sufficient precision in statistics of this kind, *performance measurement*, is, of course, no easy task, but is worthy of considerable effort.'

In his talk, Nick introduced some of the basic statistical issues and current lines of research in Performance Measurement; see Dransfield, Fisher and Vogel, *International Statistical Review* 67, 99-150 for a summary of these. He also discussed opportunities for statisticians to tackle a variety of technical and non-technical problems.

Nick addressed the question concerning why should we worry about Performance Measurement. The reasons included: it affects all of us one way or the other through the work we do, what we get paid, etc.; if we don't get involved it will happen to us in our daily lives anyway; fundamental statistical issues are involved; and, this is our territory because statistics is the science of managing uncertainty. He then went on to discuss management imperatives and Customer Value Analysis (CVA), and throughout the talk illustrated important notions using examples.

After the talk, we heard responses from two discussants. Professor John Robinson of the Department of Mathematics and Statistics at the University of Sydney agreed with Nick that statisticians should be involved in Performance Measurement. He described some personal experience in performance measurement, in which he devised a fairer research performance indicator used by many universities to reward successful departments.

Mr Dennis Trewin, from the Australian Bureau of Statistics in Canberra, commented that up until now, papers concerning Performance Measurement have been based on case studies and it was good that some firm theory was now involved. Dennis queried the relevance of the methodologies to organisations like the ABS, which doesn't really have a competitor or regular customer.

#### **Other Canberra news**

Our branch president, Dr Alice Richardson, will be on study leave at the University of Southampton, UK and Dalhousie University, Canada for Semester 1 of 2000. Her replacement for this time will be the Immediate Past President, Associate Professor Ross Cunningham.

Ross Cunningham is congratulated on his recent promotion to Associate Professor.

Warren Muller was elected Treasurer of the International Biometric Society Australian Region at the recent regional conference – congratulations Warren.

Melissa Dobbie



The International Association for Statistical Education, IASE, is a section of the International Statistical Institute, ISI, which seeks to advance statistical education at all levels, from primary school through training of professionals. The Association places a strong emphasis on international co-operation and the exchange of information through its programme of publications and meetings and provides people with the opportunity of being part of an international community who are interested in statistical education. IASE is devoted to the development and improvement of statistical education on a world-wide basis.

## Conferences

Several series of conferences are now organised or sponsored by the IASE, and have been held in venues that are as widely dispersed as possible so that they will be accessible to delegates from many different geographical locations. IASE has a commitment to continuing to provide annual international meetings on statistical education. These occur through a number of events including satellite conferences, statistical education meetings included within the ISI Biennial Sessions, and within the International Conference on Mathematical Education (ICME) programmes. A major activity of the IASE is to organise the ICOTS meetings which are held every fourth year and cover all aspects of statistical education. The next is ICOTS-6 which will be held in Durban South Africa, in 2002.

In 1999 the major involvement of the IASE was in seven Invited Paper sessions held at the International Statistics Institute (ISI) Biennial Session in Helsinki. Besides these Invited Paper Meetings there were also several other Invited Paper sessions relevant to statistics education. In addition, there were five contributed paper sessions with a focus on statistics education. Summaries are available in the 1999 IASE Review newsletter which can be found at

<http://www.swin.edu.au/maths/iase/newsletters.html>. It has been heartening to see the growth in the number of ISI sessions concerning statistics education since the IASE held its first constituted meeting in 1993.

## Auslcots

On the local level, in each of the past two years, one day meetings have been held at Swinburne University of Technology of people with an interest in statistical education. The 1998 meeting gave people the opportunity to hear Australians who presented at ICOTS-5 and to retain links formed in Singapore and as such was called Auslcots. In December, 1999 a second meeting gave a further opportunity for all interested to learn about the latest in Statistical Education in Australia. The fact that the 1999 conference included six visitors from interstate among its 40 enrolments was very pleasing indeed with sixteen talks being presented during the day. The talks included using computers for on-line assessment; using Excel to illustrate basic power analysis graphically; using StatPlay to explore statistical concepts; using thoughtfully constructed artificial data bases to illustrate real-life principles; using computers for examining the teaching and learning of the Central Limit Theorem. More discursive papers discussed: the teaching of consulting to final year students; the importance of well-designed questionnaires in expensive medical research (with interesting counter-examples!); using labour statistics in educational planning (or "where universities are going now"); teaching epidemiology to mature age students; seeing the null hypothesis as a cultural product of the Westminster system; students' use of graphs to solve problems; students' understanding of confidence intervals. Two papers addressed more general issues: the teaching and use of statistics in a wide variety of scenarios and the importance of relating theory and practice in statistics research. Members were also informed of future plans for IASE and had an opportunity to

make suggestions about the Statistics Education Workshop at the forthcoming Statistical Society of Australia Conference. Small mini-conferences of this sort are all too rare in Australia, and this one provided a good opportunity for a very relaxed, low-key conference which covered a wide variety of very interesting topics. It also helped to highlight important issues of concern to members which may be of help in planning ICOTS-6. One of the disadvantages of the day were that the large number of papers reduced the time available for discussion. More information is available at <http://www.swin.edu.au/maths/iase/auslcots2.html>

The IASE has also been involved in many other conferences around the world which were held in the past two years. These included a conference in Florianopolis, Brazil that was fully devoted to statistical education, the PME meeting and the International Research Forum on Statistical Reasoning, Thinking, and Literacy (SRTL) at Kibbutz Be'eri, both in Israel in July 1999, III International Iranian Statistical Conference (Tehran, 1998); II Iranian Mathematics Education Conference (Kerman, Iran, 1998); CLATSE 4 Congreso Latinoamericano de Sociedades de Estadística, Mendoza, Argentina, 1999. Sixth Islamic Countries Conference on Statistical Sciences, Lahore (Pakistan), 1999. A forthcoming event is the "Encontro sobre Ensino e Aprendizagem da Estatística, Lisbon (Portugal)". February, 2000. Also the Argentinian Statistical Society will hold statistical education sessions in their meetings, starting this year.

## IASE Statistical Education Research Newsletter

The IASE Statistical Education Research Group is a special interest group within the IASE, which is open to all who have an interest in carrying out research into the teaching and learning of statistics and probability. It publishes the IASE Statistical Education Research Newsletter three times a year which



includes short papers of general interest, summaries of research papers, books, and recent dissertations; bibliographies on specific topics; information concerning recent and forthcoming conferences; and Internet resources of interest. The Newsletter is located at the web site: <http://www.ugr.es/local/batanero/sergroup.htm>

### **Summary of some upcoming Statistical Education Activities**

July 1-2, 2000. Statistical Education Workshop, Adelaide, South Australia. Theme: Innovation in Statistical Education. Guest speaker, Professor David Moore. See <http://www.sapmea.asn.au/15ASC.htm>

July 23-27, 2000. PME, Hiroshima, Japan. See <http://www.ipc.hiroshima-u.ac.jp/~pme24/>

July 31-August 6, 2000—International Congress on Mathematics Education, ICME-9 Makuhari/Tokyo, Japan. IASE has been involved in the planning of several sessions. See <http://www.swin.edu.au/maths/iase/icme9.html>.

August 7-11, 2000—Round Table Conference: Training Researchers in the Use of Statistics—Tokyo, Japan. By invitation only. All invitations have already been extended. Further information is available at <http://www.ugr.es/~batanero/iasert.htm>.

AusICOTS-3 Proposed for December 2000 (date not finalised)

August 22-29, 2001—ISI 53 Biennial Session—Seoul, Korea. See <http://www.swin.edu.au/maths/iase/isi53.html>.

July 7-12, 2002—International Conference on Teaching Statistics—Durban, South Africa. This is the major international conference in Statistics Education that is held every 4 years. Details can be found at the ICOTS-6 at <http://www.beeri.org.il/icots6>.

### **Membership in IASE**

IASE offers its membership the opportunity to become part of an international community interested in the improvement of statistical education at all levels. They can both contribute to innovations and progress in statistical education and learn from colleagues from round the world. The current Executive Committee has recognised, as one of its most pressing priorities, the need to improve channels of communication between statistical educators who often find themselves relatively isolated in professional terms. Along with this goes the need to strengthen support networks, especially in emerging countries. Members receive various publications free and discount rates on others and IASE meetings. The IASE is the only global organization whose main focus is Statistics Education. If you are not already a member of IASE, you are strongly urged to consider joining IASE. At the present exchange rates, dues are only US\$24.00. Members have found the publications, meetings and contacts formed through IASE membership have been most helpful in their teaching of statistics courses. For further information about the IASE and for a copy of the IASE Membership form go to the IASE web site at <http://www.cbs.nl/isi/iase.htm>. This site also has many links useful to anyone involved in statistical education.

<http://www.cbs.nl/isi/iase.htm>

Brian Phillips  
President IASE



## Overseas Conferences

**Workshop on Hierarchical Modeling in Environmental Statistics**, 14-16 May 2000, Ohio State University, Columbus, Ohio, USA Co-sponsored by Ohio State University and American Statistical Association's Section on Statistics and the Environment.

A tutorial on Bayesian hierarchical modeling will precede the conference on Sunday morning May 14, 2000. For more information, contact Noel Cressie (ncressie@stat.ohio-state.edu)

**Statistics and Health**, 11-13 June 2000, Biostatistics Research Group of University of Alberta, Edmonton, Canada.

An international conference and workshop creating a forum where statisticians, health services researchers, epidemiologists, policy analysts and other scientists can interact to identify and discuss issues and solutions for health research. The workshop on hierarchical modeling in health services research will be given by Dr Constantine Gatoni on Sunday, 11 June 2000, including data analysis using MLn and BUGS software.

Information: <http://www.stat.ualberta.ca/~brg/conf.html> or email [brg@statualberta.ca](mailto:brg@statualberta.ca), K.C. Carriere, Associate Professor of Statistics, Department of Mathematical Sciences, University of Alberta, Edmonton, AB T6G 2G1, Canada.

**XXth International Biometric Conference**, 2-7 July 2000, University of California at Berkeley.

Information: website, <<http://www.biostat.ucsf.edu/IBC2000/>> Kevin L. Delucchi, PhD, Dept. of Psychiatry, Box 0984-TRC, University of California, San Francisco, 401 Parnassus Ave, San Francisco, CA 94143-0984; USA; e-mail: [kdelucc@itsa.ucsf.edu](mailto:kdelucc@itsa.ucsf.edu); tel +1 (415) 476-4180; fax: +1 (415) 476-7677.

**MAM3: The Third International conference on Matrix-Analytic Methods in Stochastic Models**, 12-14 July 2000, Leuven, Belgium.

Information: email: [MAM3@econ.kuleuven.ac.be](mailto:MAM3@econ.kuleuven.ac.be); <http://www.econ.kuleuven.ac.be/man3>

**Compstat 2000, XIV Compstat conference of the International Association for Statistical Computing**, 21-25 August 2000, Utrecht, The Netherlands. Statistical computing provides the link between statistical theory and applied statistics, from development and implementation of new statistical ideas through to user experiences and software evaluation. and relevant to those in universities, industrial companies, government agencies, research institutes or as software developers. Information and registration website: <http://neon.vb.cbs.nl/rsm/compstat/>; Anouk Denis, fax: +31 30 253 5851, email: [compstat@fbu.uu.nl](mailto:compstat@fbu.uu.nl) or FBU Congress Bureau, Utrecht University, Attn: Mrs. Marcelle Buma, PO Box 80125, 3508 TC Utrecht, The Netherlands.

**IASE Round Table Conference on Training Researchers in the Use of Statistics**, Meiji University, Tokyo, Japan, August 2000. Information: Carmen Batanero, Dept. Didactics of Mathematics, University of Granada, 18071 Granada, Spain; email: [batanero@goliat.ugr.es](mailto:batanero@goliat.ugr.es); URL <http://www.ugr.es/~batanero/iasert.htm>

**Bayesian Nonparametrics (BNP) Workshop**, 27 July - 2 August, 2001, University of Michigan, Ann Arbor

Information: Contact Paul Damien ([pdamien@umich.edu](mailto:pdamien@umich.edu)) in Canada and the USA, Stephen Walker ([s.walker@ic.ac.uk](mailto:s.walker@ic.ac.uk)) in Europe.

## Society Secretaries

Central Council  
President: Prof. I. James  
Secretary: Dr N.C. Weber  
Email: [neville@maths.usyd.edu.au](mailto:neville@maths.usyd.edu.au)

New South Wales  
President: Ms J. Kelly  
Secretary: Mr E. Bosworth  
Email: [ebosworth@cuscal.com.au](mailto:ebosworth@cuscal.com.au)

Canberra  
President: Dr A. Richardson  
Secretary: Ms Anna Poskitt  
Email: [anna.poskitt@abs.gov.au](mailto:anna.poskitt@abs.gov.au)

Victoria  
President: Dr N. Bartlett  
Secretary: Mr G. Bruton  
Email: [geoff.bruton@buseco.monash.edu.au](mailto:geoff.bruton@buseco.monash.edu.au)

South Australia  
President: Dr I. Saunders  
Secretary: Dr L. Giles  
Email: [lynne.giles@flinders.edu.au](mailto:lynne.giles@flinders.edu.au)

Western Australia  
President: Dr J. Speijers  
Secretary: Dr M. Hazelton  
Email: [martin@maths.uwa.edu.au](mailto:martin@maths.uwa.edu.au)

Queensland  
President: Dr R. Wolff  
Secretary: D.J. Hay  
Email: [.hay@spmed.uq.edu.au](mailto:.hay@spmed.uq.edu.au)

## Section Chairs

Statistics in the Medical Sciences  
Ms Lynette Lim  
Email: [llim@mail.newcastle.edu.au](mailto:llim@mail.newcastle.edu.au)

Statistics in the Biological Sciences  
Dr Simon Barry  
Email: [simon.barry@brs.gov.au](mailto:simon.barry@brs.gov.au)

Survey and Management  
Dr David Steel  
Email: [david\\_steel@uow.edu.au](mailto:david_steel@uow.edu.au)

Statistical Education  
Dr Brenton Dansie  
Email: [brenton.dansie@unisa.edu.au](mailto:brenton.dansie@unisa.edu.au)

Statistical Computing  
Dr G. Stone  
Email: [glenn.stone@nrma.com.au](mailto:glenn.stone@nrma.com.au)

Industrial Statistics  
Dr G. Robinson  
Email: [geoff.robinson@cmis.csiro.au](mailto:geoff.robinson@cmis.csiro.au)

Young Statisticians  
Miss V. Whewey  
Email: [virg@cse.unsw.edu.au](mailto:virg@cse.unsw.edu.au)

Further contact details for Society Secretaries and Section Chairs can be obtained by contacting the Society on (02) 6249 8266