



statistical society of australia incorporated

newsletter

31 May 1993

number 63

## CANBERRA BRANCH READERSHIP SURVEY

Some skeptics in the Canberra Branch wondered how worthwhile members find the *Australian Journal of Statistics*, and last year they wanted the Branch to press Central Council to conduct a survey to investigate this. Eventually the Branch decided to run an initial survey within the Branch and to ask questions about other topics as well.

Accordingly a questionnaire was sent out with the 1993 subscription notices. Questions fell into four groups, questions about the individual respondent, questions about Branch meetings, questions about the journal and questions about the Newsletter.

The response rate was quite good. There were 81 replies. The branch currently has 96 financial members, but some replies may have come from members who have not yet paid their 1993 subscriptions. This included a good response from members who did not attend meetings, Table 1.

**Table 1: How frequently did you attend meetings of the Canberra Branch in 1992?**

>4 times	2-3 times	once	none
30	26	12	23

The age profile of Branch membership is surprising, Table 2;

**Table 2: Age**

<25	25-34	35-44	45-54	55-64	65+
3	14	33	22	5	4

68% of members are aged between 35 and 54 suggesting that the Branch needs to do more to recruit younger members and to retain older members.

**Table 3: Number of years member of SSA**

<2	2-5	6-10	11-20	21+
11	10	16	26	18

However Table 3 suggests that recruiting and retention of members are not too bad.

The qualifications and employment of members are much as we expected, Tables 4 and 5.

**Table 4: What is your highest qualification?**

Secondary School	0
Bachelor Degree	19
Graduate Diploma	14
Masters Degree	22
PhD	24
Other	2

**Table 5: In which type of organisation do you work?**

ANU	18
Other Tertiary Institutions	9
CSIRO	6
ABS	19
Other Public Service	22
Private Sector	3
Other	4

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*E. Brinkley, Australian Bureau of Statistics, PO Box 10, Belconnen, ACT 2616.*

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

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Question six asked members if there was anything that would encourage them to attend more meetings, many replying that pressure of other commitments was the main thing keeping them away. Two members asked for a later start. Question seven invited comments on Branch activities, while question 23, the last question, asked people for any other comments and suggestions for the attention of the Branch or the Society. Both these questions drew comments on a similar range of issues such as accreditation, education, and general promotion of statistics to both government and the general public. One member suggested a visit by the Branch to the casino.

**Table 6: AJS: To which types of articles/areas would you like the *Australian Journal of Statistics* to give greater emphasis?**

Topic	%
Experimental design	15
Linear models	20
Multivariate statistics	26
Robust methods	16
Inference	10
Probability	6
Time series	15
Econometrics	11
Sampling	37
Medical statistics	17
Biological/agricultural statistics	20
Reviews of research areas with promising statistical applications	54
Discussion of classical articles from statistical literature	28
Interviews with distinguished statisticians and probabilists	26
Comprehensive book reviews	28
Other	26

30% of the respondents had never published, while of those who had, 70% had published since the end of 1986. 60% of all respondents had published in non-statistical

journals. 90% read statistical journals and 64% read other journals.

The *Australian Journal of Statistics* came off quite well. Only 5% of respondents admitted to reading none of it at all, 85% read the table of contents, 53% read book reviews, and 53% read the occasional article. 53% thought it publishes the right mix of articles and 58% found it relevant to their work. However many people wanted to see greater emphasis given to various areas, Table 6.

These answers were reflected in question 15 which asked for suggestions for improving the Journal.

5% of respondents would prefer not to receive the Journal even if it did not save them any money, and 30% would choose not to receive it given an appropriate reduction in the membership fee.

The Newsletter is widely read, Table 7.

**Table 7: Which sections of the Statistical Society newsletter do you usually read?**

Section	%
None	1
Feature articles	91
Branch reports	73
News of members	72
Conference announcements	74
Job advertisements	48
Other	9

97% of respondents think it publishes the right mix of articles, and 87% find it relevant to their work.

The Society is not doing as much as some members would wish in the areas of accreditation and education, but all in all the positive response to the questionnaire was very gratifying.

The Journal came off better than the skeptics expected, and the approval of the Newsletter must be most pleasing to the editors.

Jeff Wood

## ACCREDITATION

The results of the accreditation survey will be discussed at the Annual General Meeting of Central Council on 7 May.

It is premature to discuss the conclusions of the survey, but some results may be of general interest:

- \* 64% of the Society's membership responded to the survey.
- \* 65% of those who responded said they would seek to become an Accredited Statistician or Graduate Member. (21% were undecided.)
- \* 2% of respondents said they would resign if the Society were to become an accrediting body.

- \* 71% said that the main benefit of accreditation would be in emphasising the professional competence (professionalism) of statisticians.

What is also clear is that there is a level of healthy debate about whether accreditation is a good thing for the Society and, if so, how it should be implemented. Central Council has a report on the survey prepared by CSIRO's Nan Carter which includes an excellent summary of the comments.

I believe we are indebted to Nan Carter for the excellent job she has done in carrying out the survey and preparing the report, and to the membership for participating in the survey in such a constructive fashion.

Ron Sandland  
for the Accreditation Working Party



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## BRANCH REPORTS

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### New South Wales

#### Annual General Meeting

This was held on Tuesday, March 16 at The Women's College, University of Sydney. Reports from the Secretary and Treasurer were received and the members of the 1993 Branch Council announced. The members are:

President:	Dr N I Fisher
Immediate Past President:	Professor J Robinson
Councillors	Professor G.K. Eagleson
	Dr J. Evans
	Dr E.A. Eyland
	Dr S. Huxham
	Mr D.D. Reid
	Mrs P. Shaw
	Mr P.A. Wright

#### Honours Scholarship Awards

Fourth year honours scholarships for full-time students studying a fourth, honours, year were announced. The recipients are Susan Hoffmann, Catherine Lightfoot, and Lilian Mok from the School of Mathematics and Statistics, University of Sydney, Colleen Hunt, University of New England, and Tuan Luu, Macquarie University.

#### H.O. Lancaster lecture

At the conclusion of the Annual General Meeting, Dr Fisher invited Dr Richard Madden, Deputy Australian Statistician to deliver the H.O. Lancaster lecture.

Dr Madden's topic was "The Australian Bureau of Statistics, — The External Perception and Internal Vision". He outlined some of the issues faced by the Bureau in carrying out its task as the government Statistical Agency at both Federal and State levels. In particular, he noted the misuse and misinterpretation of data in the general community, the difficulties resulting from the confidentiality requirement for bona fide research organisations, and the tight budgetary constraints on the Bureau although these had proved useful in changing the Bureau's range of products. He believes that links between the bureau and the general statistical community need to be strengthened and suggested that this could be done by ABS statisticians being acknowledged by the academic community and by the setting of standards for statistical work. He claimed that the Bureau held a pre-eminent position in survey work. Dr Madden said that he thought the current accreditation debate would have a positive influence on statistics in this country. He finished by stating how privileged he was to have been asked to give a lecture named after his Professor, whose influence had been carried far and wide by the confident statisticians that emerged from the Department of Mathematical Statistics at the University of Sydney when Professor Lancaster held the Chair. He thanked Professor Lancaster for attending.

#### "Lewis Carroll's Pillow Problems: on the 1993 Centenary"

The speaker at the Ordinary General meeting held on April 20 was Professor Lancaster's successor at the University of Sydney, Professor Eugene Seneta.

Lewis Carroll, the author of the Alice books, was Charles Lutwidge Dodgson (1832-1898) an Oxford mathematician. Within his writings is a book of diversions: *Pillow Problems* (1893); of these 72 mathematical problems, 13 are probabilistic. They were called "pillow" problems because Dodgson claimed that he worked them out in bed before going to sleep and would write out the solutions in the morning.

After some background on Dodgson's life and on the status of probability within English mathematics in the 19th century, Professor Seneta outlined some of the *Pillow Problems* most of which were "urn models", multistage formulations of ignorance in terms of prior distributions. As an example of a problem for which the correct solution was obtained by incorrect methods, he gave "The Educational Times Controversy" in which there was a public debate about the solution. The problem is: two persons play for a stake each throwing two dice; they throw in turn, A commencing; A wins if he throws a "six" and B wins if he throws a "seven" the game ceasing as soon as either event happens. Show that A's chance of winning is to B's as 30 to 31. Dodgson and others had trouble with infinitesimals so a zero probability meant that the event could not occur and yet they tackled problems about random points on lines being rational points. As Professor Seneta concluded, we should perhaps be more sympathetic with students struggling with elementary probability for even the best mathematicians of one hundred years ago had trouble with it! This excellent talk was warmly applauded.

#### Future Meetings

The next meeting will be held on May 18 at The Women's College. The speaker will be Professor Victor Solo of Macquarie University, who will speak on "Inverse Problems in Statistics".

The Branch Council has decided to hold some meetings on nights other than Tuesday and at places other than the University of Sydney. Details will be available at Branch level with the next notice of meeting or from the Secretary, Dr Ann Eyland, on telephone (02) 5571195, or email [eyland\\_a@maths.su.oz.au](mailto:eyland_a@maths.su.oz.au)

### Victoria

#### Statistical challenges of measles: 1861 and 1993

Professor Niels Becker (La Trobe University) spoke at the March branch meeting on modelling measles epidemics. He looked particularly at a data set concerning an outbreak of measles in Hagelloch, Germany, 1861. Because Hagelloch was a very isolated community, this data set is



ideal for analysing the rate of infection in a closed environment. A log-linear regression approach was used with covariates such as age group and household for both susceptible and infectious persons. It was found that very different transmission rates occur in a heterogeneous community. This suggests much higher transmission rates for measles than otherwise supposed.

The implications for immunisation in Australia were also discussed. This problem is complicated by the fact that a measles, mumps and rubella vaccine is now used in Australia. An important current question is what vaccination schedule is optimal in controlling measles?

## Queensland

The Branch Annual General Meeting was held on March 29 and the following office bearers for 1993 were elected:

President: Walter Robb (Department of Education)  
 Secretary: Margaret MacKisack (Queensland University of Technology)  
 Treasurer: Ingrid Baade (Queensland University of Technology)

Members of the retiring Executive, particularly the past-President Tony Swaine, were thanked for their efforts during the past year.

The 1993 Honours Scholarship went to Michelle Gatton (Griffith University) who was present at the Annual General Meeting. Michelle was chosen from a strong field of six applicants and gave a short speech thanking the Branch for its encouragement.



*Michelle Gatton on her graduation day*

Following the meeting, John Eccleston, (Professor of Statistics at The University of Queensland) spoke on The Design of Experiments: A Personal View. The field of design of experiments has seen a marked change in research direction and an increase in applications and profile in recent times. An area thought to be in the doldrums for many years has returned as one of renewed research interest and application.

Much of modern research in the area has been driven by the availability of high-speed computers which has meant

that more complex and realistic situations have been considered by researchers and indeed requested by experimenters. Examples of this are the design of experiments for dependent data and neighbour methods, particularly for agriculture.

Another place where statistics is playing an increasingly prominent role is in the "quality movement" in industry. The advent of Taguchi's off-line quality control methods, which rely heavily on the design of experiments, has sparked vigorous debate within the statistical community. Much of the debate has been about the designs and related methods Taguchi uses, but a consequence has been the raised profile of the design of experiments.

Members enjoyed this interesting talk which was illustrated with many examples from John's personal experience and perspective.

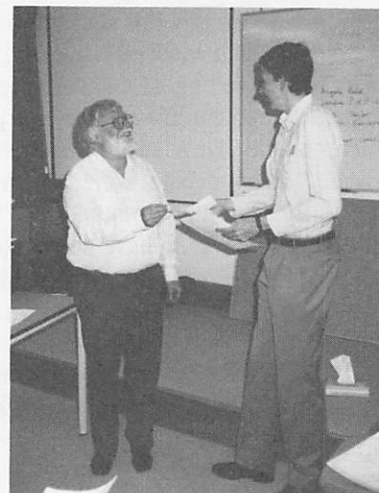
## South Australia

The South Australian Branch Council for 1993 is

President: Dr Ari Verbyla (University of Adelaide)  
 Immediate Past President: Bob Hall (University of South Australia)  
 Vice-president: Dr Brenton Dansie (University of South Australia)  
 Secretary: Dr Alan Branford (Flinders University)  
 Treasurer: Barbara Trudinger (CSIRO Division of Mathematics and Statistics)  
 Council: Trevor Hancock (Waite Agricultural Institute)  
 Sandra Pattison (University of Adelaide)  
 Angela Reid (CSIRO Biometrics Unit)  
 Sue Taylor (Flinders University)

## Honours Scholarship Award

The 1993 Statistical Society of Australia Honours Scholarship was presented at the Branch AGM to David Hirst, an Honours student at the University of Adelaide. The accompanying photograph shows the (retiring) President, Bob Hall, presenting the award to David Hirst.





## Statistics as applied at BHP Sheet and Coil Products, Port Kembla

On Wednesday, 3 March 1993, Mary Barnes (CSIRO Division of Mathematics and Statistics) gave a talk discussing the practical applications of statistics that Mary was involved with during her work at BHP Sheet and Coil Products, based in Port Kembla, Wollongong, NSW.

Mary Barnes worked at BHP Sheet and Coil Products for 7 years before recently joining CSIRO. Initially she was employed as a metallurgist but found herself needing to know more about statistics to effectively do her job. She then studied statistics part time and found herself working as a statistician well before she was qualified, working particularly in the area of TQM.

This talk detailed the application of statistics and TQM at the management level, at the shop floor and with fellow metallurgists. Some work that was done in the area of maintenance used the Weibull distribution to model the life distribution and/or the time to failure and thus to estimate the best strategies for maintenance. Assistance with some basic experimental design was outlined.

### JMP - Some experiences in using and teaching with this statistical package

The retiring president, Bob Hall (University of South Australia) gave the address to the Annual General Meeting on Wednesday, 31 March on his experiences in using and teaching with JMP.

The package JMP produced by the SAS Institute especially for Macintosh computers uses the tools of the Macintosh environment to provide a wide range of statistical techniques. It does most of what MINITAB does and more. A wide range of dynamic plotting facilities are provided.

However it does not fit the usual traditions. Specification of analyses is not in terms of commands like REGRESSION or CHI-SQUARE but in general statistical "platforms" like FIT Y by X. On the basis of variable specification, JMP decides on and commences an appropriate analysis such as regression, contingency table analysis, ANOVA or logistic regression from that platform. Details of the analysis can then be specified in the subsequent windows. Results including graphics can be selected and immediately placed in a word processor document.

This mode of operation influences teaching strategies and approaches.

JMP was demonstrated and its use with service courses was described.

The way the structure implicit in JMP might influence the teaching of statistics in service courses and in secondary schools was discussed.

## Western Australia

Following the recent Branch Annual General Meeting, the new President is Dr John Henstridge. The position of Secretary continues to be held by Dr Ian Wright.

## Canberra

### Statistical Analyses for Paired Ranking Data

The first meeting of 1993, held on Mardi Gras, was addressed by Dr Jo Verducci of Ohio State University. As a basis for his talk, Jo described a data set which gave students' rankings of 4 styles of literary criticism before and after a university literature course. The lecturer hypothesised that as a result of the course, they should change their preferences in a particular way. Jo described his analysis, which showed that there was some change in the direction expected by the lecturer, but that there were also unexpected elements in the result. He also briefly described the analyses of the same data by other statisticians.

### Annual General Meeting

The AGM of the Canberra Branch was held on 23 March 1993, at the Plant Industry Lecture Theatre at the CSIRO. The office bearers elected at the meeting were:

President:	Mr Eden Brinkley, ABS
Secretary:	Mr Greg Griffiths, ABS
Treasurer:	Dr Ted Catchpole, ADFA
Immediate Past President:	Dr Jeff Wood, CSIRO Biometrics
Council:	Dr Alan Welsh, ANU Mr Ross Cunningham, ANU Ms Caroline Bowles, ABS Mr Ian McDermid, ANU Ms Ann Cowling, ABARE Dr Kim-Anh Do, University of Canberra

### Keeping up to date

Immediately following the AGM, Dr Jeff Wood, CSIRO Biometrics, gave his presidential address. The topic of his talk was "Keeping up to date", an increasingly important issue with the current moves to accredit and/or assess the competency of statisticians. He identified two major developments, exploratory data analysis and the increasing emphasis on modelling, that the up to date statistician will be aware of.

Discussing how to keep up to date, he stressed that regular contact with other statisticians and the opportunity to experiment with new methods are more important than formal training.



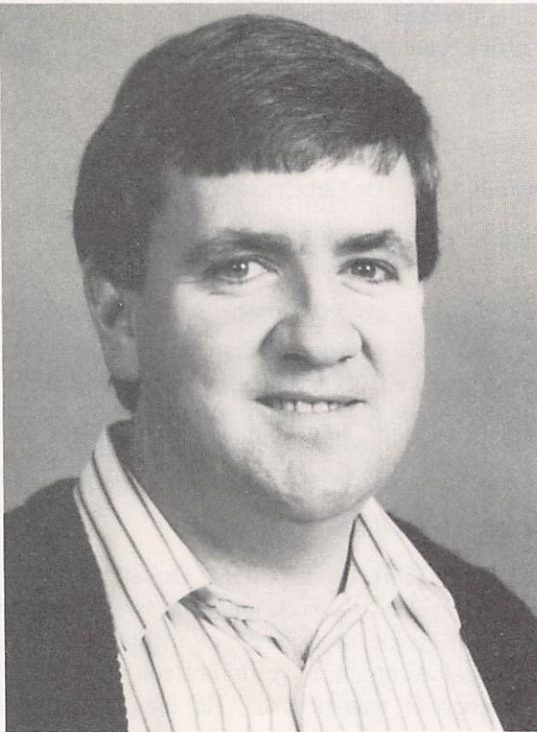
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## MORAN MEDAL TO PHIL POLLETT

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The 1993 Moran Medal for statistical science was presented to Dr Phil Pollett, 36, at the Annual General Meeting of the Australian Academy of Science on 29th April. The Moran Medal is awarded every two years by the Academy and recognizes the scientific achievements of the late P.A.P. Moran, Professor Emeritus of Statistics at the Australian National University until his death in September 1988. The award is made for distinguished research carried out, mainly in Australia, in one or more of the fields of applied probability, biometrics, mathematical genetics, psychometrics and statistics.

Phil Pollett has made outstanding contributions to applied probability, using his exceptional theoretical skills and innovative computational methods. His contributions have been influential, not only in more theoretical areas, but also in applied contexts. He has, for example, developed and analysed mathematical models for telecommunications, chemical and ecological systems. Phil has also developed novel practical methods for simulating a variety of stochastic processes.



Phil is a Reader in the Department of Mathematics at The University of Queensland and has been actively involved in the Queensland Branch of the Statistical Society of Australia, being the previous Secretary.

Congratulations on recognition for your significant work!



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## CONFERENCE REPORTS

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### Report on Statistical Society Workshop "Statistics for Quality and Management"

On 6 November 1992, the Key Centre in Strategic Management held a joint workshop with the Statistical Society of Australia and the Australian Organisation for Quality entitled "Statistics for Quality and Management". The motivation for the workshop was a perception that managers in Australia make very little use of statistics and data analysis. This perception was confirmed by a recent comparative study of TQM implementation in Australia and the USA carried out by Patrick Shannon of Boise State University, a recent visitor to the Key Centre. He concluded that both the use of data and the level of training in statistics were substantially lower in Australia than in the USA. A study of scores of entrants in the Australian Quality Awards showed Analysis and Use of Data and Information to be a consistently low-scoring category. The aim of the workshop was to discuss the obstacles to use of data and to find some examples of effective data analysis to use to convince managers of its value.

The workshop was opened by Ian Saunders of the Key Centre in Strategic Management, who spoke on Statistics, Quality and Management. He argued that managers in general dislike uncertainty and so are unhappy with intervals as answers, preferring point estimates. He identified three approaches to variation: (1) Accommodation, through allowing safety margins, (2) Explanation, by appropriate modelling and (3) Reduction, by removing root causes. Statisticians are trained to focus on (1), through an emphasis on significance testing and confidence intervals. He suggested that they should increase the emphasis on (2) and (3) and so make contributions that will be more valuable and therefore more valued.

Allan Adolphson, of the CSIRO Division of Mathematics and Statistics, described two consulting jobs where his statistical insight, rather than technical expertise, had allowed him to contribute to management improvements. The first concerned a laboratory whose test results were unreliable. A team approach, which among other aspects considered the status of the laboratory staff, produced considerable improvement in the reliability and in the morale of the staff. The second described the value of a designed experiment that, by blocking against variables that were known to be influential, allowed a new change to be effectively evaluated. Previous attempts over many months had been inconclusive.

Len Pope of the Queensland treasury described a different aspect of use of information. The Treasury is introducing an Executive Information System for its senior managers. If this is to be successful, there must be substantial participation by the potential users in its design. Len described how the EIS team is carrying out its role. He made the important point that managers must receive data before they can act upon it.

Neville Richardson of the South East Queensland Electricity Board described how SEQEB has used data in their quality improvement efforts. A particular success story was the analysis of causes of failures of connectors. A Pareto chart of causes had revealed the principle cause, which could be addressed through a small redesign of the connector.

William Dunsmuir of Bond University presented a study of the place of market research in quality. While there is much rhetoric about listening to the customer, there has been little work on quantifying customer needs so that they can be translated into service design and training needs. William described a project aimed at assessing customer needs and perceptions of service for a large and widely dispersed organisation. He also illustrated how the benefits of satisfaction can be assessed through data on customers who return for further services.

Professor John Nelder, who was visiting the University of Queensland, presented a paper on Why Experiment?, which discussed the issues to be considered in making decisions based on data and the pitfalls of unstructured data collection.

A total of 50 participants took part in the workshop. Following the papers, there was a discussion of the barriers to more effective use of data by managers. These included the lack of training and awareness of managers, the time needed to analyse data properly, the lack of confidence that managers have in the quality of the data provided to them and the lack of knowledge of business by statisticians.

The most important solution proposed was to improve communications: make recommendations without jargon, take part in teams, particularly with managers, present and market the benefits of using data, have some stories to tell (both successes and failures). Others were to make basic training more available, to link with Quality Assurance programs and to attempt to market our consultancy skills in partnership rather than competitively.

From comments received, the workshop was successful. Perhaps next time we'll be able to get a larger representation of managers ready to be convinced.

Ian W. Saunders

### Biostatistics Workshop December, 1992 Hamilton, New Zealand

Before the International Biometric Conference in New Zealand there was a satellite meeting on Biostatistics held in Newcastle.

There were more than 100 participants with backgrounds mainly in statistics, genetics and epidemiology. The program involved plenary sessions on genetic



epidemiology (R. Elston, USA), sample size (E. Lakatas, USA), cross-over trials (M. Kenward, UK), AIDS (J. Kaldor, J. Carlin, I. James, Australia) and statistical issues in drug approval (L. Fisher, USA). Contributed papers were on: genetic epidemiology, meta-analysis, quality of life measures and other biostatistical topics.

The meeting was organised by the Centre for Clinical Epidemiology and Biostatistics and the Department of

Statistics at the University of Newcastle, the NH&MRC Twin Registry (It Runs in the Family) and the Medical Sciences section of the Statistical Society of Australia.

The weather was terrible so that whatever weather Hamilton, NZ turned on was sure to be an improvement. For the program and scientific and social activities, however, the Newcastle meeting was hard to beat.

Annette Dobson

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## YOUNG STATISTICIANS' PROFESSIONAL DEVELOPMENT WORKSHOP

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The third in a series of annual Young Statisticians' Professional Development Workshops will be held in Canberra, at the Brassey Hotel in Barton, from 29 September to 1 October 1993. Sponsorship will be provided primarily by the Science and Technology Awareness Program administered by the Department of Industry, Technology and Commerce. Further financial support will be furnished by the Statistical Society of Australia, and by the Centre For Mathematics and its Applications at the Australian National University.

The previous Workshops in this series have been organised on a regional basis, by the ACT and NSW Branches of the Statistical Society. However, the next Workshop will have a clear National focus, and expressions of interest from all young statisticians are welcome.

The Workshop provides an opportunity for young (interpreted loosely) statisticians to meet and talk about their work, in a non-threatening environment. The Workshop is aimed at Honours year statistics students, postgraduate students, or statisticians in the first few years of their careers. There were about 40 participants at the 1992 Workshop, the majority of whom gave talks about their current work or research.

In particular, the Workshop will provide young statistical scientists with opportunities to consider career paths in applied areas such as commerce and industry, to gain

confidence in communicating their work to a general audience, to develop peer group networks, and to consider career paths leading to senior levels. It will emphasise the participation of women in statistical science, particularly at senior levels — at least half the participants in the 1992 Workshop were women. Three of the six invited speakers at the 1993 Workshop are women.

At this stage we seek only expressions of interest. A registration form will appear in the May issue of the Newsletter. Although the size of the Workshop will be greater than it was last year, the organisers have had to limit the number of participants to 50, so that attendance may have to be determined on a first come, first served basis. Expressions of interest should be sent to:

Ann Cowling  
 ABARE  
 PO Box 1563  
 CANBERRA ACT 2601  
 email: annc@abare.gov.au  
 Phone (06) 272 2191  
 Fax: (06) 272 2001

Ann Cowling

Peter Hall



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## AUSTRALASIAN CONFERENCES

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### CONFERENCE SUMMARY

**Australasian Meeting of the Econometric Society, 7-9 July 1993, Sydney.**

Information: Denzil G. Fiebig, Department of Econometrics, University of Sydney, Sydney NSW 2006.

**Behaviour Genetics Association 23rd Annual Meeting, 13-16 July 1993, "The Earth Exchange", Sydney.**

Information: Dr Nick Martin, Queensland Institute of Medical Research, 300 Herston Road, BRISBANE QLD 4029, tel. (07) 362 0278, fax (07) 362 0111. Full details this issue.)

**IVth Australasian Economic Modelling Conference on Asia-Pacific Economic Modelling, 24-28 August 1993, Port Douglas, North Queensland, Australia.**

Information: Colin Hargreaves, Director, Economic Modelling Bureau of Australia, GPO Box 1363, Canberra ACT 2601, Australia.

**1993 NZSA Conference, 25-27 August, University of Canterbury, Christchurch.**

Information: Murray Smith, NZSA Conference Secretary, Mathematics Department, University of Canterbury, Private Bag 4800, Christchurch 8001, New Zealand; tel. +64 3 364 2683; fax. +64 3 364 2999; email nzsa93@math.canterbury.ac.nz.

**XIIIth Scientific Meeting of the International Epidemiological Association, 26-29 September 1993, Sydney.**

Information: Conference Secretariat, c/o Mrs Jennifer Maher, PO Box 746, Turramurra NSW 2074; tel. (02) 449 1525; fax. (02) 488 7496.

**STATCOMP93, 27 September - 1 October 1993, University of Wollongong.**

Information: Statistics '93 Conference Secretary, Mathematics Department, University of Wollongong, Northfields Avenue, WOLLONGONG NSW 2522; fax. (042) 21-4845; email: statconf@uow.edu.au. (Further details in Newsletter 62 and this issue.)

**Young Statisticians' Professional Development Workshop, 29 September - 1 October 1993, Brassey Hotel, Barton, Canberra, Australia.**

Information: Ann Cowling, ABARE, PO Box 1563, Canberra ACT 2601; tel: (06) 272 2191; fax: (06) 272 2001; email: annc@abare.gov.au. (Further details in Newsletter 62 and this issue.)

**Second International Conference on Financial Econometrics, 13-14 December 1993, Queenstown, New Zealand**

Information: David Giles, Economics, University of Canterbury, Christchurch, New Zealand.

**Statistics in Ecology and Environmental Monitoring, 13-17 December 1993, University of Otago, Dunedin, New Zealand**

Information: Centre for Applications of Statistics and Mathematics, University of Otago, PO Box 56, Dunedin, New Zealand, tel: +64 3 479 7774, fax: +64 3 479 8427, email: CASM@math.otago.ac.nz. (Further details in Newsletter 62 and this issue.)

**Twelfth Australian Statistical Society Conference, 1994, Monash University, Victoria.**

Information: R.C. Griffiths, Mathematics Department, Monash University, Clayton VIC 3168, email: apm466b@vaxc.cc.monash.edu.au. (Further details in Newsletter 62 and this issue.)

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### Behaviour Genetics Association 23rd Annual Meeting, 13-16 July 1993

The Behaviour Genetics Association 23rd Annual Meeting will be held in Sydney from 13 - 16 July 1993. Statistical designs and methods used in the study of twin and family data will be covered in the conference and those interested in this area are encouraged to attend. The venue will be "The Earth Exchange", a semiprivate geology museum situated in the historic Rocks area with stunning views of the harbour and Opera House.

For further information contact:

Dr Nick Martin  
Queensland Institute of Medical Research  
300 Herston Road  
BRISBANE QLD 4029  
Tel: (07) 362 0278  
Fax: (07) 362 0111.

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### 1993 NZSA Conference, 25 - 27 August 1993

The 1993 NZSA Conference will be held in the Science Lecture Building at the University of Canterbury. The Conference will overlap with the New Zealand Mathematics Colloquium which is to be held on 23-26 August. The mathematics education conference "Maths with Class" is being held the following week commencing 30 August. On Thursday 26 August, the Mathematics Colloquium and the Statistics Conference will combine for a Biology Day devoted to mathematical and statistical papers of a biological nature.

For further information about the conference please contact:

Murray Smith  
NZSA Conference Secretary  
Mathematics Department  
University of Canterbury  
Private Bag 4800  
Christchurch 8001, New Zealand  
Tel: +64 3 364 2683;  
Fax: +64 3 364 2999;  
Email: nzsa93@math.canterbury.ac.nz.

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### Some news about STATCOMP93, 27 September - 1 October 1993

Trevor Hastie (AT&T, New Jersey) has accepted an invitation to speak about statistical modelling.

#### Organised sessions

We are in the process of organising the following sessions:

- . Experimental design
- . Medical imaging
- . Developments in S
- . Government statistical computing
- . Educational Software
- . Optimisation in statistics.

For further information contact:

Statistics '93 Conference Secretary  
Mathematics Department  
University of Wollongong  
Northfields Avenue  
WOLLONGONG NSW 2522  
fax. (042) 21-4845  
email: statconf@uow.edu.au.

### Twelfth Australian Statistical Society Conference 1994

The programme committee is soliciting suggestions for major speakers, subject areas, and special interest areas at this conference. We are particularly interested in talks of a review nature, interesting statistical case studies, and talks about major methodology (for example GLIM or REML).

We would like to make the conference attractive to all members and welcome suggestions for changes in programme format. The conference venue is Monash University, Victoria.

Please reply to: R.C. Griffiths  
Mathematics Department  
Monash University  
CLAYTON VIC 3168  
email:  
apm466b@vaxc.cc.monash.edu.au

### Statistics in Ecology and Environmental Monitoring, 13-17 December 1993

This is the first announcement of a 5-day conference on the use of statistics in ecology and environmental monitoring. One of the primary aims of the conference is to bring together all interested in these topics, whether they be statisticians, ecologists or managers. As well as invited and contributed papers, there will be a number of workshop-style sessions within the 5 days, during which emphasis will be placed on two themes:

1. Modelling Ecological Populations, particularly in the areas of:
  - . Endangered species
  - . Pest populations
  - . Parameter estimation (eg. capture-recapture models)
2. Environmental Monitoring, particularly with reference to:
  - . Design of sampling schemes
  - . Analysis to detect change
  - . Use of remote sensing

There will be a number of invited participants. Of these, both Richard Cormack (Scotland) and Roger Green (Canada) have already agreed to speak at the conference.

For further information, please contact:

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email: CASM@math.otago.ac.nz



## OVERSEAS CONFERENCES

**Thirteenth International Symposium on Forecasting (ISF '93)**, 9-12 June 1993, Pittsburgh, PA, USA.

Information: Anne B. Koehler, Department of Decision Sciences, Miami University, Oxford, OH 45056, USA.

**International Workshop on Hierarchical Modelling**, 16-19 June 1993, Rio de Janeiro, Brazil.

Information: E.I. George, Dept. MSIS, CBA 5.202, University of Texas at Austin, Austin, TX 78712-1175, USA.

**International Conference on Establishment Surveys**, 27-30 June 1993, Buffalo, NY, USA.

Information: Brenda G. Cox, National Agricultural Statistics Service, USDA, 14th Street & Independence Avenue, S.W. Room 4835, South Building, Washington, DC 20250-2000, USA.

**8th International Workshop on Statistical Modelling**, 5-9 July 1993, Leuven, Belgium.

Information: Emmanuel Lesaffre, Biostatistical Centre, Department of Epidemiology, U.Z. St. Rafael, Kapucijnenvoer 35, B-3000 Leuven, Belgium.

**International Society for Bayesian Analysis Meeting**, San Francisco, 6-7 August 1993, San Francisco, CA, USA.

Information: Robert McCulloch, Graduate School of Business, University of Chicago, Chicago, IL 60637, USA.

**1993 Joint Statistical Meetings**, 8-12 August 1993, San Francisco, CA, USA.

Information: ASA, 1429 Duke St., Alexandria, VA 22314-3402, USA.

**10th International Conference on the New Quality Philosophy in Statistical Research and Statistical Education**, 10-12 August 1993, San Francisco, CA, USA.

Information: Prof. V. Shvyrkov, IS-SSE, 536 Oasis Dr., Santa Rosa, CA 95407, USA.

**International Symposium on Statistics with Non-precise Data**, 17-20 August 1993, Innsbruck, Austria.

Information: Prof. R. Viertl, Institut f. Statistik U. Wahrscheinlichkeitstheorie, Technische Universität Wien, A-1040 Wien, Austria.

**Chemometrics and Environmetrics — CHESM-93**, ISI Satellite Meeting, Bologna, Italy, 21-24 August 1993.

Information: Prof. Daniela Cocchi, Dipartimento di Scienze Statistiche, "Paolo Fortunati", Università di Bologna, Via Belle Arti 41, 40126 Bologna, Italia, tel. +39 51 258234, fax +39 51 232153, email cocchi%statbo.cineca.it@icnucevm.cnuce.cnr.it.

**1993 New Zealand Statistical Association Conference**, 25 - 27 August, University of Canterbury, Christchurch.

Information: Murray Smith, NZSA Conference Secretary, Mathematics Department, University of Canterbury, Private Bag 4800, Christchurch 8001, New Zealand; tel. +64 3 364 2683; fax. +64 3 364 2999; email nzsa93@math.canterbury.ac.nz.

**49th Biennial Session of the International Statistical Institute**, 25 August-3 September 1993, Firenze, Italy.

Information: ISI Permanent Office, 428 Prinses Beatrixlaan, PO Box 950, 2270 AZ Voorburg, The Netherlands.

**IFCS '93 - 4th Conference of the International Federation of Classification Societies**, 31 August-4 September 1993, Paris, France.

Information: INRIA Secretariat, INRIA - Rocquencourt, Bureau des Colloques, Domaine de Voluceau-BP 105, 78153 LE Chesnay, Cedex-France.

**11th International Conference on the New Quality Philosophy in Statistical Research and Statistical Education**, 1-3 September 1993, Firenze, Italy.

Information: Prof. V. Shvyrkov, IS-SSE, 536 Oasis Dr., Santa Rosa, CA 95407, USA.

**International Meeting on Statistical Methods in Biopharmacy**, 6-7 September 1993, Paris, France.

Information: D. Serrurier, Laboratoires CIBA-GEIGY, 2 & 4 rue Lionel Terray, 92506 Rueil Malmaison Cedex, France.

**SPRUCE II (Statistics in Public Resources, Utilities, and in Care of the Environment)**, Rothamsted Experimental Station, 13-15 September 1993.

The Conference theme will be "Statistics of Water" covering the crucial areas of quality and pollution; water as energy; water supply, management, irrigation and drainage; rainfall and climate; sea-levels and coastal protection; and hydrological modelling.

Information: Vic Barnett, SPRUCE Chairman, or Roger Payne, Local Organiser, both at Department of Statistics, Rothamsted Experimental Station, Harpenden, Herts., AL4 2JQ, UK, tel. +44 582 763133, ext. 2376, fax +44 582 467116, email SPRUCE@UK.AC.AFRC.RESA.

**14th Meeting of International Society for Clinical Biostatistics**, 21-24 September 1993, Cambridge, United Kingdom.

Information: Meeting Secretariat, ISCB14, 42 Devonshire Road, Cambridge, CB1 2B1, United Kingdom.

**Second ICSA Conference in Statistical Research & Applications and the 1993 Taipei International Statistical Symposium**, 17-19 December 1993, Taipei, Taiwan.

Information: Smiley W. Cheng, Department of Statistics, University of Manitoba, Canada R3T 2N2.

**International Conference on Statistics and the Quality of Life: A Third World Perspective**, 9-12 January 1994, Luxor, Egypt.

Information: P.K. Sen, Department of Biostatistics, University of North Carolina, Chapel Hill, NC 27599, USA.

**48th Annual Quality Congress (AQC)**, 24-26 May 1994, Las Vegas, NV, USA.

Information: ASQC Conferences and Exhibits Department, PO Box 3005, Milwaukee, WI 53201-3005, USA.

**Fifth Valencia International Meeting on Bayesian Statistics**, 5-10 June 1994, Alicante, Spain.

Information: Prof. Jose M. Bernardo, Centro de Documentacion y Analisis, Presidencia de la Generalidad, Caballeros 9, 46001 - Valencia, Spain.

**Fourth International Conference on Teaching Statistics**, 25-30 July 1994, Marrakesh, Morocco.

Information: Mr EL GHAZALI Abdelaziz, Chairman of the Local Organizing Committee, I.N.S.E.A., PO Box 6217, Rabat-Instituts, Rabat, Morocco.

**17th International Biometric Conference (IBC94)**, 8-12 August 1994, Hamilton, Ontario, Canada.

Information: IBC94 Local Organizing Committee, Department of Mathematics and Statistics, McMaster University, Hamilton, Ontario, Canada L8S 4K1.

**Frontiers of Statistical Ecology and Ecological Statistics**, 20-26 August 1994, Manchester, United Kingdom.

Information: G.P. Pail, Center for Statistical Ecology and Environmental Statistics, Department of Statistics, Pennsylvania State University, University Park, PA 16802, USA, Tel: 1 814 865-9442, fax: 1 814 863-7114, email GPP@PSUVM.bitnet.



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