

Annual Conference New Zealand Statistical Association

17-19 August 1989
The University of Auckland

The conference will be held in the Conference Centre at the University of Auckland.

It will begin with a mixer from 7.00 to 10.00 pm on Wednesday August 16 at International House.

Tim Ball is the keynote speaker.

The program of invited speakers is:

Professor Peter Phillips (Yale). "Time Series Models with Infinite Variance Errors."

Professor George Seber (Auckland). "Estimating Population Densities for Sparse Highly Clustered Populations."

Cathy Macken (Auckland). "Some Perspectives on the Analysis of Data using Mathematical Models."

Peter Smith (Victoria). "Intersymbol Interference and Vitali Decoding- Some Statistical Problems in Telecommunications."

Len Cook (Deputy Government Statistician). "Marketing Official Statistics."

A workshop entitled "S, new-S and S+" will be conducted by members of the S project at ISOR (Vic) and AMD (Well) on Saturday 19 August.

There will be a satellite programme on Medical Statistics on Friday and Saturday.

PRESIDENT'S COLUMN

As can be seen from the description elsewhere in this issue, Chris Triggs and his committee have the organisation of the Annual Conference well in hand, with a full and varied programme scheduled. Note that the conference goes on into Saturday morning this year, an innovation that is not entirely welcome but necessary to accommodate all the requests on timing.



At least one change to the Executive Committee will be needed at the AGM. We will need a new Treasurer as Alex Neill has indicated that he will be stepping down after several years of sterling service. Thanks to Alex's careful stewardship, the Association is in excellent financial shape. The Committee has been considering changes in the management structure recently. One proposal is to have a permanent secretariat, including the Treasurer and an administrative officer, based in Wellington while the other offices rotate around the

country. There have been a couple of recent changes in portfolio responsibilities. Patrick Graham will look after Public Data Bases in place of Chris Triggs, and Craig Ansley is taking over from Don Esslemont as convener of the SAPQC. (Perhaps coincidentally, the SAPQC has featured in at least three newspaper articles recently.) On top of this, John Rayner has asked to be relieved from his job as convener of the Publications Committee so we will be looking for an enthusiastic volunteer to take over this demanding but rewarding task.

It is my pleasure to thank Professor Campbell for another donation of \$500. As usual this is to be devoted to furthering statistical education in New Zealand. Following a suggestion of Bryan Manly, the Association is to award a prize of a year's free membership to a student at each of the universities. The criteria for the award will be left to the discretion of the individual universities.

Finally, this is the first issue of the newsletter under the new team of Peter Danaher and Harold Henderson. I gather that all has gone well apart from great difficulty in extracting a column from the president. We all wish them well.

Alistair Scott

Draft Conference Programme

Thursday 9.00-9.30:	Registration
9.30-10.30:	Tim Ball
11.00-12.30:	Contributed Talks
2.00-3.00 pm:	Peter Phillips
4.00-5.00:	Contributed Talks
Friday 9.00-10.00 am:	George Seber
11.00-12.30:	Contributed Talks/Medical Statistics
2.00-3.00 pm:	Cathy Macken
4.00-5.00:	Peter Smith
5.00-6.00:	NZSA AGM (this is what we're all coming for)
7.00-late:	Conference Dinner at the Sun Sun Restaurant
Saturday 9.30-10.30:	Len Cook
11.00-12.30:	Medical Statistics/S Workshop

Please support your New Zealand Conference and meet your fellow statisticians

Editorial

It wasn't until we put together our first Newsletter that we realised how much work was involved. We don't know how Dick Brook managed all on his own for so long. Perhaps he has a split personality. We thank Dick for his valuable contribution to the Newsletter over the past two years. He has done a great deal to produce a Newsletter which the NZSA can be proud of.

The Newsletter relies heavily on contributions and we look forward to continued support from members. If anyone has news relevant to N.Z. statisticians, perspicacious comments or tidbits of information we'll be happy to consider them. We have noticed that the Royal Statistical Society Newsletter has several pages of "Letters to the Editor" in which controversial statistical topics are discussed. We would like to encourage similar discussion in this Newsletter.

We have a number of ideas for future issues including interviews with some well-known NZ statisticians, news about expatriate NZ statisticians and more articles on NZSA committee members.

This edition is largely devoted to the Auckland NZSA conference, which will undoubtedly be well attended. It'll be interesting to see if this year's conference dinner can top last year's!

Don't forget to send your contributions, preferably on a Mac floppy, or EMAIL either of us at:

P.Danaher@Waikato.ac.nz
H.Henderson@Waikato.ac.nz

or phone Peter at (071) 562-889 ext. 8244.

Please note that Harold will be in the U.S. until September 20 attending the ASA conference and working with Shayle Searle at Cornell. In addition, Harold recently got engaged. Peter and lots of others offer Harold and Vicky best wishes.

Peter Danaher Harold Henderson



How We're Doing

Recently Phillips, Choi and Schochet (1988) examined the productivity of statisticians in the period 1980-1986. They chose nine statistics and economics journals and standardised the page sizes to those of the *Annals of Statistics*. The individual rankings are given in the following table.

Rank	Author	Affiliation	Standardised page count	Number of articles
1	Hall, P.	Australian National U	340.3	33
2	Efron, B.	Stanford U	216.9	11
3	Wu, C.F.J.	U of Wisconsin, Madison	184.7	17
4	Bickel, P.J.	U of California, Berkeley	155.3	12
5	Goodman, L.A.	U of Chicago (U.C. Berkeley)	146.3	4
6	Li, K.C.	Purdue U (U.C.L.A.)	142.0	10
7	Barndorff-Nielsen, O.E.	Aarhus U (Denmark)	139.3	11
8	Bhansali, R.J.	U of Liverpool (U.K.)	136.7	7
9	Kallenberg, W.C.M.	Twente U/Wrije U (Holland)	134.9	8
10	Freedman, D.A.	U of California, Berkeley	134.0	12

The paper also ranked institutions by their productivity with the top ten being; Stanford, U. of Wisconsin, Berkeley, ANU, U. of Chicago, Imperial College, Purdue, U. of North Carolina, Cornell and Rutgers. Where does New Zealand figure among these esteemed institutions? Auckland comes in at number 113, Victoria at number 265 and Canterbury at number 299. What about Waikato? Oh well, better luck next year.

Reference: Phillips, P., Choi, I. and Schochet, P. (1988), "Worldwide Institutional and Individual Rankings in Statistical Theory by Journal Publications over the period 1980-1986." *Econometric Theory*, 4,1-34.

Statistics Workshop

Bond University

A workshop of statisticians involved or interested in teaching, research and consulting in quality management methods was held by the Industrial Statistics Section (ISS) of the Statistical Society of Australia (SSA) at Bond University on Queensland's Gold Coast from 16-20 February 1989. It was organised and run by Professor William Dunsmuir, Chairperson of the ISS, and his colleagues at Bond University. Over twenty statisticians from various parts of Australia attended, representing CSIRO, SIROMATH and higher education establishments. I was the sole New Zealand representative. The main objectives of the workshop were to:

- a) Plan course structures and contents for undergraduates and masters level degree training in quality management and improvement of statistical methods.
- (b) Set up a network across Australia of quality management and methods trainers and practitioners so that consulting and training needs can be met on an Australia-wide basis.
- (c) Develop a list of potential visitors from overseas institutions and industry who would be worth bringing to Australia to present seminars and workshops.
- (d) Develop the programme for the quality management statistics (QMS) symposium to be held in 1989.

Before addressing these objectives, however, four groups were formed to discuss, at length, the following questions. What is modern quality management? What roles can statisticians play? There was considerable variation in the level of awareness of those attending, so that this initial session was both necessary and worthwhile.

Two groups then worked on the first two objectives. The focus of the first objective moved away from planning course structures, as it was then felt that this was a matter for the individual institutions. The aim then became to define the knowledge and skills in quality management

needed by management, technical professionals, statistical consultants and quality management consultants. The group working on the second objective spent some considerable time discussing whether or not there was a need for a network of quality management and methods (QMM) practitioners within the SSA, and decided there was. The benefits included creating the means of information exchange, focussing activities, sharing expertise and experience and cooperating in training and consulting.

QMM will be the major focus of the activities of ISS for the next two years. A number of ways of operating the network were agreed, including the creation of a special newsletter, liaison with other quality bodies and the development of strategies for maximum impact on Australian industry. Liaison with New Zealand will be through me.

A list of potential visitors was drawn up and will be circulated to network members. It was decided to run a two-day QMS symposium in November 1989 in a number of centres, namely the Gold Coast, Sydney, Melbourne, Adelaide, Perth and Auckland (or Wellington).

On the final day we were joined by a number of people from industry and government, and presentations of our discussions were made to them for their comments. The general reaction was positive. A point made a number of times was that statisticians should become more familiar with the ways organisations are run.

The workshop was interesting and worthwhile. My feeling, and the feeling shared by many others, was that the awareness level for modern quality management is considerably greater both among senior management and the statistical profession in New Zealand than in Australia. Statisticians have played a key role in this, through the Deming Institute in particular. We are a few years ahead of the Australians. What should we be doing to stay ahead?

J.A. John

Professor of Statistics and Quality Improvement

StatLab Reviews

Did you see the reviews of StatLab in the December 1988 issues of *JASA* and *Biometrics*? StatLab is an innovative program for the Macintosh that can be used to teach statistical concepts. It has been developed by Doug Stirling at Massey and has been published by the NZSA. In the *JASA* review we read "no other software for the Macintosh of which I am aware ... comes close to having the kind of simulation capabilities found here, and many students will get a better understanding of the basic statistical idea of variation by going through these labs." The *Biometrics* review reported that "StatLab represents excellent value for money at \$99".

Great work Doug!

Local Groups

Waikato

The Waikato group of the NZSA has been meeting monthly this year, usually on the fourth Tuesday of the month at the McMeekan Centre, Ruakura Agriculture Centre for a seminar often followed by a dinner. The speakers to date have been Peter Danaher, our President Alastair Scott, John Rayner, and Nye John. The seminars have been well attended and we look forward to further interesting seminars. If you would like your name added to the mailing list please let Harold Henderson know.

A recent **big** news item is that Waikato/Ruakura will host the International Biometrics Conference in December 1992. This is quite a coup for the Waikato region. We expect 300-400 statisticians from around the world to attend.

Harold Henderson

Agriculture and Rural Affairs, Victoria, Aust.

Biometric Services seems to have been placed firmly on the NZ list of places to visit. We have had three visitors from NZ in the last week: Deborah Donnell, David Vere-Jones and David Baird. The rest of the NZSA are welcome, but don't all come at once please.

Another Kiwi, John Reynolds, will be taking over Stuart Crosbie's role as Manager.

The long-serving Peter Franz has gone to the University of Reading to do an MSc in biometry (should have come to Waikato - ed). Let's hope the Ashes are well and truly won by the time he gets there.

I am bidding farewell to Biometrics Services to become Director of Statistical Consulting at Wollongong University. Wollongong is famous for its steel mills, beaches and for being the birthplace of Norm Gunston. The locals think it's a windy spot, but there are windier spots in Australasia, not mentioning anywhere!

Ken Russell.

Otago

Yours truly has been on both sides of the Tasman recently. I visited John Best at CSIRO Sydney then did a trip from the top to the bottom of the country, visiting Auckland, Waikato, Victoria and Canterbury Universities. I also spoke with seventh form maths teachers about Mathematics with Statistics projects.

Recent visitors to the department have been: Robert Sulanke (Boise State), Katherine Heinrich (Simon Fraser) and Bryan Parry from Otago's Surgery Department.

John Rayner

VUW ISOR

We are pleased to welcome Leigh Roberts from the London School of Economics. He has joined the staff as a senior lecturer in Financial Mathematics. His specialties are Risk Theory, Kalman Filtering and Actuarial Statistics. His arrival heralds the new diploma in financial mathematics. Andrew Bruce and Deborah Donnell have also arrived. Andrew is working half-time with the Department of Statistics and is involved with development of time series software for S.

Song Xi Chen from Beijing has started an MSc/PhD under Peter Smith and David Vere-Jones in collaboration with Telecom. We also have a new teaching assistant, Mark Walkington and a new Secretary, Inge Renner.

Recent or current visitors include Ahmad Parsian (University of Shiraz), Martin van Montfort (Wagenhgen Agricultural University), Ralph Turner (University of New Brunswick), Mike Moore (Oceanographic Institute) and Alistair Gray on a six month sabbatical from the Department of Statistics.

Peter Thompson recently came home from Japan, just in time for his first lecture. Brian Dawkins is in Canada, complaining about the cold. David has found time to get away from ICOTS involvement to go to the Australian Maths Society Conference. Stephen Haslett has returned from Iowa and has become involved in a Post Office project with Tony Vignaux.

There have been a few building changes resulting in more office space and an official tearoom. Computing equipment has also prospered recently with the arrival of the first SUN workstation with three more proposed. ISOR terminals are now linked by appletalk and the campus fibre-optic cable is shortly to reach us. This will enable a campus wide ethernet network to begin soon.

Peter Smith

Give me an official tearoom over a SUN any day. Ed.

Massey

These notes are being written in Adelaide, some 3000 km from Palmerston Nth, and with the security this distance provides it is tempting to tell what is really happening at Massey. To forget about the humdrum details of academic life, of Graeme Wake being invited to talk in Indonesia and of Greg Arnold inviting himself to talk in Adelaide, and instead to tell the full story of the battles at dawn with the heavies from Business Studies. Unfortunately my return is only days away, long before the publication of these notes, so it will be reported only that in 1990 Introductory Business Statistics will be taught by the Statistics Section, none of whom have yet enrolled in an MBA.

Faced with the choice between Ethernet cabling to every office for PCs or Phonet for Macs we adopted a Mafia like approach and asked for both. These have just become operational, so the lucky few with computers will no longer be able to excuse long absences from their offices with a muttered 'Had to do some computing'.

The main recent concern at Massey has been the planning of a major social event, interspersed with seminars, to which four eminent statisticians have been invited from points around the globe. The aim is to select the most able Professor of Statistics. By the time you read this we hope that the selection will have been made, but at the moment the process provides a more interesting gamble than anything offered by the Adelaide Casino.

Greg Arnold

DSIR- AMD, MT ALBERT

Roderick Ball now has a permanent staff position. Jocelyn Dale will return in mid-September, to work part-time. After attending the International Statistical Institute conference in Paris, John Maindonald will spend four months at Rothamsted Experimental Station, working on the Genstat statistical system.

John Maindonald

10TH AUSTRALIAN STATISTICAL CONFERENCE

2-6 JULY 1990

The 10th Australian Statistical Conference will be held in Sydney, at the University of New South Wales, from July 2 to July 6, 1990. This conference will also constitute the 2nd Pacific Statistical Congress, and will occur in the year of the centenary of the birth of Sir Ronald Fisher. George Box will be in attendance.

The Programme Committee for the conference has already commenced setting up the conference programme. At this stage, three topics have been selected for major emphasis:

- Quality
- Computer intensive methods in statistics
- Analysis of dependent data

Other subject areas will be selected as special topics for the conference. The Programme Committee seeks suggestions from the members of the Society about subject areas that should receive special attention; with topics having relevance to Fisher being especially welcome. Suggestions of suitable invited speakers are also welcome.

Please direct suggestions and enquiries before January 15, 1989 to, Dr Doug Shar, SIROMATH PTY Ltd., 156 Pacific Highway, St Leonards, NSW 2065.

The Data Bundle

The data bundle is a collection of statistical data sets that has been prepared by Mike Camden for the Education Subcommittee of the NZSA (Inc).

The purpose of this resource is to provide sets of real data for students to use in statistical explorations and for projects. They are an ideal resource for Form 7 Mathematics with Statistics students but would also be very suitable for a variety of school projects at all levels.

The data bundle is available for only \$7.50 (incl. GST) from:
Education Subcommittee
NZSA (Inc)
PO Box 1731 (Please note the correct box number)
Wellington

If you would like a copy please fill in this form.

To: Educational Subcommittee
NZSA (Inc)
PO Box 1731
Wellington

From: _____

Please supply _____ copies of the Data Bundle at \$7.50 each.
Order Number: _____ Signature

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ANNUAL CONFERENCE OF THE NEW ZEALAND STATISTICAL ASSOCIATION

AUGUST 17-19 1989
UNIVERSITY OF AUCKLAND

REGISTRATION FORM

LAST NAME: GIVEN NAME:

AFFILIATION:

POSTAL ADDRESS:

EMAIL ADDRESS: TELEPHONE:

NAME TAG: Please indicate how you would like your name and affiliation to appear on your name tag:

ITEM	Costs	RATE
Registration Fee		\$45.00
Conference Dinner		\$30.00
Accommodation and Breakfast (per day)		\$27.00 (plus GST)

Accommodation

Hostel accommodation (bed and breakfast) required for each of the following nights:
Wednesday 16 Thursday 17 Friday 18

CLOSING DATE FOR ACCOMMODATION: 17 JULY 1989

Contact: Dr. C M Triggs
 NZSA Conference Secretary, Applied Maths Division

Second Announcement of International S Software Workshop

Wellington, New Zealand, 12–15 February 1990

THEME: S – Present & Future

The Applied Mathematics Division of the Department of Scientific and Industrial Research (a New Zealand Government Department) and the Institute of Statistics and Operations Research of Victoria University of Wellington are hosting an international workshop on the development of the S statistical software, in association with AT&T Bell Laboratories. The primary goal of this workshop is to provide an international forum for the exchange of information relating to current and future research and development using the S software (including ACE, S-PLUS, SUCCESS SOFTWARE, etc).

The workshop organisers are pleased to announce that all three authors of S, Rick Becker, John Chambers, and Allan Wilks, from AT&T Bell Laboratories, will be attending.

Structure

The workshop will comprise seven half-day sessions over four days. The tentative structure is as follows:

- Four sessions consisting of 2 or 3 presentations by speakers on related topics.
- At least 2 sessions devoted to workshops focusing on the development of applications software for S in a number of key areas. These workshops will review ongoing work by participants and provide an opportunity to discuss future needs and directions for S applications.
- In parallel with the applications workshops, there will be workshops focusing on the development of S internals, device drivers and porting.

Possible Timetable

Monday	Tuesday	Wednesday	Thursday
Introduction & S Futures Parallel Workshops I	User Interface & Windows Parallel Workshops II	Graphics Capabilities Free Afternoon	Data Structures & Programming Environment Workshops Plenary & Concluding Address

Conference Fee: US\$400

Participation

Those interested in participating are requested to send an abstract of at most one page describing their interests in S and how they could contribute to the workshop. E-mail is the preferred medium.

For further information contact:

Mail:	Ray Brownrigg DSIR AMD PO Box 1335 Wellington New Zealand	Peter Thomson VUW ISOR PO Box 600 Wellington New Zealand
E-mail:	ray@dsiramd.dsir.govt.nz	peter@vuwisor.vuw.ac.nz
Phone:	+64 (4) 727 855	+64 (4) 721 000
FAX:	+64 (4) 710 231	

Overseas Travel Report: USA and Canada

I recently returned from two months in North America, primarily to see what was happening on the Quality and Productivity front.

I spent 10 days with Joiner Associates, Madison, Wisconsin followed by one week visiting some of their clients. I then spent two weeks at the Institute for Improvement in Quality and Productivity at the University of Waterloo, Canada. For the remainder of my time I visited various consultants, corporations, universities and research establishments. The Deming philosophy in general and in particular the discipline of continuous improvement (Plan, Do, Check, Act - the PDCA cycle) as taught by Joiner Associates, IIQP and others in North America is alive and well and definitely catching on. In the Madison area particularly I thought the diversity of applications was very exciting and appeared to be ever growing. The involvement in this approach to Quality has reached a "critical mass" which will ensure further growth.

I saw a lot more emphasis on the use of Organizational Development (OD) skills than we have here, although this was slightly at the cost of statistical involvement within some of the client organizations I visited. The OD consultants stressed the value of teamwork, particularly project teams focussing on specific areas of production, service and management. I see a need for more OD skills in New Zealand, but would like to see it in tandem with appropriate statistical skills. The ideal would be a partnership of an OD expert with good numeracy and a statistical expert with good OD knowledge. This would make a powerful team and by approaching a company as a team, our message about teamwork would be reinforced.

The value of a network of people interested in Quality and Productivity improvement was stressed by those I visited. By having an actual organization which is seen as "knowing something", even people only vaguely interested can

approach it without making a commitment. It becomes a bit of a "show and tell" act, with those who have found the ideas useful and who clearly have no vested interest persuading interested people to try it.

Putting on my Education hat I observed the same apparent apathy in the general public to the urgency of raising levels of numeracy as I see here. In addition, there seemed to be the same cries of, "What can we do?" coming from people like us. What can we do? One thing we can do is keep our profile high. Constantly point out the benefits of having a bit of number sense at least to the younger generation and keep the fun aspect never far from the top. Somehow we have to overcome the myth that mathematics and even statistics is boring.

For just one day I got a chance to slip on my Numerical Taxonomy hat while I visited the US Department of Health Centers for Disease Control in Atlanta, Georgia. Before breakfast I bumped into Mick Roberts in the kitchen of a hostel for third world itinerants. I suspect it was a worse shock for Mick than for me as I didn't have my glasses on! The few among you who have seen me before my breakfast will understand the significance of the last sentence. I hear Mick has survived, however, and I went on to have a most productive day.

The trip was long and hard but a lot of ideas have come out of it and I am now busily implementing them. Come to my talk at the conference and hear more!

Jean Thompson
Applied Maths Division, DSIR, Wellington



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S Project

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DSIR

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Announcement

Fourth International Conference on Fibonacci
Numbers and Their Applications.

30 July to 2 August 1990

Wake Forest University, Winston-Salem NC, U.S.A.

Call for Papers. Contact John Turner at Waikato
University. He is the local representative.

University of Auckland

Lectureship in the Statistics Unit of the Department of Mathematics and Statistics

(Limited Term Appointment- 3 years)

The Department of Mathematics and Statistics teaches a full range of undergraduate and postgraduate courses. Within the department there are two units which operate with a certain degree of autonomy. These are the Statistics Unit and the newly formed Applied and Computational Maths Unit.

The Statistics Unit has strong link with other statisticians throughout the university, Medical School and DSIR.

Applicants should be suitably qualified with academic or professional research and teaching experience in one or more of the areas of applied probability, operations research and data analysis. However, applicants with with an interest in any area of applied statistics are encouraged to apply.

As a member of the Statistics Unit, the appointee will also be expected to be available for statistical consulting in his or her area of expertise.

Commencing salary will be established within the range \$35,000-42,500 per annum. Conditions of Appointment and Method of Application are available from the Assitant Registrar, Academic Appointments, University of Auckland, Private Bage, Auckland, N.Z. Applications should be forwarded as soon as possible, but no later than September 8, 1989.

W.B. Nicoll
Registrar

50 Years of Ruakura and the Fisher Connection

The book published to mark the 50th anniversary of Ruakura included a photo of Sir Ronald Fisher meeting two of our geneticists. I believe the photo was taken around 1959.

I had particular interest in this visit of Fisher to NZ, having heard something about it from the former owner of my house, Dr Harold Annett. He was an agricultural chemist who spent time at Rothamsted and was a friend of Fishers. He considered that a crucial characteristic that qualified him to become friends with Fisher was that he was completely ignorant of statistics. Aged 92 when I met him, Dr Annett had many interesting stories of his time at Rothamsted with Fisher and a "young Frank Yates" as well as his associations with McMeekan and a fledgling Ruakura.

I had a good story lined up about the possibility of Fisher staying at my house. Unfortunately in the process of following up this exciting lead I found that Fisher died two years before my house was built. Of course, he may have stepped on my land.

Neil Cox

