Registered by Australia Post Publication No NBH3503 issn 0314-6820

statistical society of australia incorporated

newsletter

31 August 1992 number 60

11th AUSTRALIAN STATISTICAL CONFERENCE

The tumult and the shouting have died. The 11th Australian Statistical Conference has passed into the collective consciousness of those who attended. Fortunately, most of the shouting was done at the evening bar and the tumult was only visible to the organisers. Perth provided its usual winter blend of sunshine and showers, sometimes simultaneously, and delegates basked or bathed accordingly. Despite the recessed economy and tyrannical distance, some 240 intrepid statisticians made it to Perth and by all accounts enjoyed themselves immensely.

Not often do the antics of statisticians attract media attention. The attendance of Persi Diaconis proved a draw card. He was given full exposure on page three of the West Australian, Perth's daily broadsheet, and was rocketed to national prominence when interviewed by Wendy Harmer on Radio National's Kaboom Show. Wendy was well behaved and very interested in Persi's (by now) nationally famous card trick. In addition to addressing the Statistical Conference, Persi gave a public lecture on the Tuesday evening and also spoke at the Australian Mathematical Society meeting. The organisers owe him a special debt of gratitude for his selfless contribution. Indeed, the organisers and I'm sure all delegates, extend warm thanks to all invited speakers for providing the framework for a successful conference.

Congratulations should go to Ian James and other members of the programme committee for assembling a galaxy of luminaries. As a consequence, the invited speaker's programme provided something of interest to most tastes. Peter Hall (ANU) tied together some loose bootstrap ends, Jerry Lawless (Waterloo) was his reliable self, Richard Smith (Chapel Hill) was a trifle chaotic but the audience warmed globally to him, whilst Ole Barndorff-Nielsen (Aarhus) and Bruce Lindsay (Penn State) were the likeliest of lads. Richard Tweedie (Colorado) and Persi Diaconis (Harvard) ventured into Markov properties, Peter Green (Bristol) made a hospital bed vanish before our very eyes, Wolfgang Haerdle (Bonn) announced the impending death of ANOVA and at the other end of the cataclysm, Terry Speed (Berkeley) addressed the origin of the species. Ron Hocking (Texas A&M) introduced a new improved REML, Shun-Ichi Amari (Tokyo) spoke on estimating functions, Herbert David (Iowa State) on concomitants of order statistics and Rahul Roy (ISI) on percolation theory.

Tim Brown presenting Alan James with the Pitman Medal

The Federal Office of Road Safety provided generous sponsorship of two speakers: Leonard Evans of General Motors Research Laboratories and Olga Pendleton of Texas Transportation Institute. These two speakers were the focal points of a one day session on Accident and Injury

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Deadline for next issue: 16 October 1992 *Printed by Koomarri Printers, Canberra*

Statistics on Tuesday. Both shared their considerable experience of the United States traffic policy and accident analysis scene and spoke of the wealth of data that was simply waiting for the right statistician to attempt an analysis. Matthew Knuiman is to be congratulated for his efforts in securing the FORS sponsorship in the first instance and then tracking down both Olga and Leonard.

ALCOA of Australia also provided generous assistance to the conference by sponsoring Jerry Lawless' attendance. Geoff Riley was the prime mover in securing this funding. Geoff also headed the Social Committee, to which all delegates are indebted. Such was the sumptuousness of the morning and afternoon teas that delegates from other conferences had to be forcibly restrained from partaking. Geoff was also responsible for the glorious weather on the afternoon of the conference tours, which guaranteed their success. "Forward planning!", he proclaimed, being accustomed to the jargon of private enterprise.

The roseate glow that descended over Perth that Wednesday afternoon and so effectively suffused into the souls of all delegates, particularly those recently returned from the Swan Valley wineries, was carried into the dining hall of University House and transformed the conference dinner into a occasion to remember. Rarely do statisticians and their spouses have opportunity to gather in such relaxed circumstances. The after dinner speaker, Ron Sandland, was welcomed and appreciated. Ron spoke seriously about accreditation, and not so seriously about many other things. By this time the combined effects of pav, custard and Brian Murphy's private collection were being felt by all incumbent and the dinner drifted harmlessly off into the night. Thanks again to Geoff Riley and the Social Committee.

By Friday morning, the gruelling conference schedule had taken its toll. The conference organisers had foreseen this eventuality and arranged an airport refueller's strike so that nobody could escape early. Terry Speed managed to spark the neurones of a few who had been declared clinically brain dead, including the author, before handing over to Tim Brown for the Presidential address. Tim presented a brief but telling argument in favour of accreditation.

Then came the most pleasant business of the conference. Alan James was awarded the Pitman Medal in recognition of his contribution to statistics. Both Tim and Terry had a second chance to speak, this time to attest to the impact that Alan's concise oevre had had on multivariate statistics and more recently biochemistry. Alan responded in typical humble fashion, but was clearly delighted to be so honoured.

As some delegates were whisked to the airport (planes were remarkably taking to the skies again - thanks lads!) those remaining enjoyed a final moment together at the BBQ lunch, before themselves melting (What was in that orange juice?! - Eds note), singly or in groups, beyond the ken of the small band of locals that remained, back to the vast Terra Incognita from whence few return, the East. The organisers were left to balance the budget and take a well earned break over the weekend before second semester hurtled round the corner the following Monday. A final vote of thanks to Ross Maller, who chaired the organising committee when it looked like we would all have to sit on the floor and to Tim Brown whose idea it was in the first place. Also to Tony Pakes, John Henstridge, Suzanne Furby, Sean Zhou, Geoff Yeo and all who served on the various committees, endlessly discussing punctilios. And to all who came, speakers and listeners, many thanks for making the conference the success it was.

Russel John
Somewhere in the South of France

From the Organizing and Programme committees: As always with conferences, the burden of day to day work falls onto the Conference Secretary. Russel's superb organization, lateral thinking and, above all, humour and wit in the face (at times) of considerable pressure, made it a pleasure to be part of the organizing team. The smooth running of the Conference was due largely to his efforts over a long period, for which the organizing committees and all in attendance extend their thanks and appreciation.

CENTRAL COUNCIL REPORT

From Central Council meeting held in Perth on Tuesday 7 July 1992.

Honours Scholarships.

The following awards were noted.

The Victorian Branch awarded three scholarships for 1992, each worth $500, to:

Mr Laurence Mandie, Monash University;

Ms Dina Neiger, Monash University;

Ms Sally Weng, Melbourne University.

The South Australian Branch awarded a scholarship of $500 to:

Sue Taylor, studying Honours in Statistical Science part-time at Flinders University;

The Queensland Branch awarded two scholarships of $400 each to:

Therese Muller, University of Central of Queensland;

David Nott, University of Queensland.

The Western Australian Branch awarded a scholarship of $500 to:

Richard McKenzie, University of Western Australia.

FASSO

There was discussion of the Society's membership of FASTS and of FASSO, with the latter intended to cater for our members with interests in the Social Sciences. It was

decided to ask a small sub-committee to investigate further about our membership of FASSO and to report to the next Council meeting. Branches were requested to seek their members' views and to report to the sub-committee.

PSC

Dr Chambers reported that the $6000 had been forwarded as arranged to the Biometrics Society for IBC, December, 1992. The residue from PSC1 had been identified and will be combined with the residue from PSC2, and the account will be finalised as arranged as soon as possible.

Accreditation (see also special article)

The report of the working party was presented and discussed. The summary recommendations of the sub-committee are that:

- the Society maintain a watching brief on developments with respect to the National Training Board but not proceed at this time towards developing competency standards; and
- proceed towards establishing an accreditation process for members of the SSAI.

Further, they recommend that:

- there be widespread consultation to ensure that there is majority support among SSAI members, with the consultation also obtaining views about preferred criteria; and
- the Council pay an honorarium to a part-time professional officer to proceed with more detailed investigation.

Professor Green, University of Bristol, UK, addressed the meeting briefly and the discussions of the open meeting held that lunchtime were noted, including the majority support for proceeding with the accreditation investigation and some consequent increase in fees, and the (close) majority support for a sliding scale of fees. It was decided to proceed to the next stage, granting continuation of the accreditation sub-committee to consult widely, and to allow an honorarium for a suitable person to act under the direction of the sub-committee in preparing options and the report for the AGM.

New ACT Associations Incorporation Act; ASPAI officers and their roles

The sub-committee proposed that SSAI and ASPAI stay separately constituted, that the Treasurer of SSAI be the Treasurer of ASPAI, and that there be a position of Publications Manager of ASPAI. It was decided that there will be a Publications Manager who will assist the Editors, Treasurer and Council with publications of SSAI and ASPAI, and that this person should have a budget to attend meetings with the Editors and Council as required. It was decided that the Treasurer should continue to act as the secretary for ASPAI for meetings only.

Progress on examining the SSAI and ASPAI constitutions and the new ACT Incorporation Act, was discussed, and it was decided that the Secretary seek legal advice as required. The Secretary also advised the Council of the necessity to hold the AGM in March in order to comply with the constitution.

Australian Mathematical Sciences Council

The President reported on his correspondence, including Dr Sharpe's comments, with the Australian Education Council about the profiles project and its complete lack of input from the statistical profession.

Professor Brown reported that the AMSC wishes to stop the profiles project; take up the Mayer report; and investigate the idea of a National Mathematics centre. The Branch education representatives were requested to report on the Mayer report.

A/Professor MacGillivray reported commendation from the President of the AMSC, Professor Garth Gaudry, for work by individuals and Branches of the SSAI in programs for schools and maths teachers, with the request that such work be continued.

Student sponsorships to conferences

It was decided to continue Council sponsorship of students to conferences, and guidelines were determined; these will be circulated to Branches.

H.L. MacGillivray
Secretary

BRANCH REPORTS

New South Wales

Teaching Statistics in Schools

Dr Ken Sharpe from the University of Melbourne spoke on a topic that has implications for us all: Teaching Statistics in Schools. Both here and overseas there has been over recent years a dramatic increase in the amount of statistics taught in schools. Whilst this would seem a wholly desirable move, it is not without its problems. The speaker examined the pros and cons of this increase but clearly it was the cons that were of particular interest to the audience. One problem is the syllabus: there is a tendency for mathematicians to have a guiding hand in its development with the effect that a substantial amount of the curriculum, masquerading as statistics, is in fact probability (some of those present would have no difficulty with that of course). Another problem is that intuition in probability and statistics takes a long time to develop and many teachers have yet to develop such intuition. The effect is that some teachers don't understand important concepts and in consequence condemn their students to confusion on the subject. This situation needs to be rectified and the speaker outlined a number of ways in which this can be tackled. A lively discussion ensued with Prof. Jim Douglas making us all feel young again by

describing similar battles he had fought with the school education authorities before many of us were born.

A Bayesian Approach to Nonparametric Regression

This meeting was concerned with the important and increasingly popular concept of nonparametric regression. This is regression when the functional form of the regression function is unknown.

In a talk entitled "A Bayesian Approach to Nonparametric Regression" Professor Bob Kohn of AGSM UNSW produced a cure to a difficulty connected with classical nonparametric regression. In the classical case, confidence intervals outside the range of the data get large very quickly giving little indication as to the likely location of the regression curve. We may however have prior information about the functional form of the curve - this prior information being expressible in terms of the curve belonging to a class of solutions of some differential equation (essentially fitting a parametric curve) or using penalised least-squares in which the smoothness term involves an integrand closely related to the earlier mentioned differential equation.

Queensland

Applications of Fitting a Mixture Model to Grouped Truncated Data

At the latest meeting of the Queensland branch, Dr Peter Jones of the Biometrics Unit of CSIRO spoke on work he had completed as part of his doctoral thesis. The topic was the applications of fitting a mixture model to grouped truncated data. Examples describing the modelling of red blood diameter distributions in diseased cattle, collagen fibril diameter distributions in muscle tissue, and soil particle size distributions were used.

Victoria

Quality Improvement

The April Meeting was addressed by Neviene Torki on quality improvement. She contrasted the approaches of Management by Objectives, commonly used by business, and Total Quality Management. The basic flaw in MBO is that it does not consider the capability of the system but only sets targets and reports on whether the targets have been met. By contrast TQM looks at the process and asks what improvements can be made to the system and what the system is capable of. She identified 6 steps in the TQM approach to improvement; listed a number of tools that can be used in the process, including Statistical ones such as histograms, pareto charts, control charts and process capability analysis, and discussed which tools were most appropriate for each step.

Honouring Professor E.J. Williams

The May Meeting of the Victorian Branch took the form of a dinner at a local restaurant to honour the career of Professor E.J. Williams on the occasion of his 75th birthday. The dinner was attended by 40 people and was very much appreciated by all concerned.

Modelling the Prevalence of Ross River Virus

The June Meeting was addressed by Dr Ian Marschner who discussed some issues arising from attempts to model the prevalence of Ross River Virus based on clinical hypotheses. The data available was cross-sectional data with a 3 state classification : RRV present, absent or equivocal. A simple model is that the progression of states for a person is $A \rightarrow P \rightarrow E \rightarrow A$ with no reinfection. The objective would then be to estimate the transition rates between states at the different locations for which data was available under the assumption that there was no reinfection and that the prevalence was constant over time and age. While the model gave a reasonable fit to the data it cannot be used to validate the hypothesis directly. Reversion or reinfection are also consistent with the data and some locations may carry a greater risk than others. A longitudinal study is needed to study changes over time and accurately assess infection rates and immunity.

South Australia

Something on Cross-Over Designs

Sandra Pattison ofof the Department of Statistics, University of Adelaide, spoke at the Wednesday, 13 May Branch meeting on Something on Cross-Over Designs. Experiments using units, or subjects, where more than one treatment is applied to each unit, although at different periods in time, and the subjects' response is measured at each of these times, are known as Repeated Measures Designs (RMDs), Carry-Over Designs and Cross-Over Designs. Typically they are used in Animal Feeding and Clinical Trials.

This talk looked at some examples of RMDs, especially in the presence of residual treatment effects, that is, the effect of a treatment from the previous period. Then for small numbers of treatments, periods, and experimental units, some 'optimal' RMDs were discussed.

Agricultural Statistics in Scotland

Ian Nevison of the Scottish Agricultural Statistics Service (Aberdeen Unit) addressed the June meeting on how the SASS provides statistical and mathematical support for agricultural, environmental and food research and development in Scotland. The first half of the talk gave an overview of the Scottish agricultural statistics scene and how SASS functions. It looked at the organisational structure, the research interests and some of the problems and opportunities that will face it in the coming years.

The second half of the talk looked at calibration of near infrared reflectance spectra to wet chemistry measurements in order to determine the composition of organic materials. In particular, methods for estimating protein and neutral detergent fibre composition in forages were considered.

Western Australia

Geographic Information Systems — What, Where and How

Following the branch meeting in May, WA members and others gathered for an interesting talk by Dr Derek Milton,

of the University of Western Australia. Derek presented a review of what has been achieved in the area of information technology over the past 20 years with particular reference to significant development in systems which analyse spatial information commonly called Geographic Information Systems (GIS). These have many uses, for example, Land Information Systems. He illustrated the power of GIS from their ability to integrate apparently disparate data, provided it is spatially referenced. This promises the elucidation in data sets of relationships of a previously unimagined complexity. Derek also described various statistical methodologies such as multivariate techniques that are used in the analysis of spatial data and cited several applications. He concluded his presentation emphasising the urgent need for interaction between statistical and GIS professionals in relation to technical and ethical issues.

Conservative and Bold Strategies for Casino Games

The talk in June by Associate Professor Tony Pakes of the University of Western Australia considered possible strategies to maximize the probability of achieving a monetary goal.

Tony illustrated the possibilities with regard to craps and detailed the options available in roulette at Burswood (WA) then considered the appropriateness or otherwise of the strategy of betting a constant stake at high odds, especially in the circumstances of being close to the desired goal, with the possibility of overshooting by a large amount.

A theoretical analysis was presented, making use of a number of Martingale results, and other advanced techniques.

Tony also gave a comprehensive account of the use of the word martingale from its use by Rahelais in 1589 and its equestrian and nautical usages, through to its modern mathematical use by Doob.

Canberra

Statistical Research at ABARE

The April meeting of the Society saw a dual presentation by Dr Ray Lindsay and Dr Philip Kokic of the Australian Bureau of Agricultural and Resource Economics (ABARE) on two different aspects of the statistical research program of the organisation. ABARE is the Commonwealth Government's largest economic research agency, and is attached to the Department of Primary Industries and Energy. It's primary function is to provide the Government with economic and statistical analysis relating to issues in the agriculture, mining and energy sectors of the economy. For this purpose, it collects economic data on these sectors from a number of sources and publishes the results of its analyses as widely as possible. A key data input for ABARE is its annual program of farm-based economic surveys, which provide a huge amount of information each year on the financial and economic performance of Australia's major rural industries. Ray's talk looked at the problem of efficient estimation of distributions from these data, and particularly methods for computing distributional estimates for relatively small subgroups within the target populations of these surveys. The basic processing tool used by ABARE for this purpose is SAS, but the algorithms provided in SAS do not allow for efficient use of complex survey design information when estimating distributions. More efficient methods, based on model-based ideas for survey inference, are available. However, as Ray's talk showed, their implementation in SAS is not straightforward. In the following talk, Philip Kokic then described how ABARE maximised the usefulness of it's survey data to both the Government and its various industry client groups by providing both map-based statistical summaries and 'standard' tabular analyses of these data. ABARE has found that map-based analyses of farm level data are particularly useful since they provide a vivid representation of both spatial trends and 'local' regional effects. Philip's talk focussed on showing how the data mapping team within ABARE had integrated the data processing capabilities of the SAS package, the modern spatial smoothing methods available in the Splus package, and the mapping capabilities of the ARCINFO geographical information system, to create maps showing regional patterns in economic variables across Australia. He also addressed some important outstanding statistical problems with these maps, and in particular, highlighted the need for further research on effective ways of mapping the uncertainty associated with the maps themselves.

Calibration

The May meeting of the Canberra Branch continued the 'rural' emphasis of the April meeting. In a talk that was both entertaining as well as informative, Dr George Brown of the CSIRO Biometrics Unit at Prospect, NSW, described his work in calibration, and in particular, its application to the important practical problem of objective measurement of the fibre diameter of the wool produced by Australia's approximately 50,000 woolgrowers. For those of you, like me, whose closest encounter with wool is when you pull a jumper over your head on a chilly morning, the fibre diameter of wool (measured in microns) can vary between about 16 and 30, and there is a considerable price differential between 'fine' wool (low micron count) and 'coarse' wool (medium to high micron count). Getting the 'correct' fibre diameter measurement for a bale of wool can make a big difference to the price realised for that bale, and eventually the income the woolgrower receives for producing the bale. However, Australia produces a lot of wool (just ask the Wool Realisation Commission), and so it is imperative that a rapid method of determining fibre diameter be used. In 1976, CSIRO developed just such a tool - the Fibre Distribution Analyser, or FDA. George's talk focussed on the basic technology behind the FDA, and the need for it to be statistically calibrated in order to enable it to work properly with wools of varying types. He also described some recent upgrades to the FDA technology which have thrown up new problems in appropriately calibrating this tool.

Statistical Myths in Transportation including the case of the Killer (Pavement Marking) Buttons

Dr Olga Pendleton, who is visiting the Federal Office of Road Safety (FORS) from the Texas Transportation Institute in the US, spoke to a large gathering at our meeting on 30 June. Olga began her talk by describing the structure of the ASA in the US, and then moved on to how statistics are compiled in the US and how organisations similar to FORS work with statisticians. Olga noted that the transportation field was generally behind in the use of statistics, especially when compared to fields such as medicine, but she has found people working in the field to be surprisingly open and all too grateful for constructive criticism of their work.

Olga then moved on to some specific examples of studies she has come across over the last 10 years. One of these examples related to the use of reflecting centre line marking buttons on roads. A two year controlled study into accident rates showed that the rates actually increased after the buttons were placed on roads. When asked to comment on the findings Olga undertook a site by site analysis which showed that at 60% of sites the accident rates decreased, but that at about 10% of the sites, usually in highly populated areas, the rates increased greatly. Unfortunately, no further work has been conducted to explore this phenomenon further. Olga then gave several more examples of results which went against our expectations, but which were statistically significant. These included an analysis of death rates before and after the introduction of seat belts which showed an increase in deaths, and an evaluation of the 55 mph speed limit on USA highways which showed a decrease in death rates once the limit was increased to 65 mph. Olga examined this latter study further and noted that while the death rates had indeed decreased on the highways, the rates had increased on the minor roads leading off the highways.

Olga concluded her talk by noting that in her experience about 90% of funding of research projects was devoted to collecting data, but only 10% on the vitally important analysis. This observation was supported by a number of people in the audience. Olga also suggested that more effort needs to be put into design issues for transportation studies, given the many problems encountered in analysing aggregate data.

REPORT OF THE WORKING PARTY ON ACCREDITATION

The February 1992 meeting of Central Council asked a Working Party comprising Ron Sandland (Chair), Tony Pettitt, Alan Welsh and myself to report to the July Council meeting with a preferred position on accreditation. We considered two separate but related issues.

(a) Should SSA develop competency standards as proposed by the National Training Board as a basis for accredited courses in statistics?

(b) Should the SSA develop standards for the purposes of registering 'accredited' members of the SSA?

For reasons set out below, the Working Party recommended that we maintain a watching brief on general developments with respect to (a) but not take any steps towards developing competency standards at this time. However, with respect to (b), the Working Party recommended that we should take preliminary steps towards establishing accredited members of the SSA.

These recommendations were considered by an Open Meeting at the recent 11th Australian Statistical Conference and subsequently by Central Council. Both recommendations were endorsed. It was also agreed that there should be widespread consultation on (b) prior to implementation, to ensure that there was majority support among SSA members before proceeding further. The consultation should also obtain views on the details of the accreditation process.

Competency Standards

There were several reasons why we chose not to develop competency standards. There are a number of relevant factors.

- It is not clear that national competency standards have bipartisan political support.
- The Australian Vice-Chancellor's Committee has publicly criticised the concept of competency standards.
- Universities have not agreed to use the competency standards as input into structuring their courses.
- The development of competency standards is being encouraged by the National Training Board; they are not mandatory at this time.
- No other professional associations appear to be moving rapidly towards developing competency standards.

In view of the considerable effort involved, the very doubtful benefits and the criticisms now being made by some academics, we recommend that the SSA maintain a watching brief only on the development of national competency standards. There have been some recent developments on competency standards as a result of the Youth Summit (viz general support for the Carmichael report) and the Working Party will monitor these developments and assess whether the SSA should change its current position.

Accreditation of Statisticians

The Working Party recommends that the SSA now take positive steps towards accreditation. This issue is currently being addressed by statistical societies in United Kingdom and USA.

The Royal Statistical Society (as part of its merger with the Institute of Statisticians) is proposing to adopt the

accreditation procedures of the Institute which are based on an assessment of both qualifications and experience, and accredited statisticians would be known as chartered statisticians. The Society would continue to have open membership except for the "professional wing" which requires accreditation. The general membership will continue to run the Society. There is also recognition that continuing education of some form would become very important, and there would be a need for a code of conduct, and disciplinary and appeal procedures. Chartered membership would be more expensive than general membership.

The American Statistical Association set up an Ad Hoc Committee on Certification which has recently reported. The Committee has recommended that the ASA implement a system for certifying statisticians. (Certification is the term used by ASA and should be regarded as synonymous with accreditation.)

For similar reasons that these societies are pursuing accreditation, it is important that SSA now pursue the same process. We see the main reasons being:

- Increasingly, the clients of statisticians will expect and look for accreditation of the professional competency of statisticians. It will emphasise the professionalism of our work.
- Accreditation would lead to increased visibility of statisticians and hopefully increased interest in statistics among students. There is evidence that in some other disciplines, accreditation has lead to increased enrolment in courses.
- Accreditation should ameliorate the too-common perception that a course or two in statistics or the ability to run a computer program makes one a statistician.

Issues that need to be considered are the fee structure; criteria and procedures for determining accreditation (there seems to be agreement that accreditation should be based on a combination of qualifications and experience); continuing professional development; and de-registration and appeal procedures.

The Open Meeting

A number of useful contributions were made at the Open Meeting at the 11th Australian Statistical Conference

- There was discussion on the balance between qualifications and experience with recognition that both were important, but there would be cases in which some trade-off may be warranted.
- In parallel with accreditation, the SSA should continue to put effort into gaining recognition of the importance of statistical expertise.
- It was emphasised that already non-accreditation has had a detrimental effect on the use of statistics in the social sciences.
- The potential benefits of accreditation in recruiting students to statistical courses was emphasised, with many students giving preference to courses that will result in professional qualifications.
- There was considerable discussion of the financial aspects of accreditation, with the general view being that all members will benefit to some extent by the society having accreditation, but that those choosing accreditation should bear more of the cost.

Where to Next?

Central Council agreed that we should proceed with investigating accreditation with a view to adopting such a process. As part of that process, there should be widespread consultation with members. It was recognised that this consultation and the documentation of proposed procedures would be labour intensive and require dedicated effort. Council agreed to allow $5000 for a suitable person to be employed for this purpose and to act under the direction of the Working Party to prepare recommendations for the consideration of the AGM.

It is envisaged that meetings on accreditation will be held by each Branch. However, if you have views you would like to be considered, please contact (orally or in writing) one of the Working Party members.

Dennis Trewin
Australian Bureau of Statistics

CHANGES ACROSS THE TASMAN

President's Column — NZ Statistical Association (Inc), Newsletter No. 30

(Reprinted with permission)

July 1, 1992 was a very sad day for statistics in New Zealand. This was the day the new Crown Research Institutes (CRIs) came into being, and the day Applied Mathematics Group (AMG), DSIR, ceased to be. This change was especially devastating for statistics. Of the nine statisticians at Wellington AMG, only three were ddefinitely confirmed into positions.

The establishment of CRIs should not, in itself have caused me to write my opening sentence. It should have been possible to maintain a central group of applied statisticians whose focus was methodological development and new ideas on applications of statistics. Sadly, this important facet of applied statistics has not been understood, either by the Foundation for Research, Science and Technology or by Industrial Research Limited (IRL).

I am concerned that the few applied statisticians left in CRIs are likely to be hopelessly overloaded trying to serve their local colleagues and will have little time to keep abreast of new ideas emerging overseas, or time to generate new ideas of their own in an applications environment. This can only have a deleterious effect on our discipline. I find it hard to see how the small, albeit excellent, group of statisticians in IRL can continue the traditional AMG role of being a resource for applied statistics in New Zealand. Maybe the universities can work to fill the gap, but they will need increased resources.

I am particularly dismayed that Industrial Research Limited has decided it cannot support the exploratory data analysis and quality sides of statistics. This comes at a time when the rest of the world is seizing the opportunities such analyses bring to make their businesses more effective. It's great to be creative and it's great to question, but do we, as New Zealanders, always have to go the opposite way to the rest of the world as a matter of course?

The Association will have to step up its efforts to communicate the value of statistics but it is going to be hard — a bit like physiotherapy after an accident. I'll keep trying.

Jean Thompson

Courses in S and S-PLUS

Melbourne: 28 September - 2 October 1992

Adelaide: 16 - 20 November 1992

Learn to use the full potential of S or S-PLUS. You can attend for the whole week, or select from the following modules.

Introduction to S Programming
(2 days)

Basic use of S and S-PLUS for interactive data analysis and graphics. Suitable for people with little or no experience with the S language.

Advanced Graphical Techniques
(1 day)

Extends the use of graphics for data analysis and displays. Find out how to customize your plot and get it looking just the way you want

Statistical Models in S (2 days)

Based on the new book by J. Chambers & T. Hastie, includes: data frames and object oriented programming, linear and nonlinear models, GLMS, tree based models, time series models.

Every participant will be provided with a workstation, or PC DOS machine, if preferred.

Presenter: Dr Bill Venables, Senior Lecturer in Department of Statistics, University of Adelaide. Dr Venables is a very experienced Lecturer and Statistical Consultant and has in recent years given courses on the S language both in Adelaide and in Bond University. His well known "Notes on S" have been successfully used in short courses in many countries, including Holland, Japan, the UK, the USA and Canada.

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PROFESSOR LINGAPPAIAH AND THE SSAI

A Short Biography

Professor G.S. Linagappaiah was born in December 1928 in the southern state of Karnataka in India. His teaching and research experience spans a period of 43 years as follows:

1950-51	St Philomena's College, Mysore, India
1951-53	Presidency College, Madras, India
1953-59	University of Madras, India
1959-63	a) Maryland University, Maryland, USA
	b) Howard University, Washington, DC, USA
1963-65	University of New Brunswick, Canada
1965-93	Concordia University, Canada (called Sir George Williams University before 1974)

In the mid-fifties, Professor Lingappaiah was a Fulbright Scholar.

Professor Lingappaiah has 100 publications in international journals such as *Annals of St. Stat. Math.* (Japan), *Australian J. of Stat., Canadian J. of Stat., Communications in Stat.* (USA), *Metrika, Metron, Statistica, Biometriche Zeitschrift* (now *Biom. J.*), *Demonstratio Math.* (Poland), *Zastosowonia Math.* (Poland), *IEEE Trans. on Reliability* (USA), *Aplicase Matematiky* (now *Appl. in Math.*), *Indian J. of Pure & Appl. Math.*, etc.

SSAI and I

I do remember that in 1959 at Washington DC, I received two announcements of two new births. One was *Technometrics* (*Tech*) and another of *Australian Journal of Statistics* (*AJS*). My feeling for *Tech.* was "statistical" while that for *AJS* was more "exotic" for a publication from "way down under". Even after the first volume, I was still a bit skeptical about its longevity. But after a couple of volumes, one could see the serious turn it was taking. After my paper in 1974, it became almost the "favourite". The rest is history. As everyone knows, *AJS* stands at the top of the list of leading statistical journals in the world. No bonafide statistician or probabilist can afford to miss the Journal.

The "Newsletter" is another aspect of SSAI that everyone enjoys receiving (personally, instead of a folio size, it can be of the same size as the journal with about 24 pages in each number, stapled in the middle like *IMS Bulletin* — more easy to shelf and more easy to handle).

Eventually *AJS* may turn out to be a quarterly as the contributions pour in. The Journal has a great future indeed. Glad to have been associated with SSAI as a founding member for the last 34 years. It was a great privilege.

NEWS ABOUT MEMBERS

The President, **Tim Brown**, moved from the University of WA Mathematics Department to the Chair of Statistics at the University of Melbourne on July 1. Tim was also Head of the Department of Statistics there for a period of 5 years. This Department is the oldest in the country and has a flourishing Statistical Consulting Centre with clients both inside and outside the University. Ian Gordon has been appointed Director of the Consulting Centre till the end of 1993, during which time the joint operations of the Consulting Centre and Department will be developed further.

Professor John Eccleston currently at Bond University will be taking up his new position as Chair of Statistics in the Department of Mathematics at The University of Queensland in September 1992.

Dr Kaye Basford from the Department of Agriculture, University of Queensland, is absent on study leave until January 1993. During her absence Kaye will be working with Dr Pieter Kroonenberg in The Netherlands, Professor Walt Federer at Cornell and Professor John Tukey at Princeton. In her spare time, Kaye will be delivering a paper at the IMSIBAC-4 Congress in San Sebastian, Spain and conducting a two week long workshop on Data interpretation at Los Banos in The Philippines.

Dr Kim-Anh Do moved from the Centre for Mathematics and its Applications (CMA) to the University of Canberra during July. Kim had been at the ANU since early 1990, where she had been working on a variety of problems related to the bootstrap, particularly efficient Monte Carlo simulation. Her energy and vitality will be sorely missed, as will her considerable statistical skills, and so members of the CMA are particularly pleased that she will continue her work with them and become an Associate of the Centre. Kim is organising a workshop on practical applications of the bootstrap, to be held at the CMA in early December.

David Fox is currently at Denver, Colorado. He is an expatriate Australian, formerly from Perth. He will be arriving late August to take up an appointment with CSIRO, IPPP Biometrics Unit, Perth.

Dennis Trewin to take up New Zealand Appointment

Dennis Trewin, First Assistant Statistician of the Statistical and Information Services Division of the ABS, is to take up a two to three year appointment as New Zealand Deputy Government Statistician in September this year.

In announcing his decision to take up the appointment, Dennis commented that it had not been reached easily. He has very much enjoyed working at the ABS and in particular the regular interaction with staff. He noted that the ABS is a highly regarded organisation which is continuing to strengthen its performance, but said that every now and again a person needs to challenge their comfort zone and after nearly six years in his current position he thought it was time to take on a new challenge.

Dennis believes the move to New Zealand is very attractive from a professional point of view, and he is keen to participate in the exciting and potentially very productive changes our colleagues in New Zealand are making.

Dennis has worked in the ABS for 26 years in a variety of senior positions in Central Office and as NSW Deputy Commonwealth Statistician. He holds a BSc (Hons) from Melbourne University, a BEc from the Australian National University, and a MSc from the London School of Economics which he completed as a Public Service Post-graduate scholar.

Dennis has been very active in national and international statistical organisations. He was a founding Editor of the Newsletter, President of the ACT Branch of the SSA in 1985 and 1986, President of the SSA in 1987 and 1988, and is currently the Chair of Survey and Management Statistics Section. In the international arena, Dennis is an Editor of the International Statistical Review, Associate Editor of the Journal of Official Statistics, and has been elected to the Councils of the International Statistical Institute and International Association of Survey Statistics for the period 1991-95.

In his private life, Dennis has a keen interest and is an active participant in golf, squash, orienteering and rogaining. The many statistical challenges he will face in his move to New Zealand will probably pale into insignificance relative to the challenges he will face in the many hills and mountains around Wellington which will become his home town.

Dennis' move will strengthen the good relations the ABS has with the New Zealand Department of Statistics, and he will no doubt contribute similarly to strengthening our relationship with the New Zealand Statistical Association. Dennis will be sorely missed from the Australian scene, and we wish him well in his new venture.

SPECIAL INTEREST SECTION

Medical Statistics

The fifth workshop conducted by the Australian NHMRC Twin Registry and supported by The Howard Norman Trust, ***It Runs In The Family. V. Australian Twin Research and Genetic Epidemiology***, will be held in Newcastle on Monday 30 November and Tuesday 1 December 1992.

Professor Robert Elston of the Department of Biometry and Genetics at the Louisiana State University will be guest speaker. Robert is a leading Genetic Epidemiologist in the USA, and well known for his seminal paper (Elston & Stewart, 1978) on the use of likelihood methods to analyse twin, family and pedigree data. He has a broad background in genetics, statistics and applications to medicine. He is an excellent lecturer with the ability to make scientific ideas understandable to the non-specialist audience.

Researchers who have made use of the Australian NHMRC Twin Registry, and any other interested persons, are invited to present details of their research work. Over the last decade more than 70 twin research projects have been established, making ours the most used registry of its type in the world - see *1990 Annual Report.* Because twins can be used in numerous ways to address a variety of research issues, geneticists, epidemiologists, psychologists and scientists from other relevant disciplines are also being invited. The workshop, therefore, will be multi-disciplinary, and is designed to facilitate further research using Australian Twins.

The two-day twin workshop is part of, and running in parallel with, a Biostatistical Workshop being organised by the Centre for Biostatistics and Epidemiology at The University of Newcastle and the Medical Sciences Section of the Statistical Society of Australia. Topics to be covered include Cross-Over Trials, Statistical Issues in New Drug Approval, Meta-Analysis, Quality of Life Issues, and AIDS Research in Australia. It is NOT intended that the twin workshop be a statistical workshop. By being run in parallel it will, hopefully, attract the interest of statisticians and build links with the researchers.

More information is available in the Australasian Conference section of this Newsletter.

Statistical Education

The International Statistical Institute (ISI) and l'Institut National de Statistique et d'Economie Appliquée (I.N.S.E.A.) are pleased to announce that the Fourth International Conference on Teaching Statistics will be held in Marrakech, Morocco, from 25 to 30 July 1994.

The main objectives of the Conference are:

- promoting the interchange of ideas about teaching materials, methods and content;
- fostering International Cooperation among teachers of statistics.

Speakers of international repute will address the plenary meetings and present invited lectures. There will also be many workshops, tutorials, panels and discussion groups and contributed paper sessions. Opportunities will be provided to see and experiment with the latest in computer hardware and software. Teaching from first year of school to college, polytechnic and university level will be included, as well as sessions on teaching statistics in government, business and industry.

The conference will be focussed on the following fields:

- Statistics education for citizens, including statistics at schools;
- Research in teaching and learning statistics and probability;
- The impact of technology on teaching and learning statistics;
- Teaching probability and statistics in universities and technical institutes;
- Statistical training outside teaching institutions.

The opportunity will enable participants to enjoy the beauty of the kingdom through the diversity of its landscape and the multiplicity of historical sites as well as the generosity of its people. Good attractions would be Marrakech itself (the venue of the conference) the excursion to Dades Valley, the foothills of High Atlas or a hike toward Jbel Toubkal, the highest point in North Africa (4167 m).

The Congress Palace, recently constructed and air-conditioned, is a magnificent addition to the landmarks of Marrakech City.

For further information, write to: Mr EL GHAZALI Abdelaziz, Chairman of the Local organizing committee, INSEA, PO Box 6217, Rabat-Instituts, Rabat, Morocco.

MISCELLANEOUS

Competition for Young Statisticians from Developing Countries, 1993

The International Statistical Institute (ISI) announces the Sixth Competition among young statisticians from developing countries who are invited to submit a paper on any topic within the broad field of statistics, for possible presentation at the 49th Session of the ISI to be held in Florence, Italy, in 1993.

Participation in the competition is open to nationals of developing countries who are living in a developing country, and who were born in 1961 or later. Papers submitted must be unpublished, original works which may include material from participants' university theses.

The papers submitted will be examined by an international jury of distinguished statisticians who will select the three best papers presented in the competition. Their decision will be final.

The authors of the winning papers will be invited to present their papers at the Florence Session of ISI, with all expenses paid (i.e. round trip airline ticket from his/her place of residence to Florence plus a lump sum to cover living expenses).

Manuscripts for the Competition should be submitted in time to reach the ISI not later than January 1, 1993.

The rules governing the preparation of papers, application forms and full details are available on request from the ISI Permanent Office. The address is as follows: The Director, Permanent Office, International Statistical Institute, 428 Prinses Beatrixlaan, 2270 AZ Voorburg, The Netherlands

National Museum of Australia launches a new Project on Women Scientists

In 1936 Irene Crespin arrived in Canberra to take up the position of Commonwealth Palaeontologist attached to the Bureau of Mineral Resources. She alighted from the old steam train at Canberra Railway Station to discover that her arrival had been forgotten by the officials and no accommodation had been arranged for her. Her friend, Mrs Ludbrook, booked her into the Hotel Ainslie where she planned to stay for the first two weeks. It became her home for the next 15 years.

The National Museum of Australia is collecting material relating to Irene Crespin as a part of a new project which aims to collect and document artefacts relating to the life and work of women scientists. The Museum already has an ancient monocular microscope used by Irene Crespin in the early part of her career. Other items being offered to the Museum include her geologist's pick, which she was rarely without, the old leather swivel chair which she used for much of her working life, and a badge of the Soroptomists International, an organization of professional women which provided introductions for her to professional women around the world.

The particular focus of the Women Scientists Project is on women still living who worked as scientists between the 1930s and the 1950s. The Museum wishes to contact any such people who would like to talk about their experiences and have objects they would consider donating to the National Museum's collection. The project is biographical in nature. It aims to document the lives of individuals and to situate their experiences within the wider context of their times.

If you know of interesting women scientists who might like to participate in this project you can contact Ruth Lane on (06)242 2117 or toll free on (008)02 6132, or write to the National Museum of Australia, GPO Box 1901, Canberra ACT 2601.

Calls for Nominations for Wark and Lyle Medals

Nominations are invited for the 1993 Ian William Wark medal and lecture by 16 September 1992. The award will be made to an eminent scientist whose work is at the interface of science and industry and has benefited the community.

Nominations are also invited for the 1993 Thomas Ranken Lyle medal by 30 September 1992. The purpose of the medal is to recognise outstanding achievement by a worker in Australia on the basis of research in mathematics or physics.

Nominations for either medal should include a detailed citation of the candidate's work, a curriculum vitae and publications list. At least 2 referees should forward comments directly to the Academy of Science by the closing date. Nominations on forms available from the Academy secretariat should be addressed to the Executive Secretary, Academy of Science, GPO Box 783, Canberra ACT 2601; enquires to Faye Nicholas, tel. (06) 247 5777.

The Australasian Chemometrics Society

Chemometrics is the application of mathematics and statistics to chemistry with the aims of extracting the maximum amount of information from chemical data and designing optimum measurement and production methods.

Chemometricians are concerned with subjects like experimental design, multivariate calibration and classification, pattern recognition, process control, optimisation and signal processing. We also introduce chemists to basic mathematical and statistical methods and some of us are involved in advanced techniques such as expert systems and neural networks. Our emphasis is on methods that work with real data rather than on statistical theory.

Typical chemometrics applications are: determining the protein content of wheat from near infrared spectra; optimising the yield of a chemical reaction by simultaneously adjusting the concentration of several catalysts; reducing the number of experiments needed to develop a new pharmaceutical while increasing the amount of useful information they produce; classifying swedes (the vegetable, not the people) as fresh or stale according to gas

chromatograph profiles; diagnosing diseases from chemical analysis of urine; controlling nitrogen content in a fertiliser production plant; and extracting useful information from noisy measurements.

Chemometrics does not limit itself to chemical data. For examples, multivariate calibration methods developed in chemometrics are used by geologists in prospecting and process control methods developed in chemometrics are used to control iron smelters.

Chemometricians are a diverse lot, coming from chemistry, statistics, mathematics and computing. We gather under the umbrella of the International Chemometrics Society (ICS).

Due to increased interest in chemometrics in this part of the world the ICS has asked Professor Brynn Hibbert to start a branch for the South East Asia, Australia and New Zealand region, which we are calling the Australasian Chemometrics Society (ACS). The ACS is seeking new members. If you wish to join or want to know more about the society, contact any of the people listed below.

If you want to know more about chemometrics, excellent sources for more specific information on methods and applications are **Chemometrics and Intelligent Laboratory Systems** (Elsevier) and **Journal of Chemometrics** (Wiley). **Analytical Chemistry** has two yearly reviews on chemometrics and **Analytical Chimica Acta** has a chemometrics section. "Chemometrics: A textbook" by Massart *et al* (Elsevier 1988) is an excellent, though expensive, introduction to the discipline.

Chair: Professor D.B. Hibbert (Brynn), School of Analytical Chemistry, University of NSW, PO Box 1, Kensington NSW 2033, Tel (02) 697 4713, Fax (02) 662 2835

Secretary: Mr P.C. Williams (Peter), Scientific Software Solutions, 116 The Grove, Coburg VIC 3058, Tel (03) 383 5556, Fax (03) 383 5880

Treasurer: Ms M. Mulholland (Mary), School of Analytical Chemistry, University of NSW, PO Box 1, Kensington NSW 2033, Tel (02) 697 4709, Fax (02) 662 2835

Membership Secretary, Australasian Chemometrics Society, School of Analytical Chemistry, University of NSW, PO Box 1, Kensington NSW 2033

[Editorial note: A three-day Satellite Meeting on Chemometrics and Environmetrics to be held at University of Bologna, Bologna, Italy, 21-24 Auugust 1993 is summarised in the Overseas Conferences Section of this issue. This meeting is jointly sponsored by the Bernoulli Society Committee for Statistics in the Physical Sciences, the ISI Industrial Statistics Committee and the Italian Chemical Society and will immediately preceed the 49th Biennial Session of the International Statistical Insitute at Florence.]

Index to Corrections, Addenda, and Comments That Were Published in Statistics Journals, 1970—1991

by Dr T.P. Hutchinson and Mr Y. Ke

Everyone makes mistakes. Those occurring in scholarly journals are often corrected by a notice in a later issue of the journal. But there is usually no way of discovering whether a given article has had any corrections or addenda to it, or comments on it, published. This book provides a means of doing so. All the major English-language journals of statistics (numbering 78) for the years 1970—1991 have been searched, and the published corrections, addenda, and comments have been listed, each under the name of the author of the original article and its bibliographical details. There are over 3200 entries, and an index is provided of authors of comments and of coauthors of the original articles.

Published June 1992, by Rumsby Scientific Publishing, PO Box Q355, Queen Victoria Building, Sydney, A5 format, Paperback. x + 296 pages. Index of coauthors and of authors of comments. Price: $55 Australian. (Although this type of book is costly to produce, the publishers have kept the price low to encourage everyone to get their own copy. Furthermore, a price reduction of 35% is offered on orders of 8 or more copies.)

CONFERENCE REPORTS

Instructional Workshop on Numerical Methods for Stochastic Differential Equations

The numerical analysis of stochastic differential equations (SDEs) is still in its infancy. It differs considerably from that of ordinary differential equations on account of the peculiarities of stochastic calculus. The stochastic Taylor expansion provides the key to the systematic derivation of higher order numerical schemes for SDEs, which involve multiple stochastic integrals for the driving Wiener processes. Different types of schemes are required for strong, pathwise approximations and weak, functional (eg moments) approximations. Since the schemes and background ideas are unfamiliar to many people, an instructional workshop was organised at Deakin University, Geelong from 13 to 17 July 1992 by Peter Kloeden (Geelong) and Eckhard Platen (ANU, Canberra/IAAS, Berlin). Over 40 participants from Australia, France, Germany, Japan, New Zealand and Switzerland attended, of whom about a third were graduate students and another third (partly overlapping) from finance and economics departments.

The first two days consisted of instructional lectures on stochastic calculus, random number generation, SDEs and numerical schemes for SDEs, given by David Heath (Canberra), Peter Kloeden, Eckhard Platen and John van der Hoek (Adelaide). These were based on the organisers' book P.E. Kloeden & E. Platen "Numerical Solution of Stochastic Differential Equations", Springer-Verlag, Applications of Mathematics Series Volume 23, just published.

The remaining three days were more research oriented and included four lectures by Denis Talay (INRIA, France) and two by Wesley Petersen (ETH Supercomputer Centre, Zurich). The final day concentrated on finance modelling with SDEs with lectures by Kim Sawyer (Melbourne), John van der Hoek, Eckhard Platen and Norbert Hofmann (Berlin).

A "Proceedings" of transparency photocopies (circa 100 pages) is available for $15 within Australia and $20 overseas, postage paid, from Prof. P.E. Kloeden, Department of Computing and Mathematics, Deakin University, Geelong VIC 3217 or from Dr E. Platen, Statistics Research Section, IAS, Australian National University, GPO Box 4, Canberra ACT 2601.

Workshop on Approximate Conditional Inference

In early July, Dr Andy Wood organised a workshop on Approximate Conditional Inference at the CMA, funded by the Department of Industry, Technology and Commerce. It featured talks by distinguished statistical scientistics such as Professor Ole Barndorff-Nielsen of Aarhus University, Denmark; Professor Peter McCullagh of the University of Chicago; Professor Wolfgang Haerdle of Humboldt Universitat zu Berlin; and Drs Alan Miller and Geoff Robinson of CSIRO's Division of Mathematics and Statistics, Melbourne.

3rd Annual Convention of the Australian Association for Engineering Education

The 3rd annual convention of the Australasian Association for Engineering Education was held at the University of Adelaide from 15 to 18 December 1991 and was attended by about 120 engineers and others interested in engineering education. The theme of the conference was "Broadening Horizons of Engineering Education" and this was reflected in many of the keynote and contributed papers. The session titles were: Wider Horizons, Academics and Industry, Student Motivation, Course Developments, Extending Horizons, Postgraduate Education, Lateral Issues, Equity Issues, Teaching Methods, Management Issues, Quality Issues and the Way Ahead . It was interesting to note that many of the topics addressed were also very relevant to statisticians.

The three of us, members of the Victorian Statistical Education group, gave presentations at the conference. Brian Phillip in "Statistical education for engineering students in the 1990s" described the engineering statistics course at Swinburne which makes use of the "Against All Odds" videos, classroom experiments and statistical computer packages and focuses on the practical, rather than the theoretical aspects of statistics, with emphasis on looking at data, statistical reasoning and the attainment of quality along with the use of statistical packages to facilitate computations and graphical output. Paul Lochert in "Hypothesis Testing versus Estimation" argued that examination of engineering practice showed that the prime emphasis of an engineering statistics course should be on estimation rather than hypothesis testing, after the basic concepts of data analysis and statistical quality control have been introduced. He then described the implementation of such a course at Monash-Caufield. Neil Diamond in "Statistics for Engineers - experience with a new syllabus" described a course he has been trialling for mechanical engineers at Victoria University of Technology-Footscray where the main focus is on an introductory account of the use quality control charts and factorial and fractional factorial designs.

We believe that it was very worthwhile to attend the convention both to hear how engineering educators are responding to the current challenges facing their profession and to discuss how engineering statistics units can complement that effort. We would encourage interested members of SSA to attend the next convention to be held at the University of Queensland from 13 to 16 December 1992.

AUSTRALASIAN CONFERENCES

CONFERENCE SUMMARY

Australian Population Association Sixth National Conference — Australian Population Futures, 28-30 September 1992, Manly Pacific Parkroyal, Sydney. (Full details in Newsletter 58.)
Information: Patrick Corr, Conference Registrar, Sixth National Conference, Australian Population Association, 13 Corben Avenue, Moorebank, NSW 2170, tel. (02) 268 4387, fax (02) 268 4334.

Young Statisticians Professional Development Workshop, 30 September - 2 October 1992, Newcastle. (Full details in Newsletter 59.)
Information: Craig Shaw or Paul Dickman, NSW Health Services Research Group, Department of Statistics, UNIVERSITY OF NEWCASTLE NSW 2308; tel: (049) 215510, fax: (049) 684742, email: stpd@zeus.newcastle.edu.au.

15th National Conference of Musicological Society of Australia, 7-11 October 1992, Sydney Conservatorium of Music.
Information: Conference Secretary, Lyn Osman, Sydney Conservatorium of Music, Macquarie Street, Sydney NSW 2000 or to Dr Nigel Nettheim, Department of General Studies, UNSW, PO Box 1, Kensington NSW 2033, tel: (02) 868 4005, regarding the session entitled "Music Analysis with Computers and Statistics".

Workshop on Practical Applications of the Bootstrap, 2-4 December 1992, Canberra. (Full details in Newsletter 59.)
Information: Kim Anh-Do, Statistical Sciences Division, CMA, Australian National University, Canberra, ACT 2601.

Analysis of Repeated Measurements Data: An Overview, Hamilton, 3-4 December 1992, New Zealand.
Note: To be held prior to IBC 92 at the University of Waikato.
Information: David Fletcher, Department of Mathematics and Statistics, University of Otago, Box 56, Dunedin, New Zealand.

Dynamic Graphical Analysis of Statistical Models, 6 December 1992, Hamilton, New Zealand.
Note: Short course prior to IBC 92.
Information: B. Dow, IBC 92 Secretary, Ruakura Agricultural Centre, Private Bag 3080, Hamilton, New Zealand.

The XVIth International Biometrics Conference, 7-11 December 1992, Hamilton, New Zealand. (Full details in Newsletter 57, 58 and 59.)
Information: IBC 92 Secretary, Ruakura Agricultural Centre, East Street, Hamilton, New Zealand.

International Conference on Environmental Biometrics, 14-15 December 1992, Sydney. (Full details in Newsletter 59.)
Information: Dr John Evans, Water Board, PO Box 73. West Ryde NSW 2114; fax (02) 334 0817. (More details this issue and full details in next issue.)

1993 Mathematics-in-Industry Study Group, 15-19 February 1993, Melbourne.
Information: Dr N.G. Barton, CSIRO Division of Mathematics and Statistics, PO Box 218, Lindfield NSW 2070; tel. (02) 413 7702; fax (02) 416 9317; email noel@syd.dms.csiro.au. (Full details in this issue.)

15th NATIONAL CONFERENCE OF THE MUSICOLOGICAL SOCIETY OF AUSTRALIA, 5th Floor, 109 Pitt Street Campus of Sydney Conservatorium of Music, 7 - 11 October 1992.

The conference includes a session entitled "Music Analysis with Computers and Statistics", scheduled for 1.30 - 3.30 pm on Thursday 8 October at the Pitt Street Campus.

Papers in this session are:

J. Fisher (Sydney) Texture by Numbers: a New Analytical Approach to Haydn's Sonata-allegro Structures;

G. Marillier (Perth) Patterns in Time: Investigating Questions of Influence, Ascription and Date by means of Multiparametric Time-series Analysis;

N. Nettheim (Sydney) A Statistical Investigation of the Pulse in German Folksong;

H.V. Sahasrabuddhe (Pune, India) A Computational Study of Hindstani Music.

The contact for intending attendees is the Conference Secretary, Lyn Osman, Sydney Conservatorium of Music, Macquarie Street, Sydney NSW 2000, tel. (02) 230 3750. Other enquiries may be made to the session convenor, Dr Nigel Nattheim, Department of General Studies, UNSW, PO Box 1, Kensington NSW 2033, tel. (02) 868 4005.

IT RUNS IN THE FAMILY V — Australian Twin Research and Genetic Epidemiology, Royal Newcastle Hospital, Newcastle, NSW, 30 November - 1 December 1992.

The fifth workshop conducted by the Australian NHMRC Twin Registry and supported by the Howard Norman Trust.

Presentations are invited from researchers who have made use of the Australian NHMRC Twin Registry, geneticists, epidemiologists, psychologists, and scientists from other relevant disciplines.

Twins can be used in numerous ways to address a variety of research issues. The workshop will be multi-disciplinary and is designed to facilitate further research using the Australian NHMRC Twin Registry.

For further information, please contact Dr John Hopper on tel. 008-037-021.

1993 MATHEMATICS-IN-INDUSTRY STUDY GROUP, Melbourne, 15-19 February 1993.

The ninth Mathematics-in-Industry Study Group will be held in Melbourne from Monday 15 to Friday 19 February 1993. The meeting will be organised by CSIRO Division of Mathematics and Statistics in collaboration with a Melbourne-based Steering Committee with members from Monash University, Swinburne Institute of Technology and BHP Research.

The first circular for the meeting will be distributed in the very near future to all members of the Division of Applied Mathematics of the Australian Mathematical Society.

The goals of the Study Group are:

- to stimulate greater awareness in Australian industry of the need for and role of mathematics;
- to establish better links between industry and academic mathematicians;

- to provide improved university education of mathematicians through
  1. expanded employment prospects for mathematics graduates,
  2. fresh research problems for mathematicians,
  3. innovative material for teaching courses;
- to provide Australian industry with high level mathematical advice on challenging problems, and to provide an opportunity for industrial scientists to receive expert training in mathematical modelling.

The format of the Study Group will be basically unchanged from previous meetings.

Developments for 1994 and beyond

Expressions of interest are called from academics who would like to sponsor the Study Group on an annual basis in *1994 and beyond*. An article describing the reasons for this significant development will be published in a forthcoming issue of the *Gazette* of the AMS.

For further information, please contact Dr N.G. Barton, CSIRO Division of Mathematics and Statistics, PO Box 218, Lindfield NSW 2070; tel (02) 413 7702; fax (02) 416 9317; email noel@syd.dms.csiro.au.

INTERNATIONAL CONFERENCE ON ENVIRONMENTAL BIOMETRICS, Sydney, 14 - 15 December 1992

Abstracts may be submitted for consideration 16 October 1992 to either Dr John Evans, Water Board, PO Box 73, West Ryde 2114; fax (02) 334 0817 or Dr Walt Piegorsch, NIEHS/DBRA/SBB (Mail Drop B3-02), PO Box 12233, Research Triangle Park, North Carolina 27709, USA; fax (919) 541 4311. Full details of the programme and registration procedures will be advertised in August 1992. In the meantime, additional information may be obtained from John or Walt.

SATELLITE MEETING ON BIOSTATISTCS, Centre for Clinical Epidemiology and Biostatistics, University of Newcastle, 30 November - 2 December 1992.

Topics include: statistical analysis of pedigree data, statistical aspects of clinical trials and other topics in biostatistics.

For further information contact: Professor Annette Dobson, Department of Statistics, University of Newcastle, Newcastle NSW 2308, tel. (049) 215 544, fax (049) 684 742.

PRACTICAL APPLICATIONS OF THE BOOTSTRAP, ANU, Canberra, 2 - 4 December 1992.

For more information contact: Dr Kim-Anh Do, Statistical Sciences Division, CMA, Australian National University, Canberra ACT 2601, tel. (06) 249 0564 or (06) 258 1708, fax (06) 249 5549, email dokstat@durras.anu.edu.au.

ANALYSIS OF REPEATED MEASUREMENTS DATA: AN OVERVIEW, Hamilton, 3 - 4 December 1992

For more information contact: Dr David Fletcher, Department of Mathematics & Statistics, University of Otago, Box 56, Dunedin, tel. +64 (3) 479 7804, fax +64 (3) 479 8427, email dfletcher@otago.ac.nz.

INTERNATIONAL WORKSHOP ON MATRIX METHODS FOR STATISTICS, University of Auckland, 4 - 5 December 1992

Cosponsored by the International Linear Algebra Society (ILAS) to foster the interaction, in an informal setting, of researchers in the interface between matrix theory and statistics. We propose that there be no parallel sessions, and that all, or almost all, the talks be of 20 minutes duration. Garry Tee (Auckland) has been invited to talk about the work of Alexander Craig Aitken (1895-1967), and his plans to publish Aitken's Collected Papers. We plan to charge a US$ 20 registration fee.

If you are interested in participating in this workshop please contact George PH Styan, Department of Mathematics and Statistics, McGill University, Burnside Hall 1240, 805 ouest, rue Sherbrooke, Montreal, Quebec H3A 2K6, Canada; fax +1 (514) 398-3899, email mt56@musica. mcgill.ca.

DYNAMIC GRAPHICAL ANALYSIS OF STATISTICAL MODELS: SHORT COURSE, University of Waikato, 6 December 1992

Professor R. Dennis Cook, University of Minnesota, will conduct this short course on Sunday 6 December 1992, at the University of Waikato. He is a leading authority on the use of modern graphical methods in analyses based on statistical models. Graphical methods will be demonstrated on a Macintosh using XLISP-STAT, a graphics programming environment developed recently by Luke Tierney, University of Minnesota. This environment allows easy access to virtually all the modern graphical methods — high dimensional rotation, animation, brushing, linking, identification, touring, slicing and so on. New theory and methods for graphical data analysis will be explored. An important feature of Professor Cook's work is utilising and developing new methods to create practical, usable tools for consulting statisticians.

Participants will receive information on how to obtain XLISP-STAT, without charge, for Macintosh, PC or Unix. More information may be obtained from the IBC92 secretary. You may register for this short course ($NZ 75) now on the IBC92 registration form.

MOLECULAR EVOLUTION WORKSHOP, Rotorua, 12 - 13 December 1992.

Bruce Weir is organising a workshop in Molecular Evolution for 12-13 December, 1992. It will be held in Rotorua at the Forest Research Institute, and will be named in honour of the late Allan Wilson.

For more information contact: Dr Bruce Weir, North Carolina State University, Raleigh, North Carolina 27695-8203, USA, email nbsweir@ncsumvs.bitnet.

METHODS FOR CORRELATED DATA: CURRENT RESEARCH, Queenstown, 14 - 16 December 1992

The focus will be on current research in different aspects of the analysis of correlated data, with emphasis on applications in epidemiology and medicine. We hope to draw together statisticians currently working in the area to discuss some of the issues. Invited speakers will include Professor Norman Breslow, University of Washington, Seattle, Dr Michael Kenward, University of Reading, and Professor Alastair Scott, University of Auckland. Specific topics will include methods for discrete data or survival data, repeated measurements, estimating equations and random effects models.

For further information contact Dr Katrina Sharples, Department of Preventative and Social Medicine, University of Otago Medical School, Box 913, Dunedin, tel. +64 (3) 479 7221, fax +64 (3) 479 0529, email katrina@otago.ac.nz.

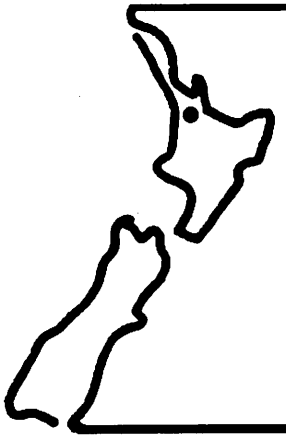
2ND AUSTRALASIAN GENSTAT CONFERENCE, Forest Research Institute, Rotorua, 14 - 16 December 1992

This is the second international Genstat conference to be held in Australasia. The conference aims to provide a forum for Genstat users to report on their research and consulting using Genstat, to exchange ideas, make suggestions, and to see the latest Genstat developments.

The conference will take place at the Forest Research Institute, Rotorua. Participants may register on the evening of Sunday 13 December or first thing on Monday morning, and the conference will end at midday on Wednesday 16 December. Registration (which includes lunch, tea and coffee and a Sunday evening reception) will be $NZ 220. Accommodation will be available in student hostels at a cost of about $100 per person for three nights; alternatively participants can book their own accommodation at local motels.

The Programme will contain invited and contributed papers on new statistical facilities in Genstat, developing statistical methods using Genstat, innovative applications of Genstat, use of Genstat for teaching and future developments.

Potential contributors should send a one-page abstract to Roger W. Payne or David B. Baird as soon as possible. Australasian contributors are particularly encouraged to do so. For further information and a registration form, please contact Roger W. Payne, Statistics Department, Rothamsted Experimental Station, Harpenden, Herts, AL5 2JQ, UK (email Payne@resa.afrc.ac.uk) or David B. Baird, MAF, PO Box 24, Lincoln (email Bairdd@chpc.dsir.govt.nz).



1992 (XVIth) International Biometric Conference

Hamilton, New Zealand 7-11 December 1992

IBC92 Secretary
Ruakura Agricultural Centre
Private Bag 3123
Hamilton, New Zealand

Phone 64 (7) 856 2836
Fax 64 (7) 838 5012
E-mail (internet) ibc@ruakura.maf.govt.nz
ibc@ruakura.cri.nz

BIOMETRIC SOCIETY

Sixteenth International Biometric Conference

University of Waikato
Hamilton, New Zealand, 7-11 December 1992

IBC92 Registration Snapshot

Registrations for IBC92 are now flooding into the comference secretariat, accompanied by a healthy number and diversity of paper sumissions. As at July 9, registrations comprised 82 from Australasian, 72 from North America, 64 from Europe, and 49 from other regions. These 267 participants had offered 240 contributed papers, in addition to the 20 invited papers.

At the 1990 IBC in Budapest, over 540 participants presented 194 contributed papers, 29 invited papers, 20 computer and 60 paster sessions. IBC92 and its satellites will make December the statistics month in Australasia. Statistical events feature from November 30 to December 16.

Registration

Information on registration was printed in the May Newsletter. Registration forms were included in the March Newsletter.

Accommodation

We have a few extra 4 bedroomed cottages on campus available. If you would like a cottage please check with the IBC92 Secretary before you register as they may be all gone. However, there is still plenty of accommodation in the Halls of Residence.

Satellite Conferences

Information on the nine satellite conferences is published in this Newsletter.

General Conference Information

The Australasian region of the Biometric Society invites you to the sixteenth International Biometric Conference at the University of Waikato in Hamilton, New Zealand, from 7 to 11 December, 1992. This is only the second time an IBC has been held in Australasia; the first was in Sydney in 1967.

OVERSEAS CONFERENCES

Royal Statistical Society Conference, 9-11 September 1992, Sheffield, United Kingdom.
New contact: Dr Nick Feller, Department of Probability and Statistics, University of Sheffield, UK.

1992 European Meeting of Statisticians, 14-18 September 1992, Bath, UK.
Information: Prof. R. Sibson, School of Mathematics, University of Bath, Claverton Down, Bath BA2 7AY, UK.

Seventh International Conference on Multivariate Analysis (Part 2), 21-23 September 1992, Barcelona, Spain.
Information: C.M. Cuadras, phone 34-3-3308851, fax 34-3-4110969, e-mail d3escca0@eb0ub011.eam.

International Conference on Applied Demography, 24-26 September 1992, Bowling Green, OH, USA.
Information: K.V. Rao, Dept. of Sociology, Bowling Green State University, Bowling Green, OH 43403, USA.

Symposium 92 - Ninth Annual International Methodology Symposium, 2-4 November 1991, Ottawa, Ontario, Canada.
Information: Nancy Darcovich, Statistics Canada, 5th Floor, Jean Talon Building, Ottawa, Ontario, K1A 0T6, Canada.

Seventh International Conference on Multivariate Analysis (Part 3), 16-22 December 1992, New Delhi, India.
Information: S.K. Mitra, phone 91-11-664741, telex 31-73274 ISI IN, e-mail isid!mitra%vikram@shakti.ernet.in.

ASA Winter Conference, 3-5 January 1993, Fort Lauderdale, Florida, USA.
Theme: Families and Children - Research Findings, Data Needs and Survey Issues.

Information: Meeting Department, American Statistical Association, 1429 Duke Street, Alexandria, VA 22314-3402, USA.

Fourth International Workshop on Artificial Intelligence and Statistics, 3-6 January 1993, Fort Lauderdale, FL, USA.
Information: R.W. Oldford, University of Waterloo, FL, USA.

7th Conference on the Scientific Use of Statistical Software (SoftStat '93), 14-18 March 1993, Heidelberg, Germany.
Information: SoftStat '93, ZUMA, Postfach 12 21 55, D-6800 Mannheim 1, Germany.

NIH Conference in Current Topics in Biostatistics, 25-56 January 1993, Bethesda, MD, USA.
Information: Jonas H. Ellenberg, Biometry and Field Studies Branch, NINDS, NIH, 7550 Wisconsin Avenue, Room 7A-12, Bethesda, MD 20892, USA.

US Census Bureau's 1993 Annual Research Conference, 21-24 March 1993, Arlington, Virginia, USA.
Topics for ARC 1993 will include: design of survey questionnaires, quality measurement for automated surveys, effects of automation on the survey workforce, estimation techniques for small subdomains, behavioural research on contextual effects, modeling social and economic phenomena, nonresponse in surveys and censuses, coverage issues in censuses and surveys, research issues for 2000 census planning.
Information: Maxine Anderson-Brown, Conference Coordinator, Bureau of the Census, United States Department of Commerce, Washington, DC 20233-0001, USA.

Biometric Society (ENAR) Spring Meeting, 21-24 March 1993, Philadelphia, PA, USA.
Information: Boris Iglewicz, Statistics Department, Temple University, Philadelphia, PA 19122, 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.

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 Universitat Wien, A-1040 Wien, Austria.

Chemometrics and Environmetrics — CHESM-93, ISI Satelite Meeting, Bologna, Italy, 21-24 August 1993.
The aim is to stimulate communication between practitioners and researchers concerning significant problems arising in these two important areas. Presentation of significant practical problems will be emphasised.
Information: Prof. Daniela Cocchi, Dipartimento di Scienze Statistiche, "Paolo Fortunati", Universita 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.

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 Colleques, Domaine de Voluceau-BP 105, 78153 LE Chesnay, Cedex-France.

SPRUCE II (Statistics in Public Resources, Utilities, and in Care of the Environment), Rothamsted Experimental Station, 13-15 September 1993.
Following the very successful first SPRUCE International Conference in Lisbon in Spring, 1991, a second will be held at Rothamsted Experimental Station, Harpenden, UK. This will be in conjunction with the 150 year celebrations of the Station, where so many major contributions to the development of statistics have been made from the time of R.A. Fisher and F. Yates.
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.

Fourth International Conference on Teaching Statistics, Marrakeh, Morocco, 25-30 July 1994.
Information: Mr EL GHAZALI Abdelaziz, Chairman of the Local Organizing Committee, I.N.S.E.A., PO Box 6217, Rabat-Instituts, Rabat, Morocco.

International Conference on Establishment Surveys - Call for Contributed Papers

An International Conference on Establishment Surveys (ICES) will be held in Buffalo city, New York, U.S.A. from 27th to 30th June 1993. The organizing Committee of ICES is calling for contributed papers on topics related to the design, conduct, evaluation, and interpretation of establishment surveys. Contributed papers will be published in a proceedings volume, which will be made available to conference attendees. To submit a paper, 3 copies of a 1-2 page double-spaced abstract with a US$50 non-refundable submission fee should be sent, by 1 November 1992, to: Lee Decker, Meetings Department, American Statistical Association, 1429 Duke Street, Alexandria, VA 22314-3402 USA; telephone:+1 (703) 684-1221; fax +1 (703) 684-2037. The submission fee will be applied to the conference registration fee. For further information, contact Bernard Wong of the Australian Bureau of Statistics (NSW Office) on (02) 268-4660.

1993 MORAN MEDAL FOR STATISTICAL SCIENCE

This award recognises the scientific achievements of the late P.A.P. Moran, Professor Emeritus of Statistics of the Australian National University until his death in September 1988.

The award will be made to a scientist for distinguished research carried out mainly in Australia, in one or more of the fields of applied probability, biometrics, mathematical genetics, psychometrics and statistics. Preference shall be given to younger scientists and to those candidates whose first doctoral degree was awarded not more than eight years ago.

The inaugural award was presented in 1991.

Nomination of candidates for the 1993 medal is hereby invited. Proposals should be covered by the nomination form available from the Academy's secretariat and include a curriculum vitae and sufficient details of the candidate's scientific work and its impact to enable the Academy to assess it in the light of the criteria for the award of the medal. Referees (at least 2) should forward comments directly to the Academy to arrive by the closing date.

Nominations are confidential and should be addressed to:

The Executive Secretary
Australian Academy of Science
GPO Box 783
CANBERRA ACT 2601

Enquiries: Faye Nicholas
06 247 5777

Closing Date 16 September 1992

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Enquiries and subscriptions should be sent to:

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CANBERRA, ACT 2601.

Advertising will be carried in the Newsletter on any matters which the Editors feel are of interest to the members of the Society. In particular, advertisements of statistical vacancies, statistical literature and calculators will be welcome. For details of advertising rates etc. contact either the Editors or Dr J.T. Wood at the same address.

Members are requested to notify their local branch secretaries (see this page of the Newsletter) of change of address, so that Newsletters and Journals can continue to be despatched to them.