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EDITORIAL

NEWSLETTER: THE FIRST EDITION

This is the first issue of the Statistical Society of Australia's *Newsletter*. It has been established by the Central Council on an experimental basis for one year, in response to a perceived need for a wider outlet for news and comment than that currently provided by the News and Notes section of the Society's *Journal*. If the *Newsletter* proves successful, then it is hoped to produce three issues annually, in April, July and October.

The editors welcome contributions in any areas of interest to members of the Society. We hope to publish in each issue one or two major articles, of about 1500-2000 words, on topics which will appeal to large numbers of readers; for example, important current national and international statistical programmes; problems currently being faced by statisticians; public matters of interest to the statistical profession, such as the main article in this issue; and descriptions of practical applications of statistical techniques.

A section in each issue will be devoted to branch notes, with particular emphasis on reports of the substance of the talks at branch meetings. One of the aims of the *Newsletter* is to help make members more aware of the full range of activities of the Society, and the Branch Notes section in each issue will be a concrete contribution to its fulfilment. Branch Secretaries will be glad to receive articles and forward them to the Editors, or of course material can be sent to us directly.

The *Newsletter* will also carry regular articles on

Statistical Education; on Statistical Computing; notices of conferences; and notices of visitors to Australia in statistical areas. Items for any of these would be appreciated.

Letters to the editors will be encouraged, and we would particularly like to carry letters from practising statisticians outlining difficulties they face, to enable theoreticians to assist with solving such problems.

We are also interested in descriptions of research areas currently being investigated, and short articles describing recent developments in important fields in statistics. However, these must be essentially non-technical; research papers will be forwarded to the Editor of the *Journal* for his consideration.

Production costs are being kept to a minimum by the use of voluntary typing; by the donation by the Division of Mathematics and Statistics of CSIRO of computer time for typesetting; and by including the distribution of the *Newsletter* with the distribution of regular Branch notices.

It is also anticipated that the *Newsletter* will eventually offset costs by carrying a certain amount of advertising of, for example, statistical vacancies, calculators and statistical literature. The editors hope members who can help to bring the *Newsletter* and such sources of revenue together will do so.

If the need for the *Newsletter* does exist, we assume it will flourish. We hope that you find this first edition stimulating, that you will continue to read it and will want to contribute to it, and that it will play a part in making the Australian Statistical Society a more vital and interesting professional body for all its members.

Editors: R.L. Tweedie, Divn. of Mathematics & Statistics, CSIRO, PO Box 1965, Canberra City, ACT 2601.
D.J. Trewin, Australian Bureau of Statistics, Cameron Offices, PO Box 14, Belconnen, ACT 2616.

The views of contributors to this Newsletter should not be attributed to the Australian Statistical Society.

N.S.W. BRANCH

The Branch has ten meetings planned for 1977. At its March meeting Professor D. McNeil discussed some aspects of data analysis in a talk entitled *Non-Inferential and Non-Probabilistic Statistics*. In April Dr David Rutledge surveyed alternative approaches in estimating structural change in econometric models. He highlighted the recent paper by Brown, Durbin et al and indicated how their methodology and computer programme would be used in a series of simulation studies to test the efficiency of several approaches with specified alternatives.

Professor W.T. Federer (Cornell University) and Professor T. Lewis (Hull University) will speak at Branch meetings in May. *Statistics: Yesterday, To-day and To-morrow* will be the title of Professor Federer's talk in which he will make some comments on approaches to the teaching of statistics and the implications for the subsequent use of statistics in real world situations. Professor T. Lewis will speak on *Analysing Bivariate Extreme-Value Data*, discussing the applications of theory (especially that developed by Tiago de Oliveira and others) to the analysis of such data and illustrating the methods by actual data.

The Central Council Invited Lecture, *World Mortality*, will be delivered in July by Professor H.O. Lancaster. His address will include the progress of mortality data since the rise of modern statistical offices (parish records and other sources); consideration of the social, hygienic, nutritional and other factors affecting mortality; themes of statistical interest and social and demographic consequences.

Speakers for the remainder of the year include Dr D.W. Bacon, Queen's University, Canada (*Singularities in Multi-response Modelling*), Professor H. Mulhall, Dr J. Robinson, Dr M. Henderson and Dr P. Cooke.

The 1977 Branch Symposium (November 17-18th) will be held at the Sebel Town House, Sydney. The theme for the symposium is *Simulation*, with approximately equal time being given to theory and applications.

VICTORIAN BRANCH

1976 CONFERENCE

1976 proved to be a very active year for the Victorian Branch. In addition to the usual monthly meetings - held on the fourth Tuesday of each month from March

to November - we were also responsible for organising and running the Third Australian Statistical Conference, held at La Trobe University during August. To quote from our annual report:

The conference was held in conjunction with the CSIRO Division of Mathematics & Statistics annual meeting. It was eminently successful and attended by over 200 delegates. Over sixty contributed papers were read and invited lectures were delivered by Prof R. Thom, Dr C.C. Heyde, Dr H. Cohn, Prof A.T. James and Prof J.F.C. Kingman, who was the official overseas guest of the Society. There was an interesting discussion session on the training of applied statisticians. The social events were a Cocktail Party and a very well attended Conference Dinner which was addressed by Sir Louis Matheson and Prof E.J.G. Pitman. It is felt that this conference has set the standard for future events.

BELZ LECTURE

The eighth Maurice H. Belz lecture was held on 23rd November 1976 when Professor Peter Finch of Monash University spoke on *The crude analysis of survival data*. Professor Finch argued that we should concentrate our attention on a fairly crude analysis of survival data since more sophisticated procedures lead to conclusions whose trustworthiness depends to a large extent on assumptions which cannot be validated from the data in hand. His lecture was followed by spirited discussion.

1977 ANNUAL MEETING

The first meeting for 1977 was held on 22 March, and was the occasion of the Annual General Meeting. Professor Toby Lewis of the University of Hull, currently visiting CSIRO Division of Mathematics and Statistics, gave a very interesting address on *Analysing spatial patterns*. He spoke of the problems of trying to determine whether objects in a two-dimensional space tended to clump together in groups or whether, at the other extreme, they tended to be as far away from each other as possible. Various measures related to nearest neighbour distances and/or distances from a random sampling point to the nearest object were considered. A new conditioned distance ratio method developed by T.F. Cox and the speaker (*Biometrika* 63, 483-500) was shown to have very good properties. The methods were illustrated by data drawn from such diverse fields as the trees in Lansing Woods, Michigan, the location of shopping centres in Canberra, and cattle in paddocks in Central Australia.

1977 COUNCIL

The new Council for 1977, elected at the A.G.M. is:

President:	Professor P.D. Finch
Past President:	Dr D.S. Ironmonger
Council:	Dr W. Bartlett, Dr B. M. Brown, Dr R. M. Clark, Mr N. Diamond, Dr I. R. James, Dr R. G. Jarrett, Dr G. K. Robinson, Mr R. Vasudeva.

At a subsequent Council meeting, Dr Jarrett and Mr Vasudeva were elected Secretary and Treasurer respectively.

S.A. BRANCH

The initial meeting for 1977 was held in the A.E. Cornish Building on April 27. The speaker was Professor M.S. Bartlett, formerly of Oxford University and currently visiting the Division of Mathematics and Statistics of CSIRO. He spoke on *Stochastic or Deterministic Population Modelling?*

The 1977 Committee consists of:

Chairman:	B. Leach
Vice-chairman:	R. Lamacraft
Secretary:	A.G. Constantine
Treasurer:	J.B. Field
Councillors:	M. Atkinson, L. Veitch

W.A. BRANCH

1977 PROGRAMME

- Mar 1 Dr M.L. Levitan of Villanova University
Is there sexism in American Universities?
- Apr 6 Mr A. Grassia of CSIRO
Calibration of a mechanical sorter.
- May 3 Mrs H. Ridings of the Dept. of Agriculture
The computer from planning to harvest.
- June 1 Dr J. Hill of the University of Aberystwyth
Title to be announced
- July 5 Dr F.C. Durling of WAIT
A look at the bivariate Burr distribution
- Aug 3 Prof. T.P. Speed of University of W.A.
The use and misuse of probability in human affairs.
- Sept 6 Mr A. G. Hopper of WAIT
Teaching statistics to ardent non-statisticians.
- Oct 5 Dr P. M. B. Roes of Technical University, Delft
Title to be announced.

- Nov 2 Dr P. R. Grimwood of Westrail
SWATS - Southern Western Australian Transport Study
- Dec 6 Annual General Meeting, Elections and Drinks

Following a tradition established in recent years, informal dinners will be held at a nearby restaurant following most meetings.

CANBERRA BRANCH

ANNUAL MEETING 1977

The Annual General Meeting of the Canberra Branch was held on 22 March 1977. Dr J. Gani, Chief of the Division of Mathematics and Statistics of CSIRO and retiring President of the Canberra Branch of the Society, presented his Presidential Address, on *Personal and Social Aims of a Statistician* (A fuller report on his address will appear in the next issue of the *Newsletter*.)

1977 COUNCIL

The council elected for 1977 comprised:

President:	C. C. Heyde
Past President:	J. M. Gani
Secretary:	R. W. Mellor
Treasurer:	R. L. Tweedie
Councillors:	K.R.W. Brewer, E.K. Foreman, G. H. Pollard, R.C. Trewin, S.R. Wilson

BAYESIANITY

At the meeting of 15 February 1977, the speaker, Professor J. V. Zidek of the University of British Columbia, then visiting the Division of Mathematics and Statistics, CSIRO, Canberra, spoke on *Bayesianity - Why or Why Not?* After outlining the Bayesian method, arguments for and against its use were presented.

The following points were given in favour:

- (1) the method is natural and it leads to readily interpretable results. Engineers, etc., want to input into the analysis as fully as possible their accumulated wisdom. Studying the support for a proposition in terms of odds is conventional.
- (2) all other methods are deficient in ways Bayesianity is not. They are too narrow, lack axiomatic foundations, imply absurd procedures, require ad hoc patchwork, fail to offer a systematic approach, and require but conceal or de-emphasize subjective steps. In particular, the Neyman-Pearson criteria may lead to powerful but absurd tests, the "confidence" in confidence intervals is misplaced as Robinson (Biometrika,

1975) shows, and non-Bayesian bookies lose money. It was pointed out that the likelihood principle cannot stand alone, as an attempt to apply it in sample surveying shows.

Against Bayesianity:

- (1) being axiomatic, the theory fails with the axioms.
- (2) even if personal probabilities exist it is not clear that they should be introduced, and "ignorance" priors lead to marginalization paradoxes.
- (3) it is unclear how group decisions should be made in the Bayesian framework, or which prior should be used in scientific reporting. Stone's paradox (JASA, 1976) casts doubt on the principle of precise measurement.
- (4) the validity of the approach in nonparametric situations is not clear. Freedman's (Ann. Math. Statist., 1965) result, showing the inconsistency of all Bayes rules for a particular infinite dimensional problem, casts doubt on the applicability of the theory.
- (5) it is not clear how subjective probabilities should be elicited.
- (6) for realistic priors, computational problems arise.

In the ensuing discussion a number of additional points were raised. The choice of prior for sample survey design seems difficult as, for example, in gathering federal statistics. In decisions involving possibly severe consequences, the prior would likely not be chosen without some support from data. The status of randomization in the application of Bayesian methods is unclear and the problem of outliers does not seem to have been addressed.

However, the discussion was far from heated, and it seems that, in Canberra at least, strong passions are not aroused by the Bayesian controversy. It would interest the editors of this *Newsletter* to know whether this is an Australia-wide phenomenon, or whether it is due to the capital's own congenial statistical climate.

1977 TENTATIVE PROGRAM

May 24	Professor G. Kallianpur (Director, Indian Statistical Institute) <i>On the activities of the ISI</i>
Early June	<i>Panel on Teaching of Tertiary Statistics</i> (Panelists from A.N.U., Bureau of Statistics, C.C.A.E., CSIRO)
Late June	Professor L. Billard (Florida State University) <i>Title to be advised</i>
Mid July	R.B. Mitchell (C.C.A.E.) and J. Tydeman (A.N.U.) <i>Use of Delphi Techniques</i> Joint meeting with the Canberra Branch of ORSA
September 6	Knibbs Lecture, Professor D.R. Cox (Imperial College, London)

FELLOWSHIP

Dr. C.C. Heyde, President of the Canberra Branch of the Society and Editor of the Journal of the Australian Statistical Society, was elected a Fellow of the Australian Academy of Science in April 1977. The members of the Canberra Branch warmly congratulate Dr. Heyde on this honour.

STATISTICAL COMPUTING

This section is intended to carry items of a general nature on statistical computing. Actual programmes will not be accepted, but information on availability of computing programmes to carry out specific statistical analyses will be welcome. The following article indicates some dissatisfaction in this area, and we would be interested in any further correspondence on this theme.

A USER'S PLAIN

Dr S.R. Wilson

Department of Statistics, IAS, ANU, Canberra

Have you ever been brought a thick wad of computer output and expected to interpret every number that appears (including, say, the significance of the "mean sex" being 0.4949, with standard deviation of 0.5025, whilst the "mean marital status" is 2.4136 with a standard deviation of 1.5639)? And then to interpret the following complicated analysis, all quite correct in theory, but in a theory *not* appropriate to the researcher's problem! Should statisticians be concerned about the increasing use and abuse of computing packages for the statistical analysis of data?

Have you ever read, and shuddered at, the manuals accompanying the more popular packages, such as IMSL? Not only is documentation poor, from the statistical viewpoint, but it is often misleading to the statistical novice. This could be considered to be worse than useless. And computer package manuals are now increasingly being used to teach statistics!

To what extent have most analyses been checked statistically? Are the results really correct? Recently a researcher at ANU ran his data through four different PCA programmes and got four *different* sets of results!

Programmes, such as GENSTAT, written by statisticians are often criticised because one must programme the statistical analyses with them oneself, and this is often a little hard for the computing novice. For this reason such programmes are often overlooked in the tertiary teaching establishments. But surely a *statistical computer* package should meet the user's computing and statistical requirements? Should we perhaps encourage the day when the word statistical is replaced by computer, and the Computer Package for Social Sciences (CPSS) is doing a *computer* analysis of the data? Or is a statistically brighter future possible?

AUSTRALIAN STATISTICS ADVISORY COUNCIL

D. Walker

Co-ordination Branch, Australian Bureau of Statistics, Canberra

On 22 February 1977 the Australian Statistics Advisory Council (ASAC) held its inaugural meeting at the Cameron Offices of the Australian Bureau of Statistics.

At the present time, the Council consists of the Chairman, the Australian Statistician, six members nominated by the State Premiers and a further nine from a wide spectrum of groups associated with business, academic and community interests.

Announcing the appointment of the members on 14 January 1977, the Treasurer, Mr. Phillip Lynch, said "He expected the Council to play an important role in helping to determine the future of official statistical services over the next few years."

The following article deals with the formation and functions of ASAC.

INTRODUCTION

Although the genesis of the Australian Statistics Advisory Council may be traced to proposals developed by the ABS in the early 1970's, it is generally agreed that the main impetus for its establishment came from the Committee on Integration of Data Systems (Crisp Committee), which was appointed by the then Government in December 1973 "to advise on the general principles and administrative arrangements which would enable the Government to integrate the various departmental data systems servicing related areas of its social and economic policies".(1)

During its investigations the Crisp Committee found a significant amount of unco-ordinated statistical activity in various government departments and instrumentalities and widely diverging practices in regard to the determination of the need for a particular type of statistical information and how it was to be collected from individuals and businesses.

RECOMMENDATIONS OF THE CRISP COMMITTEE

In an attempt to overcome these problems, the Crisp Committee recommended, among other things, the establishment of a network of bodies to assist in the determination of priorities for statistical work within the context of prevailing community goals and objectives.

The foremost body envisaged by the Committee, a National Statistics Advisory Council, consisting of 24

members drawn from the government and private sectors of the community, was to look at setting longer term statistical priorities (i.e. a year or more ahead); the efficiency of the existing system in terms of the collection, processing and dissemination of statistics; and allied matters relating to the work of the ABS and other arms of government.

Obtaining a wide range of opinion appears to have been an important consideration in the thinking of the Crisp Committee on the composition of the Council. At different points in its report the Committee recommended that the Council should be "widely representative", "representative of important community groups", and "representative of government at all levels and major private users to ensure that priorities in statistical activities conform more closely with the priorities and wishes of the community as a whole".

Implementation of these recommendations would have produced a Council consisting of: a Chairman; the Australian Statistician; two State members nominated annually by the Conference of Australian Statisticians; and twenty other members drawn from a wide spectrum of groups associated with government, business, academic and community interests.

THE AUSTRALIAN BUREAU OF STATISTICS ACT 1975

Legislation to establish the ABS as the central statistical authority for the Commonwealth Government; to appoint an Australian Statistician with powers of a permanent head; and to establish an Australian Statistics Advisory Council (ASAC) was enacted by the Parliament in mid 1975. Under this legislation, the Australian Bureau of Statistics Act 1975, the Council is to advise the Minister and the Statistician "on the improvement, extension and co-ordination of statistical services ... in Australia"; and "any other matters relating generally to those statistical services". The Act also enables the Minister and the Statistician (or both) to seek the advice of the Council on these matters. The Council has a statutory obligation to present an annual report to the Parliament.

THE CURRENT STATISTICAL NETWORK

The ASAC is now part of a network of individuals and official bodies involved in provision of official statistics in Australia.

The Minister responsible for the ABS (The Treasurer) has power to refer statistical matters to the Council for its advice, to appoint members of the Council, to convene meetings and (as a statutory obligation) to lay the Council's annual report "before each House of the Parliament within 15 sitting days of that House after its receipt by the Minister".

The position of the Australian Statistician in relation to the Council is unusual in that he is a member of ASAC; he may refer matters to ASAC; and ASAC is there to advise him. As head of the ABS, the Statistician has a special responsibility to convey to the Council his knowledge, for instance, of the Public Service Board's attitude to future changes in the Bureau's organization, the financial constraints within which the Bureau operates, the statistical requirements of other government departments and instrumentalities, and prevailing views within the Bureau itself.

Other important bodies in the current statistical network are the Conference of Australian Statisticians - composed of the Australian Statistician, his deputy and the six State Government Statisticians - and the advisory bodies on statistics which have recently been set up in certain states to advise on the provision of statistics and statistical services for the State Governments.

(1) *Letter of commission from the then Prime Minister, the Hon. E.G. Whitlam, QC, MP, to Professor L.F. Crisp of the Australian National University.*

STATISTICAL EDUCATION

MASTER'S DEGREE BY COURSEWORK IN STATISTICS AT ANU

Professor C.R. Heathcote

Department of Statistics, SGS, ANU, Canberra

A Master's degree which may be taken by completing a sequence of semester units in Statistics has been introduced at the A.N.U. Only half the course will be offered in 1977 but this will be sufficient for part-time students to complete by the end of 1978. A range of options, suitable for full-time completion of the course in the one academic year, will be available in 1978.

The course is designed primarily as preparation for Honours graduates wishing to pursue a career as statisticians in industry or in organizations such as the Australian Bureau of Statistics or CSIRO. It therefore has an applied bias, the units building on and

complementing the theoretical work of the Honours degree. The pre-requisite for entry is a I or IIA Honours degree in Statistics or Mathematics/Statistics. Candidates without this qualification but with extensive professional experience will also be considered for enrolment, otherwise the completion of a qualifying course is necessary.

A variety of semester units will be offered of which a student must complete eight to qualify for the degree. Four of these eight are compulsory core units. Some of the units may be taken by fourth year Honours as well as by Master's students and the options offered in 1977 are:

Probability I, Inference I, Time Series, Experimental Design, Inference II, Procurement and Analysis of Data, Applied Probability, Multivariate Analysis, Reliability Theory, Robust Estimation, Stochastic Models, and Case Studies.

Amongst the additional semester units that will be available in 1978 are Applied Time Series Analysis, and Sample Surveys. Accreditation procedures are in train so that full-time students in 1978 and subsequent years may compete for Commonwealth Post-Graduate Coursework Awards.

The programme is fortunate in enjoying the support of statisticians outside the university and lecturers will be drawn from the Division of Mathematics and Statistics of CSIRO, and the Australian Bureau of Statistics as well as from the ANU. It is hoped that a stimulating blend of theory and practice will emerge.

CONFERENCES

**CSIRO DIVISION OF MATHEMATICS
AND STATISTICS**

and

**AUSTRALASIAN REGION OF THE
BIOMETRIC SOCIETY**

JOINT CONFERENCE

**NEWCASTLE COLLEGE OF ADVANCED
EDUCATION**

29 AUGUST-2 SEPTEMBER 1977

Invited speakers include: Professor D.R. Brillinger, Professor D.R. Cox, Professor J.N. Darroch, Dr J.M. Gani, Dr C.C. Heyde, Dr J.S. Maritz, Dr D. F. Nicholls, Professor B.W. Ninham, and Dr G.A. Watterson.

Session topics will be: Analysis of survival data, Applied Mathematics, Stochastic processes in biology, Robust regression, Examination of residuals, Biological sampling, Time series, Exploratory data analysis, Contingency tables(*), Epidemiology(*), and Contributed papers in biometry(*)

(*) These sessions will be arranged by the Australasian Region of the Biometric Society and will be held on 1-2 September. Enquiries and offers of papers should be addressed to Mr C. Brien, Secretary, Australasian Region, The Biometric Society, CSIRO Division of Horticultural Research, G.P.O. Box 350, Adelaide, 5001. Title and abstract (300-500 words) should reach the above no later than 31 May, 1977. These abstracts, and detailed synopses for the DMS sessions, will be circulated prior to the conference.

Members of DMS and the Biometric Society will receive further circulars about the conference. Other people interested are asked to send their name and address to:

**The Conference Committee,
DMS, CSIRO,
Alpha House,
60 King St.,
Newtown, NSW 2042.
or telephone (02) 6600566, xtn 517.**

2ND CONFERENCE ON "SAMPLE SURVEY THEORY AND PRACTICE"

The CSIRO Division of Mathematics and Statistics plans to hold a second conference on "Sample Survey Theory and Practice" in Melbourne between 28th-30th September, 1977. The programme will consist of topics on sample survey methodology, applications of sampling techniques in various fields, analysis of survey data, computer programs, description of surveys and related problems.

The Organiser, Dr T.J. Rao, would be pleased to hear from anyone from the Divisions of CSIRO, Universities, Institutes of Advanced Education, Technical Institutes and Colleges, Government Departments, Sample Survey practitioners and others interested in the conference. Those planning to make a contribution may send a tentative title of their paper.

For further information contact:

**Dr T.J. Rao,
CSIRO Division of Mathematics & Statistics,
C/- Division of Building Research,
P.O. Box 56 (Graham Rd),
HIGHETT, VIC. 3190**

PRELIMINARY ANNOUNCEMENT

EIGHTH CONFERENCE ON STOCHASTIC PROCESSES AND THEIR APPLICATIONS

6-10 JULY 1978

in conjunction with

FOURTH AUSTRALIAN STATISTICAL CONFERENCE

11-14 JULY 1978

To be held at the Australian National University, Canberra, from 6 to 14 July 1978. The SPA component is planned for 6-10 July and the ASC component is planned for 11-14 July.

The SPA Conference will be similar in format to the previous conferences in the series (Rochester (1971), Louvain (1972), Sheffield (1973), Toronto (1974), Baltimore (1975), Tel Aviv (1976) and Enschede (1977)). It will feature invited research papers on stochastic processes and their applications as well as sessions for contributed papers.

The Fourth AS Conference will be similar in format to the Third Conference, held in Melbourne in August 1976. This is fairly close to the SPA format.

A more detailed announcement will be available later. For further information write to:

**Dr C.C. Heyde
Conference Organiser (1978)
Division of Mathematics and Statistics
CSIRO, PO Box 1965,
CANBERRA CITY ACT 2601**

OVERSEAS CONFERENCES

Seventh Conference on Stochastic Processes and Their Applications, Enschede, Netherlands, 15-19 August, 1977.

Information: Dr J.H.A. de Smit, Dept. of Mathematics, Twente University of Technology, P.O. Box 217, Enschede, Netherlands.

International Statistical Institute, 41st Biennial Session (includes meetings of the Bernoulli Society for Mathematical Statistics and Probability and of the International Association of Survey Statisticians), New Delhi, 5-15 December, 1977.

Information: Director, Permanent Office, ISI, 428 Prinses Beatrixlaan, Voorburg, Netherlands.

VISITORS

The Editors are particularly keen to receive information on visitors with statistical expertise who are not at the Mathematics and Statistics groups of CSIRO or the Universities.

The details in this section are laid out in the order: visitor's name; visitor's home institution; whether accompanied or not; areas of interest; date of visit; host institution; name of contact at host institution.

Prof M.S. Bartlett, FRS; University of Oxford (retired); wife; probability and statistics; March-June 1977; CSIRO DMS Canberra; Dr M. Westcott.

Dr J.E. Besag; University of Durham; unaccompanied; spatial problems and the statistical analysis of related data; 19th June-6th August, 1977; University of W.A.; Prof T.P. Speed.

Dr L. Billard; Florida State University; unaccompanied; epidemics; July 1977; CSIRO DMS Canberra; Dr M. Westcott.

Prof D. Brillinger; University of California at Berkeley; unaccompanied; time series, point processes; August-September 1977; CSIRO DMS; Dr M. Westcott.

Prof D.R. Cox; Imperial College, London; unaccompanied; probability and statistics; August-September 1977; CSIRO DMS; Dr M. Westcott.

Dr Y. Fujikoshi; Kobe University; multivariate analysis; until October 1977; CSIRO DMS Adelaide; Dr A.G. Constantine.

Dr Jane Gentleman; University of Waterloo; husband; statistical computing; May 1977; CSIRO DMS; Dr M. Westcott.

Prof W.M. Gentleman; University of Waterloo; wife; statistical computing; May 1977; CSIRO DMS; Dr M. Westcott.

Prof J.S. Huang; Michigan State University; wife and children; decision theory, order statistics; April-September 1977; CSIRO DMS Sydney; Dr N.I. Fisher.

Prof G. Kallianpur; Indian Statistical Institute; unaccompanied; theoretical statistics; May-June 1977; CSIRO DMS; Dr M. Westcott.

Dr F.P. Kelly; University of Cambridge; wife; stochastic processes, queueing networks; July-September 1977; LaTrobe University; Dr Niels G. Becker.

Prof M.L. Levitan; Villanova University, Pennsylvania; wife and 2 children; Markov chains; July 1976-June 1977; University of W.A.; Prof T.P. Speed.

Prof T. Lewis; University of Hull, England; unaccompanied; applied probability, statistics; September 1976-August 1977; CSIRO DMS Canberra; Dr M. Westcott.

Prof A. Mercer; University of Lancaster; - ; operations research; May-June 1977; Royal Melbourne Institute of Technology; Dr R. Vasudeva.

Prof K.R. Parthasarathy; Indian Statistical Institute; unaccompanied; probability; June-July 1977; University of W.A. and CSIRO DMS Canberra; Prof T.P. Speed and Dr M. Westcott.

Prof E.L. Porteus; Stanford University; wife and 3 children; dynamic programming; September 1976-September 1977; CSIRO DMS Canberra; Dr M. Westcott.

Dr P.B.M. Roes; Technische Hogeschool, Delft; wife; stochastic processes; June-October 1977; University of W.A.; J.P.O. Silberstein.

Prof M. Siotani; Kansas State University; unaccompanied; multivariate statistics; June-July 1977; CSIRO DMS; Dr M. Westcott.

Prof T.F.M. Smith; University of Southampton; unaccompanied; sampling theory; November 1977; Survey Research Centre, ANU; K.R.W. Brewer.

Prof R.G. Stanton; University of Manitoba; unaccompanied; statistics and computing; July 1977-March 1978; CSIRO DMS Adelaide; Dr A.G. Constantine.

Dr D.G. Watts; Queens University, Canada; unaccompanied; time series; December 1977-January 1978; CSIRO DMS; Dr M. Westcott.