

Advances in Applied Probability

The Editorial Board would like to encourage the submission to the *Advances* of review papers summarising and coordinating recent results in any of the fields of applied probability.

In addition to these review papers, *Advances* is also designed to be a medium of publication for (1) longer research papers in applied probability, which may include expository material, (2) expository papers on branches of mathematics of interest to probabilists, (3) papers outlining areas in the biological, physical, social and technological sciences in which probability models can be usefully developed, (4) papers in applied probability presented at conferences which do not publish their proceedings, and finally, (5) letters to the editor on any appropriate topic in applied probability.

In short, the main function of *Advances* is to define areas of recent progress and potential development in applied probability. As with the *Journal of Applied Probability*, *Advances* undertakes to publish papers accepted by the Editors within 15 months of their submission; letters to the editor will normally be published more rapidly.

The Editor-in-Chief is J. Gani; the Coordinating Editors are C. C. Heyde, M. F. Neuts and G. E. H. Reuter; other editors are P. J. Brockwell, V. R. Cane, J. W. Cohen, E. J. Hannan, J. Keilson, D. G. Kendall, J. F. C. Kingman, K. Krickeberg, R. M. Loynes, K. R. Parthasarathy, C. A. B. Smith, and R. L. Tweedie. The Editorial Office of the *Advances* is in the Department of Probability and Statistics, The University, Sheffield S3 7RH, England.

Volume 16 No. 1 of *Advances* contains the following papers:

APPLIED PROBABILITY IN BIOLOGY AND ENGINEERING. AN ORSA/TIMS SPECIAL INTEREST MEETING. University of Kentucky, Lexington, 18–20 July 1983
F. C. KLEBANER. On population-size-dependent branching processes
JOHN L. SPOUGE. A branching-process solution of the polydisperse coagulation equation
WILLIAM S. GRIFFITH, RICHARD J. KRYSZCIO AND PETER PURDUE. A stochastic model of particle shattering
GUNNAR ENGLUND. Obtaining remainder term estimates by an inversion technique
JOSEPH D. PETRUCCELLI. Best-choice problems involving recall and uncertainty when the number of observations is random
GREGORY CAMPBELL. Optimal selection based on relative ranks of a sequence with ties
I. B. GERTSBAKH. Asymptotic methods in reliability theory: a review
WILLIAM A. MASSEY. Open networks of queues: their algebraic structure and estimating their transient behavior
R. SCHAASBERGER. Residence time in the $M/G/1$ processor-sharing queue.

Subscription rates (per volume) for the *Advances* in 1984 are the same as for the *Journal* (see inside back cover). A discount of 10% is allowed to subscribers who order current issues of both the *Journal* and *Advances* at the same time direct from the Applied Probability Office. A detailed price list for both current and back issues is available on request.

Cheques made out on U.S., U.K. and Australian banks will be acceptable: they should be made payable to *Applied Probability*, and sent to:

Executive Editor, Applied Probability,
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SHORT BOOK REVIEWS

Short Book Reviews is a journal published under the auspices of the International Statistical Institute. It appears three times a year, in April, August and December.

Each review includes the table of contents, the intended readership, a few sentences giving a critical evaluation and a hint of the flavour of the book. Any books received but not reviewed will be listed. Reviews of books on all aspects of statistics, computing and economics and related subjects are included.

The annual subscription rate is US\$10.00. Interested individuals and institutions wishing to take out a subscription to *Short Book Reviews* should send the required payment to the

Business Office, *Short Book Reviews*,
The International Statistical Institute,
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2270 AZ Voorburg,
The Netherlands.

Books for review should be sent to the Editor

Dr A. M. Herzberg,
Department of Mathematics,
Imperial College of Science and Technology,
London SW7 2BZ,
England.

The 14th Conference on Stochastic Processes and their Applications 12–16 June 1984 in Gothenburg, Sweden

The 14th Conference on Stochastic Processes and their Applications will be held at the campus of Chalmers University of Technology, in Gothenburg, Sweden. The conference will last from Tuesday morning, 12 June, until Saturday noon, 16 June 1984.

The list of invited speakers includes J. L. Doob and K. Ito as well as R. Adler, S. Berman, S. Cambanis, D. Freedman, I. Ibragimov, M. Jacobsen, J. Jacod, O. Kallenberg, O. Nerman, E. Nummelin, J. Sinai, R. L. Smith, D. Szasz and Ruth Williams.

For further information, please write to
Chalmers University of Technology,
Course Office,
S-412 96 Göteborg,
Sweden.

NOW AVAILABLE

ESSAYS IN STATISTICAL SCIENCE

The Applied Probability Trust has now issued a supplementary volume No. 19A of the *Journal of Applied Probability* (JAP). Entitled *Essays in Statistical Science*, this book consists of a collection of papers on a range of topics including statistical theory, stochastic processes, time series, geometric probability and mathematical genetics. It has been published as a Festschrift in honour of the sixty-fifth birthday of Professor P. A. P. Moran FAA, FRS, of the Department of Statistics, Australian National University, Canberra, an editor of JAP since its first volume in 1964.

This special volume is edited by J. Gani and E. J. Hannan and contains contributions from the following colleagues and students of Professor Moran: M. S. Bartlett, B. Benjamin, V. Cane, H. Cohn, D. J. Daley, H. E. Daniels, A. W. Davis, P. Erdős, W. J. Ewens, P. D. Finch, J. Gani, J. M. Hammersley, E. J. Hannan, A. M. Hasofer, C. R. Heathcote, C. C. Heyde, D. G. Kendall, J. F. C. Kingman, R. McNamee, D. R. McNeil, R. J. Maillardet, R. E. Miles, B. H. Neumann, M. Osborne, D. K. Pickard, D. Pollard, B. C. Rennie, E. L. Scott, E. Seneta, C. A. B. Smith, D. Vere-Jones, I. Vincze, G. S. Watson, G. A. Watterson, M. Westcott, P. Whittle, E. J. Williams and S. R. Wilson.

Essays in Statistical Science is in the usual JAP format (250 × 170 mm), with 434 pages, and has an attractive dust jacket and hard binding. The price is £18.00 (US\$30.00; \$A.33.00). Orders should be sent to the Executive Editor, Applied Probability, Department of Probability and Statistics, The University, Sheffield S3 7RH, England.

SUBSCRIPTION RATES

Subscription rates (post free) for the 1984 volume of the *Journal* are as follows:

Subscribers in North, Central and South America, and Australia:

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US\$34.00; \$A38.00; £22.00 for individuals belonging to a recognised scientific society.

All other subscribers:

£54.00 for libraries and institutions;

£18.00 for individuals belonging to a recognised scientific society.

Members of the London Mathematical Society should apply direct to the Secretary of the Society for copies of the *Journal*.

All enquiries about the *Journal*, as well as other subscriptions, should be sent to the Executive Editor, Miss M. Hitchcock, Department of Probability and Statistics, The University, Sheffield S3 7RH, England. The price of back numbers varies from volume to volume, and enquiries should be sent to the Executive Editor. Cheques, money orders, etc. should be made out to *Applied Probability*; cheques on U.S., U.K. and Australian banks will be acceptable.

NOTES FOR CONTRIBUTORS

Papers published in the *Journal* are of two kinds:

(1) *research papers* not exceeding 20 printed pages;

(2) *short communications* of a few printed pages in the nature of notes or brief accounts of work in progress.

Review papers, longer research papers and letters to the editor are published in *Advances in Applied Probability*, a companion journal. (Note: Letters relating specifically to papers which have appeared in the *Journal of Applied Probability* will continue to appear in the *Journal*.)

The editors may publish accepted papers in either journal, according to the space available, in order to meet the 15-month deadline in publication referred to below.

Submission of papers

It is a condition of publication in the *Journal of Applied Probability* that papers shall not previously have appeared elsewhere, and will not be reprinted without the written permission of the Trust. It is the policy of the *Journal* not to accept for publication papers which cannot appear in print within 15 months of the date of receipt of the final version. Authors will receive 50 reprints of their papers free, and joint authors a proportional share of this number. Additional reprints will be provided at cost.

Papers should be written in English or French; papers in other languages may be accepted by the editors, but will appear (subject to the author's agreement) in English or French translation in the *Journal*. Scripts should be typewritten, using double spacing, and at least one copy should be on one side of the paper only. Each paper should be accompanied by

(i) a short abstract of approximately 4–10 lines giving a non-mathematical description of the subject matter and results;

(ii) a list of keywords detailing the contents for the purpose of computerised information retrieval.

Authors are advised to consult *The Author's Guide to the Applied Probability Journals* when preparing papers for submission. A copy of this guide may be obtained on application to the Applied Probability Office.

For efficiency in processing, authors are requested to send three copies of all submissions to the Applied Probability Office in Sheffield, rather than to individual editors. Authors overseas are asked to ensure that their submissions are sent by airmail. The Editor-in-Chief and the Applied Probability Office are in regular contact and full details of all papers submitted are available to Professor Gani in Lexington.

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