An essential interface between theory and real-world problems

Applied Stochastic Models and Data Analysis

AIMS AND SCOPE

Applied Stochastic Models and Data Analysis aims
to serve as the interface between the theoretical
aspects of Applied Probability and Data Analysis
and their applications to the real world. One of its
main objectives is to compare the various methods
available for solving real-life problems, and to
initiate new methods for solving these problems by
analysing the relevant data.

Applied Stochastic Models and Data Analysis
publishes significant survey papers, as well as three
other types of papers: firstly, those presenting
problems to be solved using real data, with or
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solutions to these problems, with a comparison of
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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in which probability models can be usefully developed, (4) papers in applied probability presented at conferences which do not publish their proceedings, and finally, (5) letters to the editor on any appropriate topic in applied probability.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.

Volume 20 No. 4 of *Advances* contains the following papers:

WILLIAM G. FARIS AND ROBERT S. MAIER. Probabilistic analysis of a learning matrix
CHARLES M. GOLDIE AND SIDNEY RESNICK. Distributions that are both subexponential and in the domain of attraction of an extreme-value distribution
MICHAEL ARONOWICH AND ROBERT J. ADLER. Sample path behaviour of χ^2 surfaces at extrema
USHIO SUMITA AND J. GEORGE SHANTHIKUMAR. An age-dependent counting process generated from a renewal process
RICHARD J. WILSON. Model fields in crossing theory: a weak convergence perspective
WILFRID S. KENDALL. Symbolic computation and the diffusion of shapes of triads
H. W. BLOCK, N. A. LANGBERG AND D. S. STOFFER. Bivariate exponential and geometric autoregressive and autoregressive moving average models
ED MCKENZIE. Some ARMA models for dependent sequences of Poisson counts
K. D. GLAZEBROOK. On a reduction principle in dynamic programming
H. R. GAIL, S. L. HANTLER AND B. A. TAYLOR. Analysis of a non-preemptive priority multiserver queue
J. C. W. VAN OMMEREN. Exponential expansion for the tail of the waiting-time probability in the single-server queue with batch arrivals
GUY LATOUCHE. Perturbation analysis of a phase-type queue with weakly correlated arrivals

Subscription rates (per volume) for the *Advances* in 1988 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,
Department of Probability and Statistics,
The University, Sheffield S3 7RH, England.

A CELEBRATION OF APPLIED PROBABILITY
Journal of Applied Probability (JAP) Supplementary Volume 25A

This supplementary volume was published in September 1988 to mark the twenty-fifth anniversary of JAP: it contains material of interest to all those working in probability and related fields. There are 27 contributions by former and present editors of the Applied Probability journals under the following eight headings: some thoughts on applied probability; the first quarter-century of the Applied Probability Trust; stochastic models in biology and field trials; applied probability and quantum theory; concepts of coincidence and convergence; the analysis of stochastic phenomena; stationary processes and time series; and random walks, graphs and networks.

This book is attractively hardbound and contains nearly 400 pages. Its price is £25.00 (US$40.00; $A.58.00). Orders may be placed now (remittances in favour of 'Applied Probability', please) by writing to the address below.

THE MATHEMATICAL SCIENTIST

The Applied Probability Trust has now assumed responsibility for the publication of **The Mathematical Scientist**. This journal contains papers on a variety of mathematical topics for the general information and enjoyment of mathematicians, statisticians and computer scientists; it also appeals to scientists in any other discipline lending itself to the application of mathematical methods. Each annual volume consist of two issues distributed in June and December, totalling approximately 128 pages.

The Mathematical Scientist is modestly priced at £7.00 (US$12.00; $A.16.00). Special discounts are available for subscribers to the **Journal of Applied Probability** and **Advances in Applied Probability**.

Orders and requests for further information should be sent to

> Executive Editor, Applied Probability,
> Department of Probability and Statistics,
> The University, Sheffield S3 7RH, England.

ANNOUNCEMENTS

WORKSHOP ON STOCHASTIC ORDERS AND DECISION UNDER RISK
To be held in Hamburg, F. R. Germany, 16–20 May 1989

Invitations to this international workshop are extended to scientists contributing to the theory of stochastic orders and their applications in various fields: economics, finance, insurance, operations research, decision theory, and statistics. The workshop will include mainly invited papers (surveys as well as technical papers), but there will also be a choice of contributed papers.

Further information may be obtained from the organizers:

Karl Mosler	or	Marco Scarsini
Universität der Bundeswehr		Università 'La Sapienza'
Holstenhofweg 85		Via del Castro Laurenziano 9
D-2000 Hamburg 70, F. R. Germany		I-00161 Roma, Italy

Institute of Mathematical Statistics — University of Sheffield
CONFERENCE ON APPLIED PROBABILITY
To be held at the University of Sheffield, UK, 16–19 August 1989

The programme will include special invited papers (by R. Durrett, C. C. Heyde and D. G. Kendall), invited paper sessions (arranged by K. Dietz, P. Donnelly, P. Jagers, A. F. Karr, F. Kelly, H. Kesten, S. E. Shreve, J. M. Steele, and M. S. Taqqu), and contributed paper sessions.

A registration form will appear in the IMS Bulletin in early 1989. Alternatively, or for further information on any aspect, please contact:

The Conference Secretary
Department of Probability and Statistics,
The University, Sheffield S3 7RH, England.

Tel	: (0742) 768555 ext. 4294	Telex :	547216 UGSHEF G
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All other subscribers:
£75.00 for libraries and institutions;
£25.00 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 at the University of California at Santa Barbara.

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