

ROLLO DAVIDSON TRUST

At a meeting of the Trustees on 24 March 1987, Rollo Davidson Prizes were awarded to

YU YAO-CHI (of the Mathematics Department, Zhong Shan University, Guangzhou) and ZOU JIE-ZHONG (of the Research Department, Changsha Institute of Railways) for their contributions which together led to the proof of D. G. Kendall's modified version of Davidson's conjecture concerning the oscillation of p -functions (joint award),

and to

ANDREW CARVERHILL (of the Mathematics Department, University of North Carolina) for his work on the flows of stochastic dynamical systems and their Lyapunov exponents.

The Trust commenced its work in 1976, and eighteen prizes have now been awarded. It is supported by royalties and individual donations: correspondence should be addressed to its Secretary:

The Bursar, Churchill College, Cambridge, CB3 0DS, UK.

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in which probability models can be usefully developed, (4) papers in applied probability presented at conferences which do not publish their proceedings, and finally, (5) letters to the editor on any appropriate topic in applied probability.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 19 No. 2 of *Advances* contains the following papers:

SAMUEL KARLIN AND FRIEDEMANN OST. Counts of long aligned word matches among random letter sequences

PETER KOTELENEZ. Fluctuations near homogeneous states of chemical reactions with diffusion

PETER HALL. On the amount of detail that can be recovered from a degraded signal

IGOR RYCHLIK. Regression approximations of wavelength and amplitude distributions

P. K. POLLETT. Preserving partial balance in continuous-time Markov chains

E. G. COFFMAN, JR., L. FLATTO AND R. R. WEBER. Optimal selection of stochastic intervals under a sum constraint

VOLKER SCHMIDT. On joint queue-length characteristics in infinite-server tandem queues with heavy traffic

O. BRONSTEIN, I. GERTSBAKH, B. PITTEL AND S. SHAHAF. One-node closed multichannel service system: several types of customers and service rates, and random pick-up from the waiting line

Subscription rates (per volume) for the *Advances* in 1987 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.

NOW AVAILABLE

ESSAYS IN TIME SERIES AND ALLIED PROCESSES

In January 1986 the Applied Probability Trust published a supplementary volume 23A of the *Journal of Applied Probability* (JAP) to mark the sixty-fifth birthday of Professor E. J. Hannan FAA, FASSA, an editor of the Journal since its inception in 1964. Entitled *Essays in Time Series and Allied Processes*, this book consists of papers relating to various aspects of time series, Professor Hannan's main area of research. The seven sections are devoted to: structure and general methods, estimation, hypothesis testing and distribution theory, non-linear and non-stationary systems, random fields and point processes, allied stochastic processes, and algorithms and computations.

This special volume, which is edited by J. Gani and M. B. Priestley, contains contributions from the following colleagues and students of Professor Hannan:

An Hong-Zhi	J. Henstridge	M. R. Osborne	G. K. Smyth
C. F. Ansley	S. M. Heravi	T. Ozaki	V. Solo
M. S. Bartlett	C. C. Heyde	E. Parzen	T. P. Speed
P. Bloomfield	Y. Hosoya	J. H. W. Penm	K. Tanaka
D. R. Brillinger	R. H. Jones	M. B. Priestley	R. D. Terrell
M. A. Cameron	K. Katsura	B. G. Quinn	P. J. Thomson
Chen Zhao-Guo	R. Kohn	J. Rissanen	P. Tin
M. Deistler	P. A. P. Moran	P. M. Robinson	J. G. Veitch
J. Durbin	D. F. Nicholls	M. Rosenblatt	G. S. Watson
J. Gani	Y. Ogata	R. Shibata	P. Whittle

A complete bibliography of Professor Hannan's publications from 1955 to 1984 is included.

Essays in Time Series and Allied Processes is in the usual JAP format (250 × 170 mm) with 437 pages, but with hard binding and an attractive dust jacket. The price is £30.00 (US\$35.00; \$A.43.00).

Orders, preferably accompanied by a remittance, should be sent to the Executive Editor, Applied Probability, Department of Probability and Statistics, The University, Sheffield S3 7RH, England. Payments must be in favour of 'Applied Probability': sterling cheques should be drawn on a British bank, US or Australian dollar cheques on a US or Australian bank respectively.

THE APPLIED PROBABILITY TRUST and
THE LONDON MATHEMATICAL SOCIETY announce

ANALYTIC AND GEOMETRIC STOCHASTICS

a publication to celebrate the sixty-fifth birthday of G. E. H. REUTER, who for many years represented the London Mathematical Society as a Trustee of the Applied Probability Trust. Edited by D. G. Kendall with the assistance of J. F. C. Kingman and D. Williams, it contains the following contributions:

- D. G. KENDALL: Harry Reuter: An appreciation
D. J. ALDOUS: Classical convergence of triangular arrays, stable laws and Schauder's fixed-point theorem
M. T. BARLOW and S. D. JACKA: Tracking a diffusion, and an application to weak convergence
N. H. BINGHAM: Extensions of the strong law
N. J. CUTLAND and W. S. KENDALL: A non-standard proof of one of David Williams' splitting-time theorems
M. JACOBSEN: Co-optional times and invariant measures for transient Markov chains
D. G. KENDALL and HUI-LIN LE: Exact shape-densities for random triangles in convex polygons
J. F. C. KINGMAN: The construction of infinite collections of random variables with linear regressions
T. J. LYONS: The critical dimension at which quasi-every Brownian path is self-avoiding
J. NEVEU: Erasing a branching tree
J. W. PITMAN and M. YOR: Some divergent integrals of Brownian motion
R. PYKE: Product Brownian measures
L. C. G. ROGERS and D. WILLIAMS: Construction and approximation of transition matrix functions

Analytic and Geometric Stochastics is a special issue of *Advances in Applied Probability*, distributed free to current subscribers with Volume 18 Number 4 in December 1986. Copies can also be purchased from Applied Probability, Department of Probability and Statistics, University of Sheffield, Sheffield S3 7RH, England, price £10.00 (US\$15.00) including postage and packing. Orders should be accompanied by a remittance in favour of 'Applied Probability'.

STATISTICAL SCIENCE

a review journal of the institute of mathematical statistics

EXECUTIVE EDITOR: **Morris H. DeGroot**, *Carnegie-Mellon University*

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J. A. Hartigan, *Yale University*

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IMS continues publication of *Statistical Science*, its successful quarterly review journal in statistics and probability, in 1987. *Statistical Science* presents the full range of contemporary statistical thought at a modest technical level accessible to the broad community of practitioners, teachers, researchers, and students in statistics and probability. *Statistical Science* has been enthusiastically received by the statistical and probabilistic community.

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Featuring in Volume 1 (1986)

Articles by Freedman & Navidi on "Models for Adjusting the Census"; Efron & Tibshirani on "The Bootstrap"; Le Cam on "The Central Limit Theorem Around 1935"; Geisser on "The Collected Works of George E. P. Box"; Genest & Zidek on "Combining Probability Distributions"; Good on "Statistical Applications of Poisson's Work"; Bookstein on "Morphometrics"; Thisted on "Computing Environments"; Lai & Siegmund on "The Contributions of Herbert Robbins"; Hastie & Tibshirani on "Generalized Additive Models"; Fishburn on "The Axioms of Subjective Probability"; Stigler on "Laplace's Memoir on Inverse Probability"; Chatterjee & Hadi on "Influential Observations"; Shafer on "Savage Revisited"; Wegman on "Harald Cramér's Personal Recollections"; O'Sullivan on "Ill-Posed Inverse Problems". *Conversations* with T. W. Anderson, D. Blackwell, P. Diaconis, E. L. Lehmann, and C. Stein.

Statistical Science is included as a privilege of membership in the Institute (\$30 for individuals). Nonmember subscriptions are available to individuals (\$25) and organizations (\$40). All subscriptions on *The Annals of Statistics* and *The Annals of Probability* include a subscription to *Statistical Science* in 1987. For additional information on how to receive *Statistical Science*, please write to the IMS Business Office, 3401 Investment Boulevard #7, Hayward, California 94545 (USA).

SUBSCRIPTION RATES

Subscription rates (post free) for the 1987 volume of the *Journal* are as follows:

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

US\$114.00; \$A159.00; £81.00 for libraries and institutions;

US\$38.00; \$A53.00; £27.00 for individuals belonging to a recognised scientific society.

All other subscribers:

£72.00 for libraries and institutions;

£24.00 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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