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models can be usefully developed, and finally, (4) papers in Applied Probability presented at conferences which do not publish their proceedings.

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.

The Editorial Board consists of E. Sparre Andersen, V. D. Barnett, D. Blackwell, V. R. Cane, J. W. Cohen, B. Gnedenko, E. J. Hannan, C. C. Heyde, J. Keilson, D. G. Kendall, J. F. C. Kingman, K. Krickeberg, R. M. Loynes, P. A. P. Moran, J. Neveu, K. R. Parthasarathy, N. U. Prabhu, R. Pyke, C. A. B. Smith and L. Takács. The Editor-in-chief is J. Gani, and the Editorial Office of the *Advances* is in the Department of Probability and Statistics, The University, Sheffield S3 7RH, England.

Volume 9 No. 1 of *Advances* contains the following papers:

D. J. BARTHOLOMEW	Maintaining a grade or age structure in a stochastic environment
JOEL E. COHEN	Ergodicity of age structure in populations with Markovian vital rates. II. General states
R. T. SMYTHE AND JOHN C. WIERMAN	First-passage percolation on the square lattice. I
P. NASH AND J. C. GITTINS	A Hamiltonian approach to optimal stochastic resource allocation
J. W. PITMAN	Occupation measures for Markov chains
P. A. JACOBS AND P. A. W. LEWIS	A mixed autoregressive-moving average exponential sequence and point process (EARMA 1,1)
VĚRA DUFKOVÁ	On controlled one-dimensional diffusion processes with unknown parameter
B. W. CONOLLY AND J. CHAN	Generalised birth and death queueing processes: recent results
MARCEL F. NEUTS	Some explicit formulas for the steady-state behavior of the queue with semi-Markovian service times
TEUNIS J. OTT	The covariance function of the virtual waiting-time process in an $M/G/1$ queue
TEUNIS J. OTT	The stable $M/G/1$ queue in heavy traffic and its covariance function.

Subscription rates (per volume) for the *Advances* in 1977 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.

INTERNATIONAL CONFERENCE ON MARKOV DECISION PROCESSES

University of Manchester, England, 17–19 July 1978

Call for Papers

The above conference is to be organised by the Institute of Mathematics and its Applications and the Department of Decision Theory of the University of Manchester.

The purpose of the conference is to enable research workers and other interested parties to discuss theoretical developments in the rapidly expanding area of Markov Decision Processes. The programme will be broadly cast to cover both general Markov Decision Processes inclusive of state/action space problems, and Semi-Markov Decision Processes, as well as theoretical aspects of these areas related to queueing, inventory and other stochastic systems for which optimal decision rules (or control policies) are of central concern.

The Programme Committee invites interested persons to submit abstracts of about 500 words of potential research papers to: The Deputy Secretary, The Institute of Mathematics and its Applications, Maitland House, Warrior Square, Southend-on-Sea, Essex SS1 2JY, England, not later than 30 June 1977. All abstracts will be considered as soon as possible after receipt.

Papers will be considered for inclusion in the proceedings of the conference, at the discretion of the Programme Committee, which consists of

Chairman: D. J. White
Members: R. Hartley
L. C. Thomas
S. French

The official language of the conference will be English.

Subscription rates

Subscription rates (post free) for the 1977 volume of the *Journal* are as follows:

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

All enquires 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

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. The copyright of all published papers shall be vested in the Trust. It is the general policy of the *Journal* not to accept for publication papers which cannot appear in print within 15 months of their date of submission. 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.

Manuscripts should be written in English of French; manuscripts 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*. Authors are requested to comply with the following instructions in submitting their papers:

Authors in Britain, Europe, North and South America should send *three copies* of their submissions to the Applied Probability Office in Sheffield.

Authors in Australasia and the Far East should send *three copies* of their submissions to the Editor-in-Chief, Dr. J. Gani, in Canberra.

The Editor-in-Chief and the Applied Probability Office are in direct contact by Telex, and full details of the papers submitted either in Sheffield or Canberra are available in both centres.

Alternatively, authors may submit papers to any of the Editors listed on the inside front cover. In this case, *two copies* of the submission should be sent to the Editor concerned, and *one copy*, with a copy of the covering letter, should be sent to the Applied Probability Office in Sheffield.

Journal conventions. It will be of help to the Editors if the following conventions are adopted:

a) The manuscript should be typewritten, using double spacing, on one side of the paper only.

b) Each paper submitted 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.

c) References should be indicated in the text by the name of the author(s) and the date, thus: Feller (1961), and the full references listed at the end of the article in alphabetical order. Journal references should include the title of the article cited, the title of the journal (abbreviated in the style of the *International Journal of Abstracts: Statistical Theory and Method*) the volume, and inclusive page numbers. Book references should give the full title, the publisher, and the place of publication. For example:

Feller, W. (1961) A simple proof of renewal theorems. *Comm. Pure Appl. Math.* **14**, 285–293.

Robinson, E. A. (1959) *An Introduction to Infinitely Many Variates.* Griffin, London.

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e) Indices and subscripts should be clearly distinguished, using the marking $\overset{4}{\vee}$, $\underset{4}{\wedge}$ where necessary.

Authors will receive only first proofs for correction; charges will be made for excessive alteration to these.

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