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in which probability models can be usefully developed, (4) papers in applied probability presented at conferences which do not publish their proceedings, and finally, (5) letters to the editor on any appropriate topic in applied probability.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 24 No. 3 of *Advances* contains the following papers:

MARC YOR. On some exponential functionals of Brownian motion
MICHAEL A. ZAZÁNIS. Analyticity of Poisson-driven stochastic systems
SEAN P. MEYN AND R. L. TWEEDIE. Stability of Markovian processes I: criteria for discrete-time chains
MASAAKI KIJIMA. Further monotonicity properties of renewal processes
W. D. SUDDERTH AND A. P. N. WEERASINGHE. A bang-bang strategy for a finite fuel stochastic control problem
CHENG-SHENG CHANG. A new ordering for stochastic majorization: theory and applications
K. D. GLAZEBROOK AND LYN R. WHITAKER. Single-machine stochastic scheduling with dependent processing times
SERGEI GRISHECHKIN. On a relationship between processor sharing queues and Crump–Mode–Jagers branching processes
C. N. LAWS. Resource pooling in queueing networks with dynamic routing
RICHARD R. WEBER. The interchangeability of tandem queues with heterogeneous customers and dependent service times
P. KONSTANTOPOULOS AND M. ZAZANIS. Sensitivity analysis for stationary and ergodic queues

Subscription rates (per volume) for the *Advances* in 1992 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.

Preliminary Announcement

INRIA/ORSA/TIMS/SMAI Conference on Applied Probability in Engineering, Computer and Communication Sciences: 16–18 June 1993, Paris

For the first time, the Applied Probability Group of ORSA/TIMS will have its meeting in Europe. The conference will be co-organized by INRIA (Institut National de Recherche en Informatique et Automatique), ORSA/TIMS (Operations Research Society of America/The Institute of Management Science) and SMAI (Société de Mathématiques Appliquées et Industrielles). The general theme of the conference is 'Applied Probability in Engineering, Computer and Communication Sciences'. The objectives are twofold: we wish to bring together researchers working in this field throughout the world and to take advantage of this meeting in order to enhance collaboration between applied probabilists within Europe at large. This meeting will be held on 16–18 June 1993, in Paris, France, during the week that precedes the 22nd Conference on Stochastic Processes and their Applications, to be held in the Netherlands.

Suggested Topics

The topics of interest include but are not limited to the following list: Markov chains, point processes, stochastic geometry, stochastic comparison, control of random discrete event systems, Markov decision processes, queueing networks, stochastic Petri networks, modeling of communication systems, modeling of manufacturing systems, modeling of computer systems, statistical theory of simulation, perturbation analysis, probabilistic analysis of algorithms, probabilistic combinatorial optimization, stochastic scheduling, reliability, risk and survival analysis.

Submission

Two kinds of submissions are solicited: (1) proposals for invited sessions; (2) contributed presentations for regular sessions. For both kinds of submissions, only abstracts are required. Each proposal for an invited session should include abstracts for all presentations, and a letter from the session organizer commenting on the focus of the session. All submissions will be reviewed by the program committee. Please send 4 copies of the proposals or the abstracts to

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Deadlines

1 November 1992 Submission of invited sessions
1 December 1992 Submission of contributed papers
1 February 1993 Acceptance notification

Program Committee (tentative)

E. Arjas (Oulu University, Finland), F. Baccelli (INRIA, France, Co-Chair), A. Borovkov (Academy of Sciences, Novosibirsk, Russia), P. Brémaud (CNRS, France, Co-Chair), D. Daley (ANU, Canberra, Australia), R. Disney (Texas A&M University, USA), P. Glynn (Stanford University, USA), A. Hordijk (Leiden University, The Netherlands), B. Hajek (University of Illinois, USA), V. Malyshev (INRIA, France and Moscow, Russia), A. Mandelbaum (Technion, Haifa, Israel), M. Miyazawa (Tokyo University, Japan), E. Pardoux (Université de Provence, Marseilles, France), M. Reiman (AT&T Bell Laboratories, Murray Hill, USA), G. Shanthikumar (University of California, Berkeley, USA), S. Stidlham (University of North Carolina, USA), D. Stoyan (Freiberg University, Germany), R. Weber (Cambridge, UK), D. Yao (Columbia University, New York, USA).

Organizing Committee

J. Eldridge, ORSA/TIMS, C. Juncker, INRIA, M. Simonetti, INRIA.

THE MATHEMATICAL SCIENTIST (TMS)

This publication contains papers on a variety of mathematical topics for the general information and enjoyment of mathematicians, statisticians and computer scientists; it also appeals to workers in any other discipline lending itself to the application of mathematical methods. Readers are encouraged to submit short papers, letters and problems concerned with the theory and application of mathematics, statistics or computing. Material for publication should be presented in a clear and simple style, suitable for an informed but non-specialist mathematical audience, and may be sent to any member of the editorial board:

Each volume consists of two issues distributed in June and December, totalling approximately 128 pages. Volume 17 (1992) costs £8.00 (US$14.00, $A18.00). It includes the following contributions:

Evaluating fuzzy representations of uncertainty, by Michael Laviolette and John W. Seaman, Jr.
Evidence and the posterior Bayes factor, by Murray Aitken
A brief history of infinite-dimensional skew fields, by P. M. Cohn
Comparing means of two Poisson distributions, by Hardeo Sahai and Satish C. Misra
Cover times for random walks on graphs, by Gunnar Blom and Dennis Sandell
The waiting time for the occurrence of k or more events in each of n independent Poisson processes, by William Woodside
Some (more or less) naturally occurring mixtures, by Norman L. Johnson and Samuel Kotz
A three-door game show and some of its variants, by V. V. Bapeswara Rao and M. Bhaskara Rao
Finite mapping by neural networks and truth functions, by Yoshifusa Ito
Solution of the stochastic birth-emigration model using continued fractions, by Brian Conolly and Christos Langaris
A new solution for the probability of completing sets in random sampling: definition of a 'two-dimensional factorial', by Jeffrey D. Lindsay
Thoughts on a new numerical system for hexadecimal numbers, by Robert W. Grubbström
A maximum likelihood proof of the Hadamard inequality, by ByoungSeon Choi

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.

SUBSCRIPTION RATES

Subscription rates (post free) for the 1992 volume of the *Journal* are as follows:

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

US$159.00; $A204.00; £90.00 for libraries and institutions;

US$53.00; $A68.00; £30.00 for individuals belonging to a recognised scientific society.

All other subscribers:

£90.00 for libraries and institutions;

£30.00 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

Papers submitted to the *Journal of Applied Probability* are considered on the understanding that they have not been published previously and are not under consideration by another publication. Papers 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;

(iii) primary and secondary classifications using the 1991 Mathematics Subject Classification, to be found in the 1990 Annual Index of *Mathematical Reviews*.

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 Heyde at The Australian National University in Canberra.

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Volume 29 Number 3

Research Papers

487 S. N. ETHIER. Eigenstructure of the infinitely-many-neutral-alleles diffusion model

499 BEN HAMBLY. On the limiting distribution of a supercritical branching process in a random environment

519 P.-C. G. VASSILIOU AND A. A. PAPADOPOULOU. Non-homogeneous semi-Markov systems and maintainability of the state sizes

535 JAMES G. BOOTH. A note on a one-compartment model with clustering

543 LAJOS TAKÁCS. On the total heights of random rooted trees

557 JAN BEIRLANT AND JOZEF L. TEUGELS. Limit distributions for compounded sums of extreme order statistics

575 MOHAMED BERRED. On record values and the exponent of a distribution with regularly varying upper tail

587 J. A. BUNGE AND H. N. NAGARAJA. Dependence structure of Poisson-paced records

597 WOLFGANG SCHWARZ. The Wiener process between a reflecting and an absorbing barrier

605 J. A. BATHER. Search models

616 MICHAEL FRENZ AND VOLKER SCHMIDT. An insensitivity property of ladder height distributions

625 JEFFREY S. BANKS AND RANGARAJAN K. SUNDARAM. A class of bandit problems yielding myopic optimal strategies

633 K. D. GLAZEBROOK, MICHAEL P. BAILEY AND LYN R. WHITAKER. Cost rate heuristics for semi-Markov decision processes

645 PHILIP J. BOLAND, FRANK PROSCHAN AND Y. L. TONG. A stochastic ordering of partial sums of independent random variables and of some random processes

655 ANTAL KOVÁTS AND TAMÁS F. MÓRI. Ageing properties of certain dependent geometric sums

667 CHENG-SHANG CHANG, XIULI CHAO, MICHAEL PINEDO AND RICHARD WEBER. On the optimality of LEPT and cμ rules for machines in parallel

682 V. ANANTHARAM. On fast simulation of the time to saturation of slotted ALOHA

691 S. CHUKOVA AND B. DIMITROV. On distributions having the almost-lack-of-memory property

699 SID BROWNE AND KARL SIGMAN. Work-modulated queues with applications to storage processes

713 D. J. DALEY AND L. D. SERVI. Exploiting Markov chains to infer queue length from transactional data

Short Communications

733 K. B. ATHREYA. On measures of non-degeneracy

740 P. N. RATHIE. On the volume distribution of the typical Poisson–Delauney cell

745 F. MATÚŠ. On equivalence of Markov properties over undirected graphs

Letter to the editor

750 JIANLIANG ZHANG AND RAKESH SHUKLA. A note on 'The statistical analysis of direct repeats in nucleic acid sequences'

753 Correction

754 OBITUARY: G. E. H. Reuter

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