# SUBSCRIPTION RATES

Subscription rates (post free) for volume 36 (1999) of the Journal of Applied Probability are as follows:

US\$232.50; \$A366.60; £141.00 for libraries and institutions;

US\$77.50; \$A122.20; £47.00 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*.

Please send all enquiries to: Applied Probability, School of Mathematics and Statistics, The University, Sheffield S3 7RH, UK.

We can provide back issue prices on application. Cheques, money orders, etc. should be made out to APPLIED PROBABILITY. Payment is accepted in US, UK or Australian currency or by VISA or Mastercard (phone: +44 114 222 3922; fax: +44 114 272 9782).

### 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 Applied Probability journals 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 not to accept for publication papers which cannot appear in print within 15 months of the date of receipt of the final version. Fifty reprints of each paper will be provided free; additional reprints are available 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. Please supply *three* double-spaced hard copies, at least one of which should be printed on one side of the paper only. The paper should include: (1) a short abstract of approximately 4–10 lines giving a non-mathematical description of the subject matter and results; (2) list of keywords detailing the contents for the purpose of computerised information retrieval; (3) primary and secondary classifications according to 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 free of charge from the Applied Probability Office. An updated version of the guide, with LATEX style files, can be obtained in electronic form on http://www.shef.ac.uk/~apt or on PC-compatible disk from the Applied Probability Office.

For efficiency in processing, authors are requested to send all submissions to the Applied Probability Office in Sheffield, rather than to individual editors. The address for all submissions is:

Executive Editor, Applied Probability, School of Mathematics and Statistics, The University, Sheffield S3 7RH, UK.

#### **COPYRIGHT**

The copyright of all published papers shall be vested in the Trust. When a paper is accepted for publication, the Trust requests the author(s) to sign a form assigning copyright to the Trust. Failure to do this promptly may delay or prevent publication.

Authorisation to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by the Applied Probability Trust for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$00.70 per copy, plus .20 per page is paid directly to CCC, 222 Rosewood Drive, Danvers, MA 01923, USA. 0021–9002/99 \$00.70 + .20.

Research Papers

- 301 JOCHEN GEIGER. Elementary new proofs of classical limit theorems for Galton-Watson processes
- 310 CHRISTIAN MEISE. On spectral gap estimates of a Markov chain via hitting times and coupling
- 320 HOWARD M. TAYLOR. The fundamental matrix for a certain random walk
- 334 S. ALILI. Asymptotic behaviour for random walks in random environments
- 350 BERNHARD GITTENBERGER AND GUY LOUCHARD. The Brownian excursion multidimensional local time density
- 374 ROBERT B. LUND, RONALD W. BUTLER AND ROBERT L. PAIGE. Prediction of shot noise
- 389 JENS LEDET JENSEN AND JAN PEDERSEN. Ornstein-Uhlenbeck type processes with nonnormal distribution
- 403 STAN ZACHARY AND ILZE ZIEDINS. Loss networks and Markov random fields
- 415 FRANK BALL. Central limit theorems for multivariate semi-Markov sequences and processes, with applications
- 433 S. T. RACHEV AND I. OLKIN. Mass transportation problems with capacity constraints
- 446 M. MÖHLE. Weak convergence to the coalescent in neutral population models
- 461 E. G. KYRIAKIDIS. Optimal control of a truncated general immigration process through total catastrophes
- 473 FRANK BALL AND PHILIP O'NEILL. The distribution of general final state random variables for stochastic epidemic models
- 492 JANKO GRAVNER. Recurrent ring dynamics in two-dimensional excitable cellular automata
- 512 RHONDA RIGHTER. A brokered market with heterogeneous suppliers and consumers
- 523 JAKŠA CVITANIĆ, HUYÊN PHAM AND NIZAR TOUZI. Super-replication in stochastic volatility models under portfolio constraints
- 546 WOLFGANG STADJE AND P. R. PARTHASARATHY. On the convergence to stationarity of the many-server Poisson queue
- 558 H. AYHAN, J. LIMON-ROBLES AND M. A. WORTMAN. On the time-dependent occupancy and backlog distributions for the  $GI/G/\infty$  queue
- 570 GORDON E. WILMOT. A Laplace transform representation in a class of renewal queueing and risk processes
- 585 ROBERT B. COOPER, SHUN-CHEN NIU AND MANDYAM M. SRINIVASAN. Setups in polling models: does it make sense to set up if no work is waiting?

## Short Communications

- 593 JEAN BERTOIN. On overshoots and hitting times for random walks
- 601 YUNSHYONG CHOW AND YU ZHANG. Inequalities for the score constant in matching random sequences
- 607 JÉRÔME MANUCEAU, MARYLÈNE TROUPÉ AND JEAN VAILLANT. On an entropy conservation principle
- 611 HAN-XING WANG AND DAFAN FANG. Asymptotic behaviour of population-size-dependent branching processes in Markovian random environments

Published by the Applied Probability Trust in association with the London Mathematical Society Copyright © 1999 by the Applied Probability Trust

ISSN 0021-9002