

FORTHCOMING PAPERS

The following papers have been accepted for publication in forthcoming issues. Further details are available **from the corresponding author** where an e-mail address or fax number is given.

Further information about the Applied Probability Trust and its publications is available on the World Wide Web. Our home page has the URL <http://www.shef.ac.uk/~apt/>

Also available from our Web site is a set of \LaTeX and \BIBTeX files that are designed to help authors prepare a paper for submission to Applied Probability Trust journals.

- ABRAMOV, VYACHESLAV M.** On a property of refusals stream
- ALEXANDER, KENNETH S.** Shortest common superstrings of random strings
- AL-MUTAIRI, D. K., AL-KHAMIS, T. M. and ABDEL-HAMEED, M. S. A** Bayesian approach for analyzing layered defense system and its ramification
- ALLAART, PIETER C.** An invariant-sum characterization of Benford's law
- ANDERSSON, HAKAN and DJEHICHE, BOUALEM** Limit theorems for the total size of a spatial epidemic
- ASMUSSEN, SØREN and KLÜPPELBERG, CLAUDIA** Stationary $M/G/1$ excursions in the presence of heavy tails
- ASMUSSEN, SØREN and TEUGELS, JOZEF L.** Convergence rates for $M/G/1$ queues and ruin problems with heavy tails • asmus@maths.lth.se
- BARBOUR, A. D. and PHATARFOD, R. M.** Dimensioning a multiple hashing scheme
- BARRY, DANIEL and HARTIGAN, JOHN A.** The minimax bookie
- BÄUERLE, NICOLE** Monotonicity results for $MR/GI/1$ queues
- BEAN, N. G., TAYLOR, P. G. and KELLY, F. P.** Can Braess's paradox occur in loss networks?
- CAI, JUN and WU, YANHONG** Characterization of life distributions under some generalised stochastic orderings
- CALVERT, BRUCE, SOLOMON, WIREMU and ZIEDINS, ILSE** Braess's paradox in a queueing network with state dependent routing
- CALVIN, JAMES M. and GLYNN, PETER W.** Average case behavior of random search for the maximum
- CAMBANIS, STAMATIS and FAKHRE-ZAKERI, ISSA** Forward and reversed time prediction of autoregressive sequences • issa@stat.unc.edu
- CAMPI, MARCO** A unique representation theorem for the conditional expectation of stationary processes and application to dynamic estimation problems
- CAVAZOS-CADENA, R. and FERNÁNDEZ-GAUCHERAND, E.** Value iteration in a class of average controlled Markov chains with unbounded costs: necessary and sufficient conditions for pointwise convergence • emmanuel@sie.arizona.edu
- CECI, CLAUDIA and GERARDI, ANNA** Filtering of a branching process given its split times

Forthcoming papers

- CHAO, X.** Partial balances in batch arrival batch service and assemble-transfer queueing networks
- CHEN, ANYUE and RENSHAW, ERIC** The $M/M/1$ queue with mass exodus and mass arrivals when empty
- CHEN, RONG-RONG** An extended class of time-continuous branching processes
- CHONG, K. S. and LAM, K.** Cost comparison of a spectrum of self-organizing rules
- COHEN, URI and WEISSMAN, ISHAY** The extremal index and clustering of high values for derived stationary sequences
- COLEMAN, J. L., HENDERSON, W., PEARCE, C. E. M. and TAYLOR, P. G.** A note on the correspondence between product-form batch-movement queueing networks and single-movement networks
- COSTANTINI, C. and SPIZZICHINO, F.** Explicit solution of an optimal stopping problem: the burn-in of conditionally exponential components
- DASSIOS, ANGELOS** Sample quantiles of additive renewal reward processes
• a.dassios@lse.ac.uk
- DEHAY, DOMINIQUE and LESKOW, JACEK** Functional limit theory for the spectral covariance estimator • leskow@pstat.ucsb.edu
- DEKKING, F.M.** An inequality for pairs of martingales and its application to fractal image coding
- DI MATTEO, ILARIA and ORSINGHER, ENZO** Detailed probabilistic analysis of the integrated three-valued telegraph signal
- DE NITTO PERSONÈ, VITTORIA and GRASSI, VINCENZO** Solution of finite QBD processes
- DETTE, HOLGER** On the generating functions of a random walk on the non-negative integers
- DION, J.P. and YANEV, N.M.** Limit theorems and estimation theory for branching processes with or without immigration
- ELSHAMY, MAGED** Stochastic models of damped vibrations
- FAGIUOLI, ENRICO and PELLEREY, FRANCO** Moment inequalities for sums of DMRL random variables
- FENG, SHUI** Propagation of chaos of multitype mean field interacting particle systems
• shuifeng@mcmail.cis.mcmaster.ca
- FOSAM, E. B. and SHANBHAG, D. N.** Variants of the Choquet–Deny theorem with applications
- FROSTIG, ESTHER and LEHTONEN, TAPANI** On the optimality of homogenous servers in a fork join queueing system with exponential processing times
- GAWELL, BOLESŁAW and KIMMEL, MAREK** Iterated Galton–Watson process
• kimmel@rice.edu
- GOMEZ-CORRAL, A. and ARTALEJO, J. R.** Steady state solution of a single-server queue with linear request repeated
- GONZALEZ, M. and MOLINA, M.** On the limit behaviour of a superadditive bisexual Galton–Watson branching process • mvelasco@ba.unex.es
- GOSSELIN, FRÉDÉRIC** Two classes of subcritical population-size-dependent Bienaymé–Galton–Watson branching processes • gosselin@cefe.cnrs-mop.fr
- GOUET, RAUL** Strong convergence of proportions in a multicolor Polya urn
- GRAVERSEN, S. E. and PESKIR, G.** On Wald’s type optimal stopping for Brownian motion
- GUERRY, M. A.** Properties of calculated predictions of grade sizes and the associated integer valued vectors

Forthcoming papers

GUTIERREZ, R., RICCIARDI, L. M., ROMAN, P. and TORRES, F. First-passage-time densities for time-non-homogeneous diffusion processes

HSIAU, SHOOU-REN Compound Poisson limit theorems for Markov chains

• srhsiau@math.ncue.edu.tw

HUANG, DAWEI and SPENCER, N.M. On a random vibration model

JAIN, GAUTAM and SIGMAN, KARL A Pollaczek–Khintchine formula for $M/G/1$ queues with disasters • sigman@ieor.columbia.edu

KEBIR, Y. Laplace transform for the renewal equation

KELLA, OFFER Stochastic storage networks: stationarity and the feedforward case

KELLA, OFFER and WHITT, WARD Stability and structural properties of stochastic storage networks

KLOEDEN, P. E., PLATEN, E., SCHURZ, H. and SORENSEN, M. On effects of discretization on estimators of drift parameters for diffusion processes

KLÜPPELBERG, C. and MIKOSCH, T. Large deviations of heavy-tailed random sums with applications to insurance and finance

KOUTRAS, M. V. and ALEXANDROU, V. A. Sooner waiting time problems in a sequence of trinomial trials

KROESE, DIRK P. Heavy traffic analysis for continuous polling models

• kroese@math.utwente.nl

LEE, DUAN-SHIN Analysis of a cyclic server queue with Bernoulli schedules

• lds@ccrl.nj.nec.com

LEFEBVRE, MARIO On the inverse of the first hitting time problem for bidimensional processes

LI, HAIJUN and SHAKED, MOSHE Aging first passage times of Markov processes: a matrix approach

LI, WEI, SHI, DINGHUA and CHAO, XIULI Reliability analysis of $M/G/1$ queueing systems with server breakdowns and vacations

LOCATELLI, MARCO Convergence properties of simulated annealing for continuous global optimization • locatelli@hermes.mc.dsi.unimi.it

LUND, ROBERT B. The geometric convergence rate of a Lindley random walk

• lund@stat.uga.edu

LUND, ROBERT and SMITH, WALTER A comparison of convergence rates for three models in the theory of dams

MA, CHUNSHENG A note on stochastic ordering of order statistics

MARTIN, R. J. and WALKER, A. M. A power-law model and other models for long-range dependence

MCCORMICK, WILLIAM P. Extremes for shot noise processes with heavy tailed amplitudes

MILLIGAN P.J.M. and DOWNHAM, D.Y. Models of superinfection and acquired immunity to multiple parasite strains • p.milligan@liverpool.ac.uk

MÖHLE, MARTIN Fixation in bisexual models with variable population sizes

NANDA, ASOK K., JAIN, KANCHAN and SINGH, HARSHINDER Properties of moments for s -order equilibrium distributions

NORBERG, TOMMY On the time a Markov chain spends in a lumped state

• tommy@math.chalmers.se

O'CONNELL, NEIL Large deviations for departures from a shared buffer

• noc@hplb.hpl.hp.com

OLOFSSON, PETER General branching processes with immigration

• petero@math.chalmers.se

Forthcoming papers

- PENROSE, MATHEW** Spatial epidemics with large finite range
• mathew.penrose@durham.ac.uk
- PHATARFOD, R. M., PRYDE, A. J. and DYTE, DAVID** The linear search problem with Markov dependent requests
- PREATER, JOHN** A perpetuity and the $M/M/\infty$ ranked server system
• j.preater@keele.ac.uk
- RAUL, GOUET** Strong convergence of proportions in a multicolor Polya urn
- RENSHAW, ERIC and DAI, YONGLONG** Regularity and symmetry results for birth-death-migration processes
- RIGHTER, RHONDA** Stochastic scheduling for a two machine open shop
- ROBERTS, G. O., JACKA, S. D. and POLLETT, P. K.** Non-explosivity of limits of conditioned birth and death processes
- RUIZ-MEDINA, M. D. and VALDERRAMA, M. J.** Dynamic forecasting with a Laplace random field. An application to geophysics data
- SABNIS, S. V. and NAIR, MINI R.** Coherent structures and unimodality
• svns@ganit.math.iitb.ernet.in
- SARKAR, ANISH** Continuity and convergence of the percolation function in continuum percolation
- SCHRIJNER, PAULINE and VAN DOORN, ERIK A.** Weak convergence of conditioned birth-death processes in discrete time
- SECCHI, PIERCESARE** Two-person red and black stochastic games
- SELIM, SHOKRI Z.** Time-dependent solution and optimal control of a bulk service queue
- SHAKED, MOSHE and WONG, TITYIK** Stochastic comparisons of random minimums and maximums
- SHAKED, MOSHE and WONG, TITYIK** Stochastic orders based on ratios of Laplace transforms
- SIMONOT, F. and SONG, Y.Q.** Characterization of convergence rates for the approximation of the stationary distribution of infinite monotone stochastic matrices
• simonofr@esstin.u-nancy.fr
- SINGH, HARSHINDER and SINGH, R. S.** On allocation of spares at component level versus system level
- SOLTANI, A. REZA** Reward processes with nonlinear reward functions
- SUMITA, USHIO and MASUDA, YASUSHI** Tandem queues with bulk arrivals, infinitely many servers and correlated service times
- TOYOIZUMI, HIROSHI** Nonparametric estimate of virtual waiting time distribution from count data
- TANIKAWA, AKIO** On the rate of convergence of Borovkov's multidimensional ergodic Markov chain
- TASCHE, DIRK** On the second Borelli-Cantelli lemma for strongly mixing sequences of events
- TONG, Y. L.** Some majorization orderings of heterogeneity in carrier-borne epidemics
- YEH, LAM** The rate of occurrence of failure
- WANG, YONGJIN** A proof to the persistence criteria of a class of superprocesses
- WANG, LIQUN and PÖTZELBERGER, KLAUS** Boundary crossing probability for Brownian motion and general boundaries
- WILLIE, HELMUT** A short note on single server loss systems with a superposition of inputs
- WILLMOT, G. E. and LIN, XIAODONG** Simplified bounds on the tails of compound distributions

Forthcoming papers

- WOODHAM, SARAH-ANNE and RICHARDS, DONALD ST P.** Comparison of system reliability functions under laboratory and actual operating environments
YEH, LAM The rate of occurrence of failure

A similar list of papers accepted for publication in *Advances in Applied Probability* now appears at the end of each issue of that journal.

Journal of Time Series Analysis

A Journal sponsored by the Bernoulli Society for Mathematical Statistics and Probability

Edited by M. B. Priestley

The leading journal in its field, publishing papers on both fundamental theory and applications. The editorial board consists of many of the world's leading experts in Time Series Analysis.

ORDER FORM

JOURNAL OF TIME SERIES ANALYSIS

Subscription Rates, Volume 17, 1996

ISSN 0143-9782

Institutional Rates, £229.00 (UK-Europe), \$406.00 (N. America*), £252.00 (Rest of World)

Personal Rates, £52.00 (UK-Europe), \$104.00 (N. America*), £65.00 (Rest of World)

Members of the Bernoulli Society, £47.00 (UK-Europe), \$89.00 (N. America*), £58.00 (Rest of World)

Published in: January, March, May, July, September and November

*Canadian customers please add 7% GST

- Please enter my subscription/send me a sample copy
- I enclose a cheque/money order payable to Blackwell Publishers
- Please charge my American Express/Diners Club/Mastercard/Visa account

Card Number Expiry Date

Signature Date

Name


Address

..... Postcode

Payment must accompany orders

Please return this form to: Journals Marketing, Blackwell Publishers, 108 Cowley Road, Oxford, OX4 1JF, UK.

Or to: Journals Marketing, JTSA, Blackwell Publishers, 238 Main Street, Cambridge, MA 02142, USA.

<input type="checkbox"/> SEARCH	Internet
<input type="checkbox"/> NEWS & EVENTS	Full details of Blackwell Publishers books and journals are available on the Internet.
<input type="checkbox"/> BOOKS	To access use a WWW browser such as Netscape or Mosaic, and the following URL:
<input type="checkbox"/> JOURNALS	http://www.blackwellpublishers.co.uk
<input type="checkbox"/> RESOURCES	
<input type="checkbox"/> SERVICES	

APPLY FOR YOUR FREE SAMPLE COPY BY E-MAIL!

jnlsamples@blackwellpublishers.co.uk

SUBSCRIPTION RATES

Subscription rates (post free) for volume **33** (1996) of the *Journal of Applied Probability* are as follows:

US\$191.60; \$A261.80; £119.00 for libraries and institutions;

US\$63.90; \$A87.35; £39.70 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: +44 114 282 4269; 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. 0021-9002/96 \$00.70 + .20.

Research Papers

- 601 ECKHARD PLATEN AND ROLANDO REBOLLEDO. Principles for modelling financial markets
- 614 K. A. BOROVKOV AND V. A. VATUTIN. On distribution tails and expectations of maxima in critical branching processes
- 623 Y. QUENNEL ZHAO AND DANIELLE LIU. The censored Markov chain and the best augmentation
- 630 M. P. QUINE AND J. S. LAW. Exact results for a secretary problem
- 640 TOBIAS RYDÉN. On identifiability and order of continuous-time aggregated Markov chains, Markov-modulated Poisson processes, and phase-type distributions
- 654 J. HÜSLER AND M. SCHMIDT. A note on the point processes of rare events
- 664 HARRY JOE. Time series models with univariate margins in the convolution-closed infinitely divisible class
- 678 ALEXANDER V. GNEDIN. On the full information best-choice problem
- 688 DJAOUAD TAÏBI. Une généralisation du modèle de diffusion de Bernoulli–Laplace
- 698 ASOK K. NANDA, KANCHAN JAIN AND HARSHINDER SINGH. On closure of some partial orderings under mixtures
- 707 EROL A. PEKÖZ. Stein’s method for geometric approximation
- 714 DOUGLAS W. McBETH AND ANANDA P. N. WEERASINGHE. Finite-time optimal control of a process leaving an interval
- 729 TUHAO CHEN AND E. SENETA. Multivariate Bonferroni-type lower bounds
- 741 ENRIQUE ANDJEL AND RINALDO SCHINAZI. A complete convergence theorem for an epidemic model
- 749 ROBERT P. DOBROW. On the distribution of distances in recursive trees
- 758 IVY HSU AND JEAN WALRAND. Dynamic bandwidth allocation for ATM switches
- 772 HARALD HAUKÁS AND TERJE AVEN. A general formula for the downtime distribution of a parallel system
- 786 AD RIDDER. Fast simulation of Markov fluid models
- 804 HONG CHEN. Rate of convergence of the fluid approximation for generalized Jackson networks
- 815 LIMING LIU AND DING-HUA SHI. Busy period in $GI^X/G/\infty$
- 830 ROBERT B. LUND. The stability of storage models with shot noise input
- 840 N. G. DUFFIELD. Economies of scale in queues with sources having power-law large deviation scalings
- 858 XIULI CHAO, MICHAEL PINEDO AND DEQUAN SHAW. Networks of queues with batch services and customer coalescence
- 870 WILLIAM P. PETERSON AND LAWRENCE M. WEIN. Heavy traffic analysis of a transportation network model
- 886 COSTAS COURCOUBETIS AND RICHARD WEBER. Buffer overflow asymptotics for a buffer handling many traffic sources

Short Communications

- 904 RAINER WITTMANN. Superprophet inequalities for independent random variables
- 909 TAKIS KONSTANTOPOULOS. A local proof of the Swiss Army formula of Palm calculus