4		
-	Applied Probability journals online at http://projecteuclid.org/jap http://projecteuclid.org/aap	
	Journal of Applied Probability and Advances in Applied Probability are now available online, in partnership with Project Euclid, at no extra cos to subscribers.	
-	 The online editions include an electronic version of each new issue (in PDF format) some weeks before the printed version becomes available an archive of all issues since 1998 full bibliographic details of each article, along with its abstract and an actively linked list of references a search facility, allowing users to search by author name, article title, subject or keyword, or through the full text of the abstract or the article itself 	
+	Access The abstract and reference list of each article are available free to al users; full access to the archive, including the full text of articles, is currently available at no extra charge to subscribers to the print editions	
	Individual subscribers should register with Project Euclid by creating a user profile, entering their JAP and/or AAP subscription number where a 'subscriber code' is requested.	
-	Institutional subscribers should complete and return a licence agreemen (available at http://www.appliedprobability.org) to the Applied Probability office along with the details of their IP range.	
+	Non-subscribers can gain access to individual articles on a pay-per- basis.	
	For further information, please contact Sue Boyles: telephone +44 114 222 3922 fax +44 114 222 3926, email s.c.boyles@sheffield.ac.uk, write to	
	Applied Probability School of Mathematics and Statistics University of Sheffield Sheffield S3 7RH, UK	
	or visit our website: www.appliedprobability.org	

AR	CELEBRATING 50 APPLIED PROBA	YEARS OF THE BILITY TRUST		
	The Applied Probability Trust and the Royal Statistical Society present the 50th Anniversary Journal of Applied Probability special lectures			
Sir John Kingman	Applied Probability and applied probability; now, then and in the future			
Dan Crisan (Imperial)	Classical and modern results in the theory and applications of stochastic filtering			
Alexander Gnedin (Queen Mary)	A survey of lambda-coalescents Wednesday 9 April 2014, 2–5pm			
The lectures will take place at The University of Sheffield Hicks Building Lecture Theatre 7 Hounsfield Road, UK For further information, please contact Sue Boyles by email s.c.boyles@sheffield.ac.uk or visit http://www.appliedprobability.org				

Subscription rates

Subscription rates for volume **51** (2014) of *Journal of Applied Probability (JAP)* are as follows (post free and including online access at http://projecteuclid.org/jap/): US\$340.00; A\$345.00; £210.00 for libraries and institutions; or US\$114.00; A\$115.00; £70.00 for individuals belonging to a recognised scientific society. The subscription rates for volume **46** (2014) of *Advances in Applied Probability*, the companion publication, are the same; if both journals are ordered directly from the Applied Probability office at the same time, the combined price is discounted by 10%. Please send all enquiries to: Applied Probability Subscriptions, School of Mathematics and Statistics, University of Sheffield, Sheffield S3 7RH, UK (telephone +44 114 222 3922; fax +44 114 222 3926; email s.c.boyles@sheffield.ac.uk). Cheques, money orders, etc. should be made payable to 'Applied Probability'. Payment is acceptable in US, Australian or UK currency, or by Visa or Mastercard. We can provide back issue prices on application.

Notes for contributors

Research papers are published in both *Journal of Applied Probability (JAP)* and *Advances in Applied Probability (AAP)*, with longer papers typically appearing in *AAP*. However, assignation of papers between the two journals is made by the Editor on an issue-by-issue basis. A submission to Applied Probability is considered as a submission to either journal. In addition, *AAP* publishes letters specifically related to papers that have appeared in *AAP* and *JAP* publishes short communications of a few printed pages in the nature of notes and letters specifically related to papers that have appeared in *JAP*. Review papers and papers in *stochastic geometry and statistical applications* are published in *AAP*.

Fifty offprints of each paper will be provided free, with additional offprints available at cost.

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. Accepted papers will not be published elsewhere without the written permission of the Trust. Submitted papers should be in English. It is the author's responsibility to ensure an acceptable standard of language, and a paper failing to meet this requirement may go back to the author for rewriting before being sent out for review.

Papers should include: (i) a **short abstract** of 4–10 lines giving a non-mathematical description of the subject matter and results; (ii) a list of **keywords** detailing the contents; and (iii) a list of **classifications**, using the 2010 Mathematics Subject Classification scheme (http://www.ams.org/msc/). Letters to the Editor need not include these. To assist authors in writing papers in the Applied Probability style, they may use the $\[MText{EX}\]$ class file aptpub.cls, available from http://www.appliedprobability.org/. Use of this class file is not a condition of submission, but will considerably increase the speed at which papers are processed.

Papers should be submitted as hard copy or as electronic files. All submissions will be acknowledged on receipt and **must be accompanied by a covering letter stating the author's postal address and affiliation**. Hard copy: Send **all** submissions to the Applied Probability office in Sheffield, and not to individual editors. Two copies of the paper, at least one of which should be double spaced, should be sent to: **Executive Editor, Applied Probability, School of Mathematics and Statistics, University of Sheffield, Sheffield S3 7RH, UK**. Electronic submission: Please email a **double-spaced** PostScriptTM (.ps) or portable document format (.pdf) file, not exceeding 1 Mb. **The files must be clearly identified by name in a separate covering message**. The address for email submissions is **submissions_japaap@sheffield.ac.uk**.

Copyright

The copyright of all published papers is vested in the Applied Probability Trust. When a paper is accepted for publication, the Trust asks the authors to assign copyright by signing a form in which the terms of copyright are listed. 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 corresponding processing and royalty fees (see http://www.copyright.com) are paid directly to CCC, 222 Rosewood Drive, Danvers, MA 01923, USA. 0021–9002/14

PRINTED IN EUROPE BY BERFORTS INFORMATION PRESS, OXFORDSHIRE

Volume 51 Number 1

Research Papers

- 1 DAWEI HONG, SHUSHUANG MAN, JEAN-CAMILLE BIRGET AND DESMOND S. LUN. A wavelet-based almost-sure uniform approximation of fractional Brownian motion with a parallel algorithm
- 19 LUISA BEGHIN AND CLAUDIO MACCI. Fractional discrete processes: compound and mixed Poisson representations
- 37 LEI HUA, HARRY JOE AND HAIJUN LI. Relations between hidden regular variation and the tail order of copulas
- 58 NARAYANASWAMY BALAKRISHNAN, GHOBAD BARMALZAN AND ABEDIN HAIDARI. Stochastic orderings and ageing properties of residual life lengths of live components in (n k + 1)-out-of-*n* systems
- 69 BENT NATVIG. On the deterioration of nonrepairable multistate strongly coherent systems
- 82 N. BAL/AKRISHNAN AND WIŁLIAM VOLTERMAN. On the signatures of ordered system lifetimes
- 92 MARK HUBER AND SARAH SCHOTT. Random construction of interpolating sets for highdimensional integration
- 106 ANTAR BANDYOPADHYAY AND FARKHONDEH SAJADI. On the nearest-neighbor algorithm for the mean-field traveling salesman problem
- 118 PHIL HOWLETT, CHARLES PEARCE AND JULIA PIANTADOSI. A new look at urban water storage in a series of connected dams
- 136 SØREN ASMUSSEN AND SERGEY FOSS. On exceedance times for some processes with dependent increments
- 152 LEANDRO P. R. PIMENTEL. On the location of the maximum of a continuous stochastic process
- 162 ORA E. PERCUS AND JEROME K. PERCUS. The maximum of a symmetric next neighbor walk on the nonnegative integers
- 174 MATTEO RUGGIERO. Species dynamics in the two-parameter Poisson–Dirichlet diffusion model
- 191 JAKOB E. BJÖRNBERG AND ERIK I. BROMAN. Coexistence and noncoexistence of Markovian viruses and their hosts
- 209 V. LE. Coalescence times for the Bienaymé–Galton–Watson process
- 219 ANYUE CHEN, JUNPING LI, YIQING CHEN AND DINGXUAN ZHOU. Asymptotic behaviour of extinction probability of interacting branching collision processes
- 235 D. ARISTOFF. Percolation of hard disks
- 247 JOSEPH LEHEC. Cover times and generic chaining
- 262 SAMUEL N. COHEN. Undiscounted Markov chain BSDEs to stopping times

Short Communications

- 282 CARL LINDBERG. Pairs trading with opportunity cost
- 287 RENATO JACOB GAVA AND DANILO SALOTTI. Stopping probabilities for patterns in Markov chains
- 293 HANSJÖRG ALBRECHER, ONNO J. BOXMA AND JEVGENIJS IVANOVS. On simple ruin expressions in dependent Sparre Andersen risk models

Published by the **Applied Probability Trust** Copyright © 2014 by the **Applied Probability Trust**

ISSN 0021-9002