

THE ANNALS
of
APPLIED
PROBABILITY

AN OFFICIAL JOURNAL OF THE
INSTITUTE OF MATHEMATICAL STATISTICS

VOLUME 5

1995

CONTENTS OF VOLUME 5

Articles

ABATE, JOSEPH, CHOUDHURY, GAGAN L., LUCANTONI, DAVID M. AND WHITT, WARD. Asymptotic analysis of tail probabilities based on the computation of moments.	983-1007
AKAHORI, JIRÔ. Some formulae for a new type of path-dependent option	383-388
ASMUSSEN, SØREN, GLYNN, PETER AND PITMAN, JIM. Discretization error in simulation of one-dimensional reflecting Brownian motion	875-896
ATHREYA, K. B. AND VIDYASHANKAR, A. N. Large deviation rates for branching processes. II. The multitype case	566-576
BARSKY, DAVID J. AND GANDOLFI, ALBERTO. A generalized maximum pseudo-likelihood estimator for noisy Markov fields . . .	1095-1125
BIGGINS, J. D. The growth and spread of the general branching random walk.	1008-1024
BOSE, A. AND KAJ, I. Diffusion approximation for an age-structured population	140-157
BRIGHTWELL, GRAHAM, OTT, TEUNIS J. AND WINKLER, PETER. Target shooting with programmed random variables	834-853
CHEN, HONG. Fluid approximations and stability of multiclass queueing networks: work-conserving disciplines	637-665
CHOUDHURY, GAGAN L., LUCANTONI, DAVID M., WHITT, WARD AND ABATE, JOSEPH. Asymptotic analysis of tail probabilities based on the computation of moments.	983-1007
COFFMAN, E. G., JR., PUHALSKII, A. A. AND REIMAN, M. I. Polling systems with zero switchover times: a heavy-traffic averaging principle	681-719
CSÖRGŐ, SÁNDOR AND SIMONS, GORDON. Precision calculation of distributions for trimmed sums.	854-873
CVITANIĆ, J., SONER, H. M. AND SHREVE, S. E. There is no nontrivial hedging portfolio for option pricing with transaction costs	327-355
DAI, J. G. On positive Harris recurrence of multiclass queueing networks: a unified approach via fluid limit models	49-77
DASSIOS, ANGELOS. The distribution of the quantile of a Brownian motion with drift and the pricing of related path-dependent options	389-398
DELBAEN, FREDDY AND SCHACHERMAYER, WALTER. The existence of absolutely continuous local martingale measures	926-945
DEMPSTER, M. A. H. AND YE, J. J. Impulse control of piecewise deterministic Markov processes	399-423
DINWOODIE, I. H. A probability inequality for the occupation measure of a reversible Markov chain.	37-43

DOBROW, ROBERT P. AND FILL, JAMES ALLEN. On the Markov chain for the move-to-root rule for binary search trees	1-19
DOBROW, ROBERT P. AND FILL, JAMES ALLEN. Rates of convergence for the move-to-root Markov chain for binary search trees	20-36
DUFFIE, DARRELL AND GLYNN, PETER. Efficient Monte Carlo simulation of security prices	897-905
DUFFIE, DARRELL, MA, JIN AND YONG, JIONGMIN. Black's consol rate conjecture	356-382
EICHLER, MICHAEL. Empirical spectral processes and their applications to stationary point processes	1161-1176
EMBRECHTS, P., ROGERS, L. C. G. AND YOR, M. A proof of Dassios' representation of the α -quantile of Brownian motion with drift	757-767
FILL, JAMES ALLEN AND DOBROW, ROBERT P. On the Markov chain for the move-to-root rule for binary search trees	1-19
FILL, JAMES ALLEN AND DOBROW, ROBERT P. Rates of convergence for the move-to-root Markov chain for binary search trees	20-36
FORT, JEAN-CLAUDE AND PAGÈS, GILLES. About the a.s. convergence of the Kohonen algorithm with a generalized neighborhood function	1177-1216
FOX, BENNETT L. AND HEINE, GEORGE W. Probabilistic search with overrides	1087-1094
FRANCOS, JOSEPH M., MEIRI, A. ZVI AND PORAT, BOAZ. A Wold-like decomposition of two-dimensional discrete homogeneous random fields	248-260
FRIEZE, ALAN AND PITTEL, BORIS G. Probabilistic analysis of an algorithm in the theory of markets in indivisible goods	768-808
FUNAKI, T., SURGAILIS, D. AND WOYCZYNSKI, W. A. Gibbs-Cox random fields and Burgers turbulence	461-492
GANDOLFI, ALBERTO AND BARSKY, DAVID J. A generalized maximum pseudo-likelihood estimator for noisy Markov fields	1095-1125
GANDOLFI, A. AND VAN DEN BERG, J. A triangle inequality for covariances of binary FKG random variables	322-326
GEMAN, STUART, KEHAGIAS, ATHANASIOS AND KÜNSCH, HANS. Hidden Markov random fields	577-602
GLASSERMAN, PAUL AND KOU, SHING-GANG. Limits of first passage times to rare sets in regenerative processes	424-445
GLYNN, PETER AND DUFFIE, DARRELL. Efficient Monte Carlo simulation of security prices	897-905
GLYNN, PETER, PITMAN, JIM AND ÁSMUSSEN, SØREN. Discretization error in simulation of one-dimensional reflecting Brownian motion	875-896
GNEDIN, ALEXANDER V. AND KRENGEL, ULRICH. A stochastic game of optimal stopping and order selection	310-321

GRAHAM, CARL AND MÉLÉARD, SYLVIE. Dynamic asymptotic results for a generalized star-shaped loss network	666–680
HEINE, GEORGE W. AND FOX, BENNETT L. Probabilistic search with overrides	1087–1094
HENDERSON, W., PEARCE, C. E. M., TAYLOR, P. G. AND VAN DIJK, N. M. Insensitivity in discrete-time generalized semi-Markov processes allowing multiple events and probabilistic service scheduling	78–96
ISHAM, VALERIE. Stochastic models of host–macroparasite interaction	720–740
KAJ, I. AND BOSE, A. Diffusion approximation for an age-structured population	140–157
KALLIANPUR, G. AND XIONG, J. Diffusion approximation of nuclear space-valued stochastic differential equations driven by Poisson random measures	493–517
KANG, HYUN-CHUNG, KRONE, STEPHEN M. AND NEUHAUSER, CLAUDIA. Stepping-stone models with extinction and recolonization	1025–1060
KASPI, HAYA AND MANDELBAUM, AVI. Lévy bandits: multi-armed bandits driven by Lévy processes	541–565
KEHAGIAS, ATHANASIOS, KÜNSCH, HANS AND GEMAN, STUART. Hidden Markov random fields	577–602
KOGAN, Y., LIPTSER, R. AND SHENFIELD, M. State-dependent Beneš buffer model with fast loading and output rates	97–120
KOTELENEZ, PETER. A stochastic Navier–Stokes equation for the vorticity of a two-dimensional fluid	1126–1160
KOU, SHING-GANG AND GLASSERMAN, PAUL. Limits of first passage times to rare sets in regenerative processes	424–445
KRENGEL, ULRICH AND GNEDIN, ALEXANDER V. A stochastic game of optimal stopping and order selection	310–321
KRONE, STEPHEN M., NEUHAUSER, CLAUDIA AND KANG, HYUN-CHUNG. Stepping-stone models with extinction and recolonization	1025–1060
KÜNSCH, HANS, GEMAN, STUART AND KEHAGIAS, ATHANASIOS. Hidden Markov random fields	577–602
KUSUOKA, SHIGEO. Limit theorem on option replication cost with transaction costs	198–221
LEVENTAL, SHLOMO AND SKOROHOD, ANATOLII V. A necessary and sufficient condition for absence of arbitrage with tame portfolios	906–925
LIGGETT, THOMAS M. Survival of discrete time growth models, with applications to oriented percolation	613–636
LIPTSER, R., SHENFIELD, M. AND KOGAN, Y. State-dependent Beneš buffer model with fast loading and output rates	97–120
LUCANTONI, DAVID M., WHITT, WARD, ABATE, JOSEPH AND CHOUDHURY, GAGAN L. Asymptotic analysis of tail probabilities based on the computation of moments	983–1007

MA, JIN, YONG, JIONGMIN AND DUFFIE, DARRELL. Black's consol rate conjecture	356–382
MANDELBAUM, AVI AND KASPI, HAYA. Lévy bandits: multi-armed bandits driven by Lévy processes	541–565
MASE, SHIGERU. Consistency of the maximum pseudo-likelihood estimator of continuous state space Gibbsian processes	603–612
MCDIARMID, COLIN. Minimal positions in a branching random walk	128–139
MEIRI, A. ZVI, PORAT, BOAZ AND FRANCOS, JOSEPH M. A Wold-like decomposition of two-dimensional discrete homogeneous random fields	248–260
MÉLÉARD, SYLVIE AND GRAHAM, CARL. Dynamic asymptotic results for a generalized star-shaped loss network	666–680
MEYN, SEAN P. Transience of multiclass queueing networks via fluid limit models	946–957
MOUNTFORD, T. AND PRABHAKAR, B. On the weak convergence of departures from an infinite series of $M/1$ queues	121–127
NEUHAUSER, CLAUDIA, KANG, HYUN-CHUNG AND KRONE, STEPHEN M. Stepping-stone models with extinction and recolonization	1025–1060
NIEMIRO, WOJCIECH AND POKAROWSKI, PIOTR. Tail events of some nonhomogeneous Markov chains	261–293
OTT, TEUNIS J., WINKLER, PETER AND BRIGHTWELL, GRAHAM. Target shooting with programmed random variables	834–853
PAGÈS, GILLES AND FORT, JEAN-CLAUDE. About the a.s. convergence of the Kohonen algorithm with a generalized neighborhood function	1177–1216
PEARCE, C. E. M., TAYLOR, P. G., VAN DIJK, N. M. AND HENDERSON, W. Insensitivity in discrete-time generalized semi-Markov processes allowing multiple events and probabilistic service scheduling	78–96
PITMAN, JIM, ASMUSSEN, SØREN AND GLYNN, PETER. Discretization error in simulation of one-dimensional reflecting Brownian motion	875–896
PITT, LOREN D., ROBEVA, RAINA AND WANG, DAO YI. An error analysis for the numerical calculation of certain random integrals: Part 1	171–197
PITTEL, BORIS G. AND FRIEZE, ALAN. Probabilistic analysis of an algorithm in the theory of markets in indivisible goods	768–808
POKAROWSKI, PIOTR AND NIEMIRO, WOJCIECH. Tail events of some nonhomogeneous Markov chains	261–293
PORAT, BOAZ, FRANCOS, JOSEPH M. AND MEIRI, A. ZVI. A Wold-like decomposition of two-dimensional discrete homogeneous random fields	248–260
POVEL, TOBIAS. On weak convergence of conditional survival measure of one-dimensional Brownian motion with a drift	222–238

PRABHAKAR, B. AND MOUNTFORD, T. On the weak convergence of departures from an infinite series of $\cdot/M/1$ queues	121-127
PUHALSKII, A. A., REIMAN, M. I. AND COFFMAN, E. G., JR. Polling systems with zero switchover times: a heavy-traffic averaging principle.	681-719
REIMAN, M. I., COFFMAN, E. G., JR. AND PUHALSKII, A. A. Polling systems with zero switchover times: a heavy-traffic averaging principle	681-719
REINERT, GESINE. The asymptotic evolution of the general stochastic epidemic.	1061-1086
RHEE, WANSOO T. On rates of convergence for common subsequences and first passage time	44-48
RITTER, KLAUS, WASILKOWSKI, GRZEGORZ W. AND WOŹNIAKOWSKI, HENRYK. Multivariate integration and approximation for random fields satisfying Sacks-Ylvisaker conditions	518-540
ROBERTS, G. O. AND SHORTLAND, C. F. The hazard rate tangent approximation for boundary hitting times.	446-460
ROBEVA, RAINA, WANG, DAO YI AND PITT, LOREN D. An error analysis for the numerical calculation of certain random integrals: Part 1	171-197
ROGERS, L. C. G., YOR, M. AND EMBRECHTS, P. A proof of Dassios' representation of the α -quantile of Brownian motion with drift	757-767
ROSENBLATT, MURRAY. Prediction and non-Gaussian autoregressive stationary sequences	239-247
SCHACHERMAYER, WALTER AND DELBAEN, FREDDY. The existence of absolutely continuous local martingale measures	926-945
SELLKE, THOMAS M. How many iid samples does it take to see all the balls in a box?	294-309
SHENFIELD, M., KOGAN, Y. AND LIPTSER, R. State-dependent Beneš buffer model with fast loading and output rates	97-120
SHORTLAND, C. F. AND ROBERTS, G. O. The hazard rate tangent approximation for boundary hitting times.	446-460
SHREVE, S. E., CVITANIĆ, J. AND SONER, H. M. There is no nontrivial hedging portfolio for option pricing with transaction costs	327-355
SIMONS, GORDON AND CSÖRGŐ, SÁNDOR. Precision calculation of distributions for trimmed sums.	854-873
SKOROHOD, ANATOLII V. AND LEVENTAL, SHLOMO. A necessary and sufficient condition for absence of arbitrage with tame portfolios	906-925
SONER, H. M., SHREVE, S. E. AND CVITANIĆ, J. There is no nontrivial hedging portfolio for option pricing with transaction costs	327-355
STEIN, MICHAEL L. Predicting integrals of stochastic processes	158-170

SURGAILIS, D., WOYCZYNSKI, W. A. AND FUNAKI, T. Gibbs–Cox random fields and Burgers turbulence	461–492
TAKÁCS, LAJOS. On the local time of the Brownian motion	741–756
TAYLOR, P. G., VAN DIJK, N. M., HENDERSON, W. AND PEARCE, C. E. M. Insensitivity in discrete-time generalized semi-Markov processes allowing multiple events and probabilistic service scheduling.	78–96
VAN DEN BERG, J. AND GANDOLFI, A. A triangle inequality for covariances of binary FKG random variables	322–326
VAN DIJK, N. M., HENDERSON, W., PEARCE, C. E. M. AND TAYLOR, P. G. Insensitivity in discrete-time generalized semi-Markov processes allowing multiple events and probabilistic service scheduling.	78–96
VAN MIEGHEM, JAN A. Dynamic scheduling with convex delay costs: the generalized $c\mu$ rule	809–833
VIDYASHANKAR, A. N. AND ATHREYA, K. B. Large deviation rates for branching processes. II. The multitype case	566–576
WANG, DAO YI, PITT, LOREN D. AND ROBEVA, RAINA. An error analysis for the numerical calculation of certain random integrals: Part 1	171–197
WASILKOWSKI, GRZEGORZ W., WOŹNIAKOWSKI, HENRYK AND RITTER, KLAUS. Multivariate integration and approximation for random fields satisfying Sacks–Ylvisaker conditions.	518–540
WHITT, WARD, ABATE, JOSEPH, CHOUDHURY, GAGAN L. AND LUCANTONI, DAVID M. Asymptotic analysis of tail probabilities based on the computation of moments.	983–1007
WINKLER, PETER, BRIGHTWELL, GRAHAM AND OTT, TEUNIS J. Target shooting with programmed random variables	834–853
WORMALD, NICHOLAS C. Differential equations for random processes and random graphs	1217–1235
WOYCZYNSKI, W. A., FUNAKI, T. AND SURGAILIS, D. Gibbs–Cox random fields and Burgers turbulence	461–492
WOŹNIAKOWSKI, HENRYK, RITTER, KLAUS AND WASILKOWSKI, GRZEGORZ W. Multivariate integration and approximation for random fields satisfying Sacks–Ylvisaker conditions	518–540
XIONG, J. AND KALLIANPUR, G. Diffusion approximation of nuclear space-valued stochastic differential equations driven by Poisson random measures	493–517
YAMADA, KEIGO. Diffusion approximation for open state-dependent queueing networks under heavy traffic situation.	958–982
YE, J. J. AND DEMPSTER, M. A. H. Impulse control of piecewise deterministic Markov processes	399–423
YONG, JIONGMIN, DUFFIE, DARRELL AND MA, JIN. Black’s consol rate conjecture	356–382

YOR, M., EMBRECHTS, P. AND ROGERS, L. C. G. A proof of Dassios' representation of the α -quantile of Brownian motion with drift	757–767
ZHANG, YU. A limit theorem for matching random sequences allowing deletions	1236–1240

Correction

ALEXANDER, KENNETH S. Rates of convergence of means for distance-minimizing subadditive Euclidean functions	327
-----------------------------------------------------------------------------------------------------------------------	-----