

# THE ANNALS *of* APPLIED PROBABILITY

*AN OFFICIAL JOURNAL OF THE*  
INSTITUTE OF MATHEMATICAL STATISTICS

## Articles

Unoriented first-passage percolation on the $n$ -cube .....	ANDERS MARTINSSON	2597
Second-order Markov random fields for independent sets on the infinite Cayley tree .....	DAVID A. GOLDBERG	2626
Establishing some order amongst exact approximations of MCMCs .....	CHRISTOPHE ANDRIEU AND MATTI VIHOLA	2661
Stochastic differential equations with Sobolev diffusion and singular drift and applications .....	XICHENG ZHANG	2697
What is the probability that a large random matrix has no real eigenvalues? .....	EUGENE KANZIEPER, MIHAİL POPLAVSKYI, CARSTEN TIMM, ROGER TRIBE AND OLEG ZABORONSKI	2733
Volatility estimation under one-sided errors with applications to limit order books .....	MARKUS BIBINGER, MORITZ JIRAK AND MARKUS REISS	2754
Shortest path through random points .....	SUNG JIN HWANG, STEVEN B. DAMELIN AND ALFRED O. HERO III	2791
Critical behaviour of the partner model .....	ERIC FOXALL	2824
Rough fractional diffusions as scaling limits of nearly unstable heavy tailed Hawkes processes .....	THIBAULT JAISSON AND MATHIEU ROSENBAUM	2860
Random walks on torus and random interlacements: Macroscopic coupling and phase transition .....	JIRÍ ČERNÝ AND AUGUSTO TEIXEIRA	2883
Elimination of intermediate species in multiscale stochastic reaction networks .....	DANIELE CAPPELLETTI AND CARSTEN WIUF	2915
Analysis of large unreliable stochastic networks .....	WEN SUN, MATHIEU FEUILLET AND PHILIPPE ROBERT	2959
From Feynman–Kac formulae to numerical stochastic homogenization in electrical impedance tomography .....	PETTERI PIIROINEN AND MARTIN SIMON	3001
Perfect sampling for nonhomogeneous Markov chains and hidden Markov models .....	NICK WHITELEY AND ANTHONY LEE	3044
Almost optimal sparsification of random geometric graphs .....	NICOLAS BROUTIN, LUC DEVROYE AND GÁBOR LUGOSI	3078
Ergodic diffusion control of multiclass multi-pool networks in the Halfin–Whitt regime .....	ARI ARAPOSTATHIS AND GUODONG PANG	3110
The inverse first-passage problem and optimal stopping .....	ERIK EKSTRÖM AND SVANTE JANSON	3154
Discrepancy bounds for uniformly ergodic Markov chain quasi-Monte Carlo .....	JOSEF DICK, DANIEL RUDOLF AND HOUYING ZHU	3178
Connectivity thresholds for bounded size rules .....	HAFSTEINN EINARSSON, JOHANNES LENGLER, FRANK MOUSSET, KONSTANTINOS PANAGIOTOU AND ANGELIKA STEGER	3206