

# The Annals of Statistics

Vol. 23

April 1995

No. 2

## Articles

- Probability inequalities for likelihood ratios and convergence rates of sieve MLEs  
WING HUNG WONG AND XIAOTONG SHEN
- Uniform coverage bounds for confidence intervals and Berry-Esseen  
theorems for edgeworth expansion. . . . . PETER HALL AND BING-YI JING
- Estimating the real parameter in a two-sample proportional odds model  
COLIN O. WU
- Dual likelihood . . . . . PER ASLAK MYKLAND
- The central limit theorem under random censorship . . . . . WINFRIED STUTE
- On strong uniform consistency of the Lynden-Bell estimator for truncated data  
KANI CHEN, MIN-TE CHAO AND SHAW-HWA LO
- An omnibus test for independence of a survival time from a covariate  
IAN W. MCKEAGUE, A. M. NIKABADZE AND YANQING SUN
- Efficient estimation of monotone boundaries  
A. P. KOROSTELEV, L. SIMAR AND A. B. TSYBAKOV
- Dimension of the singular sets of plane-fitters . . . . . STEVEN P. ELLIS
- Asymptotical minimax recovery of sets with smooth boundaries  
E. MAMMEN AND A. B. TSYBAKOV
- Finite-sample confidence envelopes for shape-restricted densities  
NICOLAS W. HENGARTNER AND PHILIP B. STARK
- Model estimation in nonlinear regression under shape invariance  
ALOIS KNEIP AND JOACHIM ENGEL
- Estimation of a loss function for spherically symmetric distributions in  
the general linear model . . . . . DOMINIQUE FOURDRINIER AND MARTIN T. WELLS
- A note on admissibility when precision is unbounded  
CHARLES ANDERSON AND NABENDU PAL
- Admissibility and minimaxity of the UMVU estimator of  $P\{X < Y\}$   
QIQING YU AND Z. GOVINDARAJULU
- Testing for a signal with unknown location and scale in a stationary Gaussian  
random field . . . . . DAVID O. SIEGMUND AND KEITH J. WORSLEY
- Estimating the number of peaks in a random field using the Hadwiger  
characteristic of excursion sets, with applications to medical images  
K. J. WORSLEY
- Autoregression quantiles and related risk-scores processes  
HIRA L. KOUL AND A. K. MD. E. SALEH
- Blind deconvolution of linear systems with multilevel nonstationary inputs  
TA-HSIN LI

## Correction Note

- The relationship between sufficiency and invariance with applications in  
sequential analysis . . . . . W. J. HALL, R. A. WIJSMAN AND J. K. GHOSH



# The Annals of Probability

Vol. 23

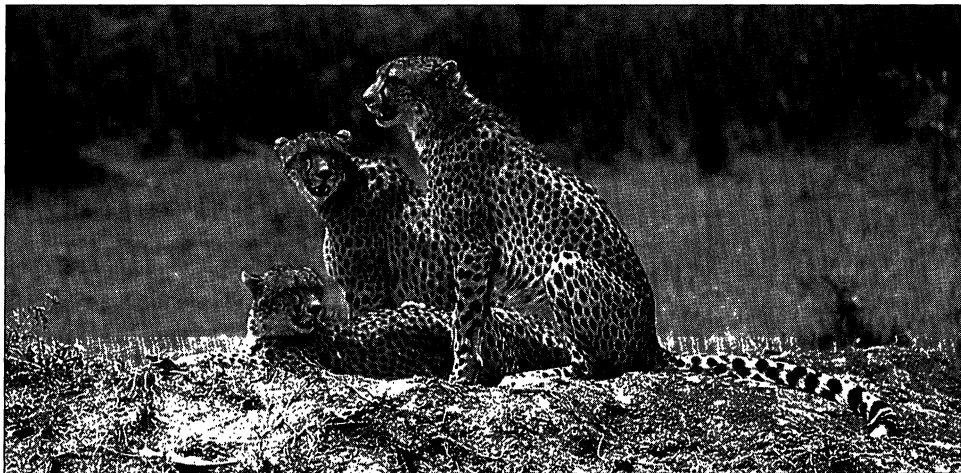
April 1995

No. 2

## Articles

- Existence of quasi-stationary distributions. A renewal dynamical approach  
P. A. FERRARI, H. KESTEN, S. MARTINEZ AND P. PICCO
- Differential subordination and strong differential subordination for continuous-time Martingales and related sharp inequalities . . . . . GANG WANG
- The asymptotic behaviour of locally square integrable martingales . . . JIA-GANG WANG
- A Skorohod-type lemma and a decomposition of reflected Brownian motion  
KRZYSZTOF BURDZY AND ELLEN TOBY
- Föllmer-Schweizer decomposition and mean-variance hedging for general claims  
PASCALE MONAT AND CHRISTOPHE STRICKER
- Stochastic integration of processes with finite generalized variations. I  
NASSER TOWGHI
- Intermediate phase for the contact process on a tree  
RICK DURRETT AND RINALDO SCHINAZI
- Reconstruction of band limited processes from irregular samples . . CHRISTIAN HOUDRÉ
- Improved upper bounds for the contact process critical value . . . . THOMAS M. LIGGETT
- Large deviations from a hydrodynamic scaling limit for a nongradient system  
JEREMY QUASTEL
- Super fractional Brownian motion, fractional super Brownian motion and related self-similar (super) processes . . . . ROBERT J. ADLER AND GENNADY SAMORODNITSKY
- Hausdorff measure of trajectories of multiparameter fractional Brownian motion  
MICHEL TALAGRAND
- A borderline random fourier series . . . . . MICHEL TALAGRAND
- On the distribution of bubbles of Brownian sheet . . . . . DAVAR KHOSHNEVISAN
- Decoupling inequalities for the tail probabilities of multivariate  $U$ -statistics  
VICTOR H. DE LA PEÑA AND S. J. MONTGOMERY-SMITH
- On the cluster set problem for the generalized law of the iterated logarithm in Euclidean space . . . . . UWE EINMAHL
- Limiting curves for I.I.D. records . . . . . JEAN-DOMINIQUE DEUSCHEL AND OFER ZEITOUNI
- Point process and partial sum convergence for weakly dependent random variables with infinite variance. . . . . RICHARD A. DAVIS AND TAILEN HSING
- A maximal inequality and dependent Marcinkiewicz-Zygmund strong laws  
EMMANUEL RIO
- A note on the asymptotic independence of the sum and maximum or strongly mixing stationary random variables . . . . . TAILEN HSING
- Maximal inequalities for partial sums of  $\rho$ -mixing sequences . . . . . QI-MAN SHAO
- On the rotational dimension of stochastic matrices. . . . . S. KALPAZIDOU

Looking out for the family  
should be second nature.  
And your first priority.



Nothing changes one's outlook on life like raising a family. There are so many new decisions to be made. One of the most important is figuring out how to protect them if something happens to you.

The best answers are right here with IMS. We know a lot about our members. So we can offer insurance that is tailored to the way you live, while keeping our group rates affordable. And as you move on to another job, you can take our coverage with you.

So if you're questioning the nature of your insurance plan, call 1 800 424-9883, or in Washington, DC (202) 457-6820, between 8:30 a.m. and 5:30 p.m. eastern time to speak with a customer service representative.

## IMS Insurance

Term Life • Small Business

The term life plan is underwritten by the New York Life Insurance Company, 51 Madison Avenue, New York, NY 10010.

# The Annals of Applied Probability

Vol. 5

May 1995

No. 2

## Articles

- There is no nontrivial hedging portfolio for option pricing with transaction costs  
H. M. SONER, S. E. SHREVE AND J. CVITANIĆ
- Black's consol rate conjecture . . . . . DARRELL DUFFIE, JIN MA AND JIONGMIN YONG
- Some formulae for a new type of path-dependent option . . . . . JIRŌ AKAHORI
- The distribution of the quantiles of a brownian motion with drift and the pricing of  
related path-dependent options . . . . . ANGELOS DASSIOS
- Impulse control of piecewise deterministic Markov processes  
M. A. H. DEMPSTER AND J. J. YE
- Limits of first passage times to rare sets in regenerative processes  
PAUL GLASSERMAN AND SHING-GANG KOU
- The hazard rate tangent approximation for boundary hitting times  
G. O. ROBERTS AND C. F. SHORTLAND
- Gibbs-Cox random fields and Burgers' turbulence  
T. FUNAKI, D. SURGAILIS AND W. A. WOYCZYNSKI
- Diffusion approximation of nuclear space-valued stochastic differential equations driven  
by Poisson random measures . . . . . G. KALLIANPUR AND J. XIONG
- Multivariate integration and approximation for random fields satisfying Sacks-  
Ylvisaker conditions  
KLAUS RITTER, GRZEGORZ W. WASILKOWSKI AND HENRYK WOŹNIAKOWSKI
- Levy bandits: multi-armed bandits driven by Levy processes  
HAYA KASPI AND AVI MANDELBAUM
- Large deviation rates for branching processes. II. The multitype case  
K. B. ATHREYA AND A. N. VIDYASHANKAR

## **IMS Lecture Notes—Monograph Series**

---

Volume 23

### **CHANGE-POINT PROBLEMS**

edited by E. Carlstein, H. G. Mueller and D. Siegmund

Change-point analysis is a rapidly growing area with applications ranging from edge detection in image analysis to DNA sequence comparison to clinical trials and industrial quality control. Based on the AMS-IMS-SIAM Summer Research Conference on "Change-point Problems" at Mount Holyoke College, this volume contains 28 papers covering a wide range of change-point problems and theory.

**385 pages; list price \$45; IMS members \$26**

Volume 24

### **MULTIVARIATE ANALYSIS AND ITS APPLICATIONS**

edited by T. W. Anderson, K. T. Fang and I. Olkin

This volume, based on an International Symposium held at Hong Kong Baptist College in 1992, presents work of many major figures in the theory of Multivariate Analysis and highlights important recent trends in applications. The volume includes 35 research articles and four longer articles summarizing short courses by T. W. Anderson, W. S. Cleveland, I. Olkin and Y.L.

Tong, readers will find useful discussions of recent theoretical results in optimality, characterization and majorization. Applied topics include correspondence analysis, nonparametric regression, projection pursuit, structural equations and quantization.

**472 pages; list price \$45; IMS members \$26**

Volume 25

### **ADAPTIVE DESIGNS**

edited by Nancy Flournoy and William F. Rosenberger

Because of the logic of adapting treatment allocation rules to the results of past experience, scientists and engineers repeatedly create and implement such strategies. Motivated by the desire to improve the efficiency of information acquisition or to limit exposure when the consequences of such exposure become evident, adaptive designs have a long history of popularity in practice. Advances in computational capabilities and in statistical theory for dependent observations have contributed to a resurgence of theoretical development in this area. This volume contains 20 papers whose topics include two-arm clinical trials, adaptive dose-response designs for quantile estimation and maximizing survival in the presence of opposing hazard functions, linear models, multinomial models, quality control and group testing.

**296 pages; list price \$40; IMS members \$24**

*Order prepaid from the:*

Institute of Mathematical Statistics  
3401 Investment Blvd, Suite 7  
Hayward, California 94545-3819

Ph #510-783-8141 Fax #510-783-4131  
E-mail IMS@STAT.BERKELEY.EDU