

**The Annals of Statistics**

**Vol. 23**

**June 1995**

**No. 3**

**Articles**

- Martingale expansions and second order inference . . . . . PER ASLAK MYKLAND  
Exact computation of the asymptotic efficiency of maximum likelihood estimators of a  
discontinuous signal in a Gaussian white noise  
HERMAN RUBIN AND KAI-SHENG SONG
- Rates of convergence for Gibbs sampling for variance component models  
JEFFREY S. ROSENTHAL
- Exact multivariate Bayesian bootstrap distribution of moments. . . . MAURO GASPARINI  
A note on a characterization of the exponential distribution based on a type II  
censored sample . . . . . JIAN-LUN XU AND GRACE L. YANG
- Coarsening at random in general sample spaces and random censoring in  
continuous time . . . . . MARTIN JACOBSEN AND NIELS KEIDING
- An approach to nonparametric regression for life history data using local  
linear fitting. . . . . GANG LI AND HANI DOSS
- Bias-variance tradeoffs in functional estimation problems . . . . . MARK G. LOW
- Deficiency of the sample quantile estimator with respect to kernel quantile  
estimators for censored data . . . . . XIAOJING XIANG
- Measuring mass concentrations and estimating density contour clusters—An  
excess mass approach . . . . . WOLFGANG POLONIK
- Nonparametric density estimation with a parametric start  
NILS LID HJORT AND INGRID K. GLAD
- Formulae for mean integrated squared error of nonlinear wavelet-based density  
estimators . . . . . PETER HALL AND PRAKASH PATIL
- On estimating mixing densities in discrete exponential family models . CUN-HUI ZHANG
- On a semiparametric variance function model and a test for heteroscedasticity  
HANS-GEORG MÜLLER AND PENG-LIANG ZHAO
- On optimal B-robust influence functions in semiparametric models . . . LARRY Z. SHEN
- Density estimation under long-range dependence. SÁNDOR CSÖRGÓ AND JAN MIELNICZUK
- Nonparametric regression under long-range dependent normal errors  
SÁNDOR CSÖRGÓ AND JAN MIELNICZUK
- Testing a time series for difference stationarity . B. P. M. MCCABE AND A. R. TREMAYNE
- Efficient location and regression estimation for long range dependent regression  
models. . . . . RAINER DAHLHAUS
- Log-periodogram regression of time series with long range dependence. P. M. ROBINSON



# The Annals of Probability

Vol. 23

July 1995

No. 3

## Articles

- Divergence of shape fluctuations in two dimensions  
CHARLES M. NEWMAN AND MARCELO S. T. PIZA
- Crossing velocities and random lattice animals . . . . . ALAIN-SOL SZNITMAN
- Percolation of arbitrary words in  $\{0, 1\}^{\mathbb{N}}$  . . . . . ITAI BENJAMINI AND HARRY KESTEN
- Enlargement of obstacles for the simple random walk . . . . . PETER ANTAL
- Galton-Watson trees with the same mean have the same polar sets  
ROBIN PEMANTLE AND YUVAL PERES
- Conceptual proofs of  $L \log L$  criteria for mean behavior of branching processes  
RUSSELL LYONS, ROBIN PEMANTLE AND YUVAL PERES
- Poisson approximation for the final state of a generalised epidemic process  
CLAUDE LEFÈVRE AND SERGEY UTEV
- On the structure of stationary stable processes . . . . . JAN ROSINSKI
- The functional law of the iterated logarithm for stationary strongly  
mixing sequences . . . . . EMMANUEL RIO
- On the almost sure convergence of series of stationary and related  
nonstationary variables . . . . . CHRISTIAN HOUDRÉ
- Central limit theorem in negative curvature . . . . . FRANÇOIS LEDRAPPIER
- Constructing gamma-martingales with prescribed limit, using backwards SDE  
R. W. R. DARLING
- Markov field property of stochastic differential equations  
AURELI ALABERT, MARCO FERRANTE AND DAVID NUALART
- Contrôle de la norme  $H^p$  d'une martingale par des maximums de temps locaux  
CHRISTOPHE LEURIDAN
- Asymptotic laws for one-dimensional diffusions conditioned to nonabsorption  
PIERRE COLLET, SERVET MARTÍNEZ AND JAIME SAN MARTÍN
- Large deviations for independent random walks on the line . . . . . TZONG-YOW LEE
- Martin capacity for Markov chains and random walks in varying dimensions  
ITAI BENJAMINI, ROBIN PEMANTLE AND YUVAL PERES
- Total variation asymptotics for Poisson process approximations of logarithmic  
combinatorial assemblies . . . . RICHARD ARRATIA, DUDLEY STARK AND SIMON TAVARÉ
- Conditional propagation of chaos and a class of quasilinear PDE . . . . WEIAN ZHENG
- The rate function for some measure-valued jump processes  
BOUALEM DJEHICHE AND INGEMAR KAJ
- A symmetric two-particle exclusion-eating process . . . . . XIJIAN LIU

## Book Review

- Review of *Lectures on the Coupling Method* by Torgny Lindvall . . . . NEIL O'CONNELL

**Higher Order Asymptotics**

*by Jayanta K. Ghosh*

These lecture notes are concerned with Edgeworth expansions, higher order efficiency, expansion of posterior, probability matching priors and related topics. The lectures were originally presented at the NSF-CBMS Regional Conference held at Chapel Hill, North Carolina, in August 1991.

**Contents**

Introduction

Edgeworth Expansions, Curved Exponentials, and Fisher Consistent Estimates

Third Order Efficiency for Curved Exponentials

Curvature and Information Loss

Expansion of Posterior, Bayes Estimate and Bayes Risk

Third Order Efficiency, Admissibility, and Minimavity

Small Sample Efficiency

Magic Formula, Bartlett Correction, and Matching Probabilities

Noninformative Priors

The New Likelihoods and the Neyman-Scott Problems

Bibliography

**Pages ..... viii+110**

**List price .....\$25**

**ASA/IMS Price ..... \$15**

**Order prepaid from:  
Institute of Mathematical Statistics  
3401 Investment Boulevard, Suite 7  
Hayward, California 94545-3819 (USA)**

## **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