

THE ANNALS of APPLIED STATISTICS

AN OFFICIAL JOURNAL OF THE
INSTITUTE OF MATHEMATICAL STATISTICS

Special Section on Statistics and Neuroscience

- Special section on statistics in neuroscience KAREN KAFADAR 1127
- Two-stage empirical likelihood for longitudinal neuroimaging data
XIAOYAN SHI, JOSEPH G. IBRAHIM, JEFFREY LIEBERMAN,
MARTIN STYNER, YIMEI LI AND HONGTU ZHU 1132
- Encoding and decoding V1 fMRI responses to natural images with sparse
nonparametric models VINCENT Q. VU, PRADEEP RAVIKUMAR,
THOMAS NASELARIS, KENDRICK N. KAY, JACK L. GALLANT AND BIN YU 1159
- A nonstationary nonparametric Bayesian approach to dynamically modeling effective
connectivity in functional magnetic resonance imaging experiments
SOURABH BHATTACHARYA AND RANJAN MAITRA 1183
- State-space solutions to the dynamic magnetoencephalography inverse problem using high
performance computing
CHRISTOPHER J. LONG, PATRICK L. PURDON, SIMONA TEMEREANCA,
NEIL U. DESAI, MATTI S. HÄMÄLÄINEN AND EMERY N. BROWN 1207
- A Bayesian approach for inferring neuronal connectivity from calcium fluorescent
imaging data
YURIY MISHCHENKO, JOSHUA T. VOGELSTEIN AND LIAM PANINSKI 1229
- Assessment of synchrony in multiple neural spike trains using loglinear point
process models ROBERT E. KASS, RYAN C. KELLY AND WEI-LIEM LOH 1262
- Nonparametric tests of structure for high angular resolution diffusion
imaging in Q -space SOFIA C. OLHEDE AND BRANDON WHITCHER 1293

Articles

- Bayesian hierarchical modeling for temperature reconstruction from geothermal data
JENNY BRYNJARSDÓTTIR AND L. MARK BERLINER 1328
- False discovery rates in somatic mutation studies of cancer
LORENZO TRIPPA AND GIOVANNI PARMIGIANI 1360
- Forecasting emergency medical service call arrival rates
DAVID S. MATTESON, MATHEW W. MCLEAN, DAWN B. WOODARD
AND SHANE G. HENDERSON 1379
- Network routing in a dynamic environment NOZER D. SINGPURWALLA 1407
- Discussion of "Network routing in a dynamic environment"
ANDREW C. THOMAS AND STEPHEN E. FIENBERG 1425
- Causal inference in transportation safety studies: Comparison of potential outcomes
and causal diagrams
VISHESH KARWA, ALEKSANDRA B. SLAVKOVIĆ AND ERIC T. DONNELL 1428

Continued on back cover

THE ANNALS of APPLIED STATISTICS

AN OFFICIAL JOURNAL OF THE
INSTITUTE OF MATHEMATICAL STATISTICS

Articles—Continued from front cover

- A new multivariate measurement error model with zero-inflated dietary data,
and its application to dietary assessment
SAIJUAN ZHANG, DOUGLAS MIDTHUNE, PATRICIA M. GUENTHER,
SUSAN M. KREBS-SMITH, VICTOR KIPNIS, KEVIN W. DODD,
DENNIS W. BUCKMAN, JANET A. TOOZE,
LAURENCE FREEDMAN AND RAYMOND J. CARROLL 1456
- Bayesian nonparametric models for peak identification in MALDI-TOF mass spectroscopy
LEANNA L. HOUSE, MERLISE A. CLYDE AND ROBERT L. WOLPERT 1488
- Population size estimation based upon ratios of recapture probabilities
IRENE ROCCHETTI, JOHN BUNGE AND DANKMAR BÖHNING 1512
- Nonparametric Bayesian sparse factor models with application to gene
expression modeling DAVID KNOWLES AND ZOUBIN GHAHRAMANI 1534
- A hierarchical Bayesian approach to record linkage and population size problems
ANDREA TANCREDI AND BRUNERO LISEO 1553
- Degradation modeling applied to residual lifetime prediction using functional data analysis
RENSHENG R. ZHOU, NICOLETA SERBAN AND NAGI GEBRAEEL 1586
- Response-adaptive dose-finding under model uncertainty
BJÖRN BORNKAMP, FRANK BRETZ, HOLGER DETTE AND JOSÉ PINHEIRO 1611
- Hierarchical Bayesian estimation of inequality measures with nonrectangular censored
survey data with an application to wealth distribution of French households
ERIC GAUTIER 1632
- Extreme deconvolution: Inferring complete distribution functions from noisy,
heterogeneous and incomplete observations
JO BOVY, DAVID W. HOGG AND SAM T. ROWEIS 1657
- Bayesian synthesis: Combining subjective analyses, with an application to ozone data
QINGZHAO YU, STEVEN N. MACÉACHERN AND MARIO PERUGGIA 1678