

# THE ANNALS *of* STATISTICS

AN OFFICIAL JOURNAL OF THE  
INSTITUTE OF MATHEMATICAL STATISTICS

## Memorial Section for Erich L. Lehmann 1917–2009

Introduction to the Lehmann special section . . . . .	PETER BÜHLMANN AND TONY CAI	2243
Erich Leo Lehmann—A glimpse into his life and work . . . . .	JAVIER ROJO	2244
Remembering Erich Lehmann . . . . .	WILLEM R. VAN ZWET	2266
The method of moments and degree distributions for network models PETER J. BICKEL, AIYOU CHEN AND ELIZAVETA LEVINA		2280

## Articles

Nuclear-norm penalization and optimal rates for noisy low-rank matrix completion VLADIMIR KOLTCHINSKII, KARIM LOUNICI AND ALEXANDRE B. TSYBAKOV		2302
Optimal estimation of the mean function based on discretely sampled functional data: Phase transition . . . . .	T. TONY CAI AND MING YUAN	2330
Evaluating probability forecasts TZE LEUNG LAI, SHULAMITH T. GROSS AND DAVID BO SHEN		2356
On adaptive inference and confidence bands . . . . .	MARC HOFFMANN AND RICHARD NICKL	2383
Factor models and variable selection in high-dimensional regression analysis ALOIS KNEIP AND PASCAL SARDA		2410
Semiparametrically efficient inference based on signed ranks in symmetric independent component models . . . . .	PAULIINA ILMONEN AND DAVY PAINDAVEINE	2448
On deconvolution of distribution functions I. DATNER, A. GOLDENSHLUGER AND A. JUDITSKY		2477
Asymptotic normality and valid inference for Gaussian variational approximation PETER HALL, TUNG PHAM, M. P. WAND AND S. S. J. WANG		2502
Global testing under sparse alternatives: ANOVA, multiple comparisons and the higher criticism . . . . .	ERY ARIAS-CASTRO, EMMANUEL J. CANDÈS AND YANIV PLAN	2533
Bernstein–von Mises theorems for Gaussian regression with increasing number of regressors . . . . .	DOMINIQUE BONTEMPS	2557
A spectral analytic comparison of trace-class data augmentation algorithms and their sandwich variants . . . . .	KSHITIJ KHARE AND JAMES P. HOBERT	2585
Penalized maximum likelihood estimation and variable selection in geostatistics TINGJIN CHU, JUN ZHU AND HAONAN WANG		2607
Bayesian inverse problems with Gaussian priors B. T. KNAPIK, A. W. VAN DER VAART AND J. H. VAN ZANTEN		2626
Computational approaches for empirical Bayes methods and Bayesian sensitivity analysis EUGENIA BUTA AND HANI DOSS		2658
Robust recovery of multiple subspaces by geometric $l_p$ minimization GILAD LERMAN AND TENG ZHANG		2686
Principal components analysis in the space of phylogenetic trees . . . . .	TOM M. W. NYE	2716
Fully Bayes factors with a generalized $g$ -prior YUZO MARUYAMA AND EDWARD I. GEORGE		2740
Robust linear least squares regression . . . . .	JEAN-YVES AUDIBERT AND OLIVIER CATONI	2766