

THE ANNALS *of* STATISTICS

AN OFFICIAL JOURNAL OF THE
INSTITUTE OF MATHEMATICAL STATISTICS

Articles

Special Section of Memorial Articles for Willem van Zwet

- Preface: Section of memorial articles for Willem van Zwet
RICHARD J. SAMWORTH AND MING YUAN 2431
- Willem van Zwet's contributions to the profession
NICHOLAS I. FISHER AND ADRIAN F. M. SMITH 2432
- Willem van Zwet's research
PETER BICKEL, MARTA FIOCCO, MATHISCA DE GUNST AND FRIEDRICH GÖTZE 2439
- Willem van Zwet, teacher and thesis advisor
SARA VAN DE GEER AND CHRIS A. J. KLAASSEN 2448

Regular Articles

- Optimal rates for independence testing via U -statistic permutation tests
THOMAS B. BERRETT, IOANNIS KONTOYIANNIS AND RICHARD J. SAMWORTH 2457
- Variable selection consistency of Gaussian process regression
SHENG JIANG AND SURYA T. TOKDAR 2491
- Optimality of spectral clustering in the Gaussian mixture model
MATTHIAS LÖFFLER, ANDERSON Y. ZHANG AND HARRISON H. ZHOU 2506
- Adaptive estimation of multivariate piecewise polynomials and bounded variation
functions by optimal decision trees
SABYASACHI CHATTERJEE AND SUBHAJIT GOSWAMI 2531
- Rank-based estimation under asymptotic dependence and independence, with applications
to spatial extremes MICHAËL LALANCETTE,
SEBASTIAN ENGELKE AND STANISLAV VOLGUSHEV 2552
- Estimation of smooth functionals in normal models: Bias reduction and asymptotic
efficiency VLADIMIR KOLTCHINSKII AND MAYYA ZHILOVA 2577
- Additive regression for non-Euclidean responses and predictors
JEONG MIN JEON, BYEONG U. PARK AND INGRID VAN KEILEGOM 2611
- Set structured global empirical risk minimizers are rate optimal in general dimensions
QIYANG HAN 2642
- Empirical tail copulas for functional data . . . JOHN H. J. EINMAHL AND JOHAN SEGERS 2672
- Inference for a two-stage enrichment design
ZHANTAO LIN, NANCY FLOURNOY AND WILLIAM F. ROSENBERGER 2697
- Existence and uniqueness of the Kronecker covariance MLE
MATHIAS DRTON, SATOSHI KURIKI AND PETER HOFF 2721
- Prediction bounds for higher order total variation regularized least squares
FRANCESCO ORTELLI AND SARA VAN DE GEER 2755
- Reconciling the Gaussian and Whittle likelihood with an application to estimation in the
frequency domain SUHASINI SUBBA RAO AND JUNHO YANG 2774
- Integrative methods for post-selection inference under convex constraints
SNIGDHA PANIGRAHI, JONATHAN TAYLOR AND ASAF WEINSTEIN 2803
- The cost of privacy: Optimal rates of convergence for parameter estimation with
differential privacy T. TONY CAI, YICHEN WANG AND LINJUN ZHANG 2825

Continued on back cover

THE ANNALS *of* STATISTICS

AN OFFICIAL JOURNAL OF THE
INSTITUTE OF MATHEMATICAL STATISTICS

Articles—Continued from front cover

- Distributed statistical inference for massive data . . . SONG XI CHEN AND LIUHUA PENG 2851
Construction of mixed orthogonal arrays with high strength
SHANQI PANG, JING WANG, DENNIS K. J. LIN AND MIN-QIAN LIU 2870
Foundations of structural causal models with cycles and latent variables
STEPHAN BONGERS, PATRICK FORRÉ, JONAS PETERS AND JORIS M. MOOIJ 2885
Measuring dependence in the Wasserstein distance for Bayesian nonparametric models
MARTA CATALANO, ANTONIO LIJOI AND IGOR PRÜNSTER 2916
Bridging convex and nonconvex optimization in robust PCA: Noise, outliers and missing
data YUXIN CHEN, JIANQING FAN, CONG MA AND YULING YAN 2948
Efficiency of delayed-acceptance random walk Metropolis algorithms
CHRIS SHERLOCK, ALEXANDRE H. THIERY AND ANDREW GOLIGHTLY 2972
Semiparametric optimal estimation with nonignorable nonresponse data
KOSUKE MORIKAWA AND JAE KWANG KIM 2991
Two-level parallel flats designs CHUNYAN WANG AND ROBERT W. MEE 3015