



Lothar-Collatz-Kolloquium für Angewandte Mathematik

Donnerstag, den 16. Mai 2019, um 17:15 Uhr, im Hörsaal 5

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Deconvolution in high dimensions

Zusammenfassung/Abstract:

Deconvolution is a classical statistical inverse problem where the aim is to estimate the probability density of a real valued random sample based on observations that are corrupted by noise. We construct estimators based on a spectral approach. Their convergence rates depend on the smoothness of the underlying density and the ill-posedness implied by the error distribution.

Since an important characteristic of many contemporary datasets is high-dimensionality, we then investigate how the spectral methodology can be transferred to case where the dimension of the observations might be much larger than the sample size. More precisely, we will study the estimation of the covariance matrix of a random vector based noisy observations. For the resulting high-dimensional statistical inverse problem, we propose and analyse spectral thresholding estimators that are adaptive to the sparsity of the covariance matrix.

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Die aktuelle Version der Kolloquiumsankündigungen (inkl. Abstracts) finden Sie unter:

<http://www.math.uni-hamburg.de/spag/angmath/kolloq/>