

## Wavelet block thresholding for samples with random design: A minimax approach under the $L_p$ risk

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### Abstract

We consider the regression model with (known) random design. We investigate the minimax performances of an adaptive wavelet block thresholding estimator under the  $L_p$  risk with  $p > 2$  over Besov balls. We prove that it is near optimal and that it achieves better rates of convergence than the conventional term-by-term estimators (hard, soft,...).

AMS 2000 subject classifications: Primary 62G07, 60K35; secondary 62G20.

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