

Optimal Besov convergence rates for wavelet ℓ^1 -regularization

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We consider Tikhonov regularization for linear and nonlinear ill-posed operator equations with wavelet Besov norm penalties. For $B_{p,1}^s$ Besov norms methods of ℓ^1 -regularization are applicable. We show order optimal convergence rates for finitely smoothing operators using a variational source condition.

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