

Nonlinear approximation and function spaces of dominating mixed smoothness

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We shall deal with best m -term approximation in L_p -norms with respect to tensor-product wavelet systems. It is well-known that corresponding approximation spaces are closely related to tensorproducts of univariate Besov spaces. Function spaces of dominating mixed smoothness are generalizations of those tensorproduct spaces. Our aim consists in a discussion of the asymptotic behaviour of widths of best m -term approximation with respect to these spaces of dominating mixed smoothness.