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Entropy and approximation numbers of Hardy integral operator in weighted spaces of Besov and Triebel-Lizorkin type

Following to well-developed concept of wavelet bases in Besov and Triebel-Lizorkin spaces we obtain upper estimates for entropy and approximation numbers of a compact Hardy integral operator in weighted spaces of Besov-Triebel-Lizorkin type with some smoothness parameters. The results are traditionally obtained by reduction of the initial problem to transformations in related sequence spaces. Choosing two particular spline wavelet bases, specially related to each other, we come to estimates of embeddings.

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