

## Approximation numbers of Sobolev embeddings of radial functions

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Approximation numbers measure the closeness, by which a bounded operator can be approximated by linear maps of finite range, whereas entropy numbers measure the compactness of the operator. Both approximation and entropy numbers of compact Sobolev embeddings have been investigated very often, for application reason. The radially of functions defined on  $\mathbb{R}^n$  as well as on Riemannian manifolds  $X$  provide us with the compactness of Sobolev embeddings between Besov and Sobolev spaces of these functions. We present the asymptotic behaviour of approximation numbers of compact embeddings for these radial function spaces in both  $\mathbb{R}^n$  and  $X$  cases. There are meaningful differences between them.

The talk is based on a joint work with L. Skrzypczak (Poznań).