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**Tomas Schonbek\*** ([schonbek@fau.edu](mailto:schonbek@fau.edu)), Department of Mathematical Sciences, Florida Atlantic University, Boca Raton, FL 33431. *Compact embeddings of Besov spaces into Lorentz-Zygmund spaces.*

Let  $1 \leq p, q < \infty$  and let  $\Omega$  be a bounded open subset of  $\mathbb{R}^n$ . We study the sequence of entropy numbers of the compact embedding of the Besov space  $B_{p,q}^{n/p}(\Omega)$  into a scale of Lorentz-Zygmund spaces generalizing the exponential Orlicz space generated by the function  $\Phi_\nu(t) = t \exp(t^\nu)$ ,  $0 < \nu \leq q'$ . This is joint work with Thomas Kühn of Leipzig. (Received February 01, 2006)