The role of democracy functions in Approximation Theory

Eugenio Hernández
Departamento de Matemticas; Universidad Autónoma de Madrid

We prove optimal embeddings for nonlinear approximation spaces $\mathcal{A}_q^\alpha$, in terms of weighted Lorentz sequence spaces, with the weights depending on the democracy functions of the basis. As applications we recover known embeddings for N-term wavelet approximation in L^p, Orlicz, and Lorentz norms.