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Characterizations of predual spaces to a class of Sobolev multiplier type spaces

We characterize preduals and Köthe duals to a class of Sobolev multiplier type spaces. Our results fit well with the modern theory of function spaces of harmonic analysis and are also applicable to nonlinear partial differential equations. We make use of several tools from nonlinear potential theory, weighted norm inequalities, and the theory of Banach function spaces to obtain our results. This talk is based on joint work with Keng Hao Ooi.