A PHELPS TYPE THEOREM FOR SPACES WITH ASYMMETRIC NORMS

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Abstract. If $(X, \|\cdot\|)$ is a linear space with asymmetric norm and Y is a subspace of X, for every $f \in Y_+^*$ (the cone of linear bounded functional on Y) there exists at most one functional $F \in X_+^*$ extending f and preserving the asymmetric norm of f. The problem of uniqueness of the extension in terms of uniqueness of elements of best approximation of $F \in X_+^*$ by elements of $Y^\perp = \{G \in X_+^* : G|_Y = 0, \ F \geq G\}$ is discussed.

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