

We intend to characterize intrinsically large subspaces of classical mixed-norm Banach function spaces. The central object of investigation is the subspace property for mixed norm Hardy spaces. We wish to achieve this by associating canonically a vector measure to the embedding operators of those Banach spaces. Extending these concepts further, we investigate non-commutative Hardy spaces with values in the trace class.

Complementing the central themes of our project, we address a long standing conjecture of Maurey. It concerns small subspaces of the Lebesgue space and was formulated for the first time by Maurey in his classical work on fixed point theorems.