

This project is devoted to a detailed study of permutation operators acting on the Haar system. First it aims at an intrinsic characterisation of the subsequences of the Haar system which are permutatively equivalent to the whole Haar basis on H^p , $p < 1$. Second we will apply permutation operators to identify the transformations of the unit disk, preserving the class of Carleson measures. The prominent position enjoyed by Carleson measures in the field of complex analysis provides important motivation for the preceding study of rearrangement operators. Furthermore the impact of permutation operators on oscillatory integrals and Fourier-multipliers will be explored.