

This project is a detailed study of permutation operators acting on the Haar system and their role in analysing Singular Integral Operators. We focus mainly on the Integral Operators arising from the General Franklin system defined by irregularly sampled nodes and on extrapolation problems for vectorvalued rearrangement operators. It aims at an intrinsic characterisation of the subsequences of the Haar system which are permutatively equivalent to the whole Haar basis on  $H^1$ , and on identifying the transformations of the unit disk, that preserve 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.