

## ABSTRACT

*Walsh Hadamard Transform* (WHT) is fairly simple transform and has found applications in data *compression* involving image transmission and storage. Among existing discrete *orthogonal transforms*, HT has the lowest computational costs. The HT is useful in signal and image processing applications where real time implementation is essential.

The KLT is a statistically optimal transform as its transform matrix is diagonal, but it suffer from its costly computation and generation of the transform. DCT has been shown that the statistical performance is the closest to the optimal transform KLT. When operating on the residual images at some bit rates, the DCT does not work significantly better than the simpler transforms such as the WHT. Hence, there is a need of analysing simpler matematically transforms in various signal processing applications.

In this final task we analysis and testing the method in *color image* compression process. In this case, color image has 24 bit color depth. Testing and analysis *the file size, compression ratio, running time, quantization factor, and matrix size*, will be our main focus in this work.

**Keywords** : *compression, color image, orthogonal transforms, Walsh Hadamard Transform (WHT), the file size, compression ratio, running time, quantization factor, matrix size.*