# ABSTRACT

*Piracy in the digital realm has often occurred for example in music, drawings, and other works. Therefore it requires the protection, ownership mark, and authentication of ownership of the work, or often in commonly called copyright. image watermarking is the solution to the problem. Watermarking is a technique for inserting certain information into digital data.*

*This Final assignment is designing an Image watermarking system using Arnold Cat Map-FDCut-DCT-SVD method. Arnold Cat Map method is applied to pre-processing in order to increase security and reduce the likelihood of targeted attacks. Watermark technique is designed to consist of 2 stages, namely the insertion process and the extraction process. Watermark is inserted into the host image by using Arnold Cat Map-FDCuT-DCT-SVD method. In the insertion process produces an image that is watermarked image, and measured performance by calculating MSE and PSNR values. In the process of extratraction re-generate watermark image, and measured performance by calculating the value of BER and NC.*

*Performance in this final assignment is obtained by testing watermarked images or watermarked images. Testing is done both in simulation without attack or simulation using attacks. In the test of image watermarking with Arnold Cat Map-FDCuT-DCT-SVD method obtained the average value of MSE= 0.477, the average value of PSNR = 66.21 dB, the average value of BER= 0.477, and the average value of nc= 0.9684, and this method is resistant to attacks of histogram equalization, poisson noise, salt and pepper noise, speckle nose, gaussian noise, JPEG compression, median filter, and resizing attacks. This method has better results than the previous research method which used Arnold Cat Map-FDCuT-DCT methods and DCT-SVD methods.*



***Keywords:*** *Image Watermarking,* Arnold Cat Map, FDCuT, DCT, SVD.