

## ABSTRACT

*The development of information and technology have a good impact in modern life. One of them is the introduction of individuals created automatically to facilitate for information related to identity. In other cases such as natural disasters, not infrequently the victim was found in poor condition on the whole body but certain parts are still intact. In order not to difficult identification of individuals properly, used methods of recognizing physical characteristics to identify individuals or commonly known as biometrics. Many physical features can be used, such as fingerprints, nasal bones, teeth, and so on as long as they are still members of the body. One is the sole of the foot.*

*Discrete Wavelet Transform (DWT) is a computation method that can be used to support digital identification system. The steps to obtain the necessary parameters to achieve optimum accuracy include the acquisition of the footprint image data, pre-processing, DWT feature extraction to the classification process using the Support Vector Machine (SVM). Testing done with 50 pieces of right foot, there are 5 classes so that each class consists of 10 pieces of right foot palm. Determination of sub band and decomposition level as test parameter. In addition to comparing statistical feature extraction parameters, the accuracy and computation time become the best feature parameter reference. The process of classification and class determination using SVM algorithm by changing kernel parameters in each test. The highest accuracy of the system used in this final project is SVM OAO of 72% with faster computation time are 66.7141 sec, so that this algorithm can be said optimally in system.*

*Previous research has been widely discussed various kinds of introduction of individuals in addition to the object of the foot. However, each recognition system has its advantages and disadvantages. One of the advantages of biometric footprint is a good work performance. This final project was created with the aim to implement a system capable of identifying individuals through the footprint image.*

**Keywords:** *Biometrics, soles of feet, DWT, SVM, MATLAB*