

## **ABSTRACT**

*The heart is the most important organ in the human body and is very well maintained so that the condition of the heart remains good. The onset of abnormalities in the heart can be fatal for sufferers. The death rate due to heart abnormalities or diseases is very high and also increasing. One way to detect heart abnormalities is an electrocardiogram (ECG) signal examination. To analyze the result of the ECG requires a method of classification and identifying heart abnormalities based on ECG signals.*

*In this study a method was proposed for the classification of ECG signals using dispEn (dispersion Entropy). dispEn measures the regularity of time series on the signal and is expected to distinguish physiological states from the time series of ECG signals. In this study dispEn and statistical computing were used as ECG signal feature extraction and combined with Support Vector Machine (SVM) for the classification process of Normal, AFIB (Atrial Fibrillation), and CHF ( Congestive Heart Failure).*

*The result of this final project is testing of 3 characteristics including dispEn characteristics, statistical characteristics, and a combination of these 2 characteristics. The result obtained in testing the combined characteristics of dispEn and statistical characteristics with SVM classification can give 80%. The system proposed in this study is expected to help diagnose clinical abnormalities in the heart.*

**Keywords:** *Cardiac abnormalities, Electrocardiogram, dispersion Entropy, Support Vector Machine.*