

## **ABSTRACT**

*Earthquakes are vibrations that occur on the surface of the earth due to the sudden release of energy from the inside that creates seismic waves. An earthquake is caused by the movement of the earth's crust (the Earth's plate). The frequency of a region, refers to the type and size of earthquakes experienced during a period of time. Along with the development of early earthquake detection system technology provides a solution to minimize the impact of earthquake events*

*This final project will discuss the design of system to determine the occurrence of earthquakes through time pattern analysis and Peak Ground Acceleration value. By using the Radial Basis Function Method, which later to minimize the loss of life from earthquakes. And help the main tools owned by the government.*

*This study aims to determine the occurrence of earthquakes from Peak Ground Acceleration values and time analysis patterns, which are obtained from the decision of the Radial Basis Function method with an accuracy rate of 85%*

*Keywords: Earthquake, Low Power Wide Area, Radial Basis Function, Peak Ground Acceleration*