Abstract

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Intelligent Earthquake Prediction System Based on Neural Network

Predicting earthquakes is an important issue in the study of geography. Accurate prediction of earthquakes can help people to take effective measures to minimize the loss of personal and economic damage, such as large casualties, destruction of buildings and broken of traffic, occurred within a few seconds. United States Geological Survey (USGS) science organization provides reliable scientific information of Earthquake Existed throughout history & Preliminary database from the National Center Earthquake Information (NEIC) show some useful factors to predict an earthquake in a seismic area like Aleutian Arc in the U.S. state of Alaska. The main advantage of this prediction method that it does not require any assumption, it makes prediction according to the future evolution of object's time series. The article compares between simulation data result from trained BP and RBF neural network versus actual output result from the system calculations. Therefore, this article focuses on analysis of data relating to real earthquakes. Evaluation results show better accuracy and higher speed by using radial basis functions (RBF) neural network