

Research Title : An Appropriate Number of Neurons in Hidden Layer for  
Personal Identification using Delta Brainwave Signals.  
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### **ABSTRACT**

This study discusses the appropriate number of neurons in hidden layer for person identification that uses delta brainwave signals. The principle of the neural network (supervised neural network), number of neurons in the hidden layer is one important factor to make learning more effective. The purpose of this study was to study the number of neurons in the hidden layer. In this study, 1000 data points of EEG signal in group of four channels, F4, P4, C4, and O2 are explored. The practical technique, Independent Component Analysis (ICA) by SOBIRO algorithm is considered clean and separates the individual signals from noise using the technique of supervised neural network for identifying 30 subjects. The number of neurons in the hidden layer 1-30 neural to test the accuracy of identifying information will be classified 20-30 subjects to find the appropriate number of neurons in the hidden layer in each group.

**Keywords : Number of Neurons in Hidden Layer, Electroencephalogram, Biometric, Identification, Independent component analysis, Neural network**