

## Abstract

As one of widely used languages class in the world, pattern recognition system that is used for arabic letters less than the system used for pattern recognition of latin character as well as kanji. Pattern recognition of arabic letters can be done by using the Adaptive Evolutionary Algorithms (Adaptive EAS) that can handle the lack of Genetic Algorithm (GA) in overcoming the premature convergence and the uncertainty of Artificial Neural Network (ANN) in determining the optimal parameters. This last assignment tries to compare the speed and accuracy performance of pattern recognition system of Arabic letters which are built by ANN, ANN-AG, and Adaptive EAS.

**Keywords:** *pattern recognition for arabic letter, neural network, genetic algorithm, adaptive evolutionary algorithms.*