

### **Abstract**

The number and variety of information can be managed further to produce new and useful knowledge. One way to manage information in the form of documents by the number of lots is to perform document clustering. One of the many methods that can be used are Artificial Bee Colony-Fuzzy Clustering (ABC-FC). Artificial Bee Colony is a Swarm Intelligence based optimization algorithm where there are individuals who exchange information in a population to search for solutions. Artificial Bee Colony adopted a set of bee behavior in finding and exploiting a food source. A bunch of bees consists of three groups: employed bees, onlooker bees and scout bees, who share each other information about food sources (solution). In the practice, the ABC is very robust, simple and flexible than other swarm-based algorithms. While Fuzzy Clustering Clustering is a method belonging to the soft clustering in which an object has a membership value of each. This membership value that indicates an object tends to be in a particular cluster. Both methods are combined to recognize patterns and make document clusters. Cluster quality index will be measured using Silhouette Coefficient.

**Keywords : Document clustering, ABC-FC, Swarm Inteligence, Silhouette Coefficient**