

## Abstract

Face recognition is one of the emerging areas of research today. The use of face recognition is in many disciplines and very useful to facilitate human tasks such as in security systems, health, education, and others. The core of face recognition is how to recognize a person's face. The problems that occur in face recognition is a variation of lighting, illumination, many facial expression, and dimensions of the image used for face recognition, and optimal algorithm for face recognition applied in the computer.

This study discusses the implementation of a face recognition system that is able to recognize the identity of the input in the form of a face image with an existing database. Implementation is done by using static images and video.

To implement it, IC-NPA used for feature extraction to reduce the dimensionality of the image to make it simple and able to take the important characteristics of the data set. Furthermore, to do the characteristics purpose, RBF Neural Network used for classification and to calculate the accuracy of the system. Results showed that the method is able to provide accuracy more than 90% on the Yale and Att face database.

Keywords : *Face recognition, feature extraction, classification, neural network*