

## Measurement of the area and diameter of human pupil using Matlab

### Abstract:

This paper presents the simple guide of measuring the area and diameter of human pupil using the MATLAB. The pupil measurement and recognition system is very useful in biometric field because the measurement of pupil is unique and is different for each person. The image of eye use in this work is an image that has been downloaded from CASIA Iris Image Database. The image is converted into the binary image and estimated the threshold value of the dark region. After several steps, the result of diameter and area of pupil have been successful calculated in the pixel unit. The measurement is converted in millimeter (mm) unit, and the result is displayed using Graphical User Interface (GUI). It shows that from five samples, different people have different area and diameter of the pupil, and this is the reason why it could be use in biometric field like fingerprint recognition.