

## ***ABSTRACT***

*In recent years, digital image technology has been developing quickly. Supporting by widespread programming software development, the technology has contributed to human activity. One of sciences that elaborate the technology is image processing.*

*This research aimed at designing smart door for face identification based on image processing. The smart door will be a face identification system with better accuracy and speed. Two main methods used in this research are Principal Component Analysis and Template Matching Correlation.*

*This research founded: (a) smart door system designed in this research can identify the face with level of accuracy **80%** (b) the smart door system also can identify the face with level of speed **4.6 seconds per subject**.*

*Keywords: image processing, smart door face identifying, principal component analysis, template matching correlation*