

## ABSTRACT

*Forensic is the field of science that is used to help the process of identification of individuals and criminal investigation in Indonesia. Forensic science of dentistry in a simple way can determine the cause of death based on an examination of the body can be done with how to identify the palatine rugae bodies. The Palatine Rugae has been proven to be consistent in all forms and very individual. As an effort to position is located in the mouth (surrounded by the cheek, the lips and the tongue) then it is very secure. When the identification of an individual with other methods difficult, palatine rugae can be considered as alternative sources of other information and allows the search field will be narrowed. So rugae palatina become one type of identification in the field of forensic more seeded. The form of the palatine rugae that up to this moment can be prove never changed start from they born.*

*This final project design and implementing applications with the image spatial processing techniques that can facilitate the identification and classification of rugae palatine pattern, with the steps: pre-processing, labeling, feature extraction and classification. Feature extraction method that used is Gabor Wavelet and using Fuzzy K-Nearest Neighbour classification, which is the application of fuzzy logic. The number of data samples as many as 20 image training and 5 image test.*

*This final project research results get the value of the best accuracy with a range of at least 75% and a maximum of 100% with computational time of 1,7434 seconds. It is expected that the ability of this system can be a comparison of systems that use other methods and help provide the benefits to the world of the forensic odontologi in Indonesia as the right accuracy standards to identify and classify the pattern rugae palatine in the identification of the individual.*

*Key word: Rugae Palatine, Spatial Processing, Fuzzy K-Nearest Neighbour, Fuzzy Logic.*