

# Cryptography, Steganography, & Digital Watermarking for Text Documentation.

Nurul Suzulyana Zulkifley <sup>1</sup>, Nur Haziqah Zainal Abidin <sup>2</sup>, Nurul Zulaikha Sulaini <sup>3</sup>, Muhamad Khairil Amir Mohamad Nawi <sup>4</sup>, Syifak Izhar Hisham <sup>5</sup>

1,2,3,4,5 Faculty of Computing (FKOM),  
Universiti Malaysia Pahang,  
Kuantan, Pahang, Malaysia

1 [nurulsuzulyana1796@gmail.com](mailto:nurulsuzulyana1796@gmail.com) , 2 [zieqa25@gmail.com](mailto:zieqa25@gmail.com) , 3 [nurul.zulaikha08@gmail.com](mailto:nurul.zulaikha08@gmail.com) ,  
4 [khairilamir96@gmail.com](mailto:khairilamir96@gmail.com) , 5 [syifakizhar@ump.edu.my](mailto:syifakizhar@ump.edu.my)

## **Abstract:**

This paper is about three techniques used in securing text documents, cryptography, steganography, and digital watermarking. This review and comparison are made based on the available technologies and research in order to protect and secure all the documents including the patients' personal information. At the end, this paper suggests the related techniques that can be implemented by the hospital management systems, which is a combination of digital watermarking and steganography.

**Keywords:** Cryptography; Steganography; Digital watermark; Hiding information; Copyright; Encryption.

## REFERENCES

This research work is supported by the Project 'A New Embedding Algorithm using Hilbert-Peano Pattern in Enhancing Authentication Systems for Textual Documents' (RDU192623) supported by Universiti Malaysia Pahang. The data in this paper can be accessed in the website of FKom, UMP at [<http://fskkp.ump.edu.my>].