Encryption and Watermark-Treated Medical Image against Hacking Disease—An Immune Convention in Spatial and Frequency Domains

C. Lakshmi , K. Thenmozhi , John Bosco Balaguru Rayappan , Rengarajan Amirtharajan

PII: S0169-2607(16)31300-1
DOI: 10.1016/j.cmpb.2018.02.021
Reference: COMM 4638

To appear in: *Computer Methods and Programs in Biomedicine*

Received date: 21 November 2016
Revised date: 8 February 2018
Accepted date: 26 February 2018

Please cite this article as: C. Lakshmi , K. Thenmozhi , John Bosco Balaguru Rayappan , Rengarajan Amirtharajan , Encryption and Watermark-Treated Medical Image against Hacking Disease—An Immune Convention in Spatial and Frequency Domains, *Computer Methods and Programs in Biomedicine* (2018), doi: 10.1016/j.cmpb.2018.02.021

Highlights

- Joint DWT watermarking and fuzzy encryption is employed to secure the medical image
- A novel fuzzy composition based diffusion is proposed
- DWT is utilized for watermarking the patient's investigation report in DICOM image
- Data compression is achieved through indirect fuzzy logic encoding