Abstract

This paper discusses the steganographic data hiding using the wavelet approach and the optimisation technique. The Discrete Wavelet Transform Using Haar Wavelet gives the excellent peak signal to noise ratio (PSNR) and less computation time. The particle swarm optimisation algorithm (PSO) is also used to hide the data so that the PSNR is improved. The results reveal the DWT using Haar wavelet and PSO algorithm gives excellent PSNR.

References

- Ratnakirti Roy, Suvamoy Changder1, Anirban Sarkar1, NarayanC Debnath, &quot;Evaluating Image Steganography Techniques: Future Research Challenges&quot; IEEE transactions 2013
- Kennedy and Russel Eberhart, &quot;Particle Swarm Optimisation&quot; IEEE International Conference On Neural Networks, Vol6, Nov 1995
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- Emad Elbeltagi, Tarek Hegazy, Donald Grierson, "Comparison among five evolutionary-based optimization algorithms" @ science direct Advanced Engineering Informatics 19 (2005) 43–53
- Santi P. Maity and Malay K. Kundu, "Genetic algorithms for optimality of data hiding in digital images" Published online: 31 May 2008 © Springer-Verlag 2008
- Bin Li, Junhui He, Jiwu Huang, Yun Qing Shi, "A Survey on Image Steganography and Steganalysis" Journal of Information Hiding and Multimedia Signal Processing, Vol. 2, Issue 2, pp. 142-172, April 201
- Muhammad Imran, et. al, "An Overview Of Particle Swarm Optimisation Variants" Published by Elsevier 1877-7058, 2013

Index Terms

Computer Science   Security

Keywords
| PSO | DWT | LSB | DCT | PSNR |