Abstract
A novel image encryption algorithm is designed based on autoblocking and a medical ECG signal. The chaotic logistic map and generalized Arnold map will be employed. ECG signal and wolf algorithm are used to generate initial conditions for the chaotic maps. Auto-blocking diffusion operation is performed only in the encryption process. The keystream is generated by a control parameter produced from the plain-image, which is proven to be secure against chosen-plaintext and known-plaintext attacks. Experimental results show that the proposed algorithm can achieve high security with good performance.

References

- Yue Wu, Joseph P. Noonan, Shannon Entropy based Randomness Measurement and Test for Image Encryption Information Sciences 00 (2011) 123

Index Terms

Computer Science
Algorithm

Keywords
Diffusion chaotic Maps