A New Image Encryption Method using Chirikov and Logistic Map

Abstract

In this paper, we have proposed a new method to develop secure image-encryption techniques using a Chirikov Standard Map and Logistic Map. In this technique, a Chirikov standard map is used to shuffle the pixels of the image and hence creating the confusion. The 1D logistic map is further used to create diffusion in the image. Various test images are used to demonstrate the validity of the proposed algorithm. The results of experiments show that the proposed algorithm for image cryptosystems provides a no correlation between the original image and cipher image. The scheme is highly key sensitive and shows good resistance against brute force attack and statistical attack.

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**Index Terms**

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