عنوان مقاله:

A New Method for Encryption of Color Images based on Combination of Chaotic Systems

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خلاصه مقاله:

This paper presents a new method for encryption of color images based on a combination of chaotic systems, which makes the image encryption more efficient and robust. The proposed algorithm generated three series of data, ranged between 0 and 255, using a chaotic Chen system. Another Chen system was then started with different initial values, which were converted to three series of numbers from 0 to 10. The three red, green, and blue values were combined with three values of the first Chen system to encrypt pixel 1 of the image while values of the second Chen system were used to distort the combination order of the values of the first Chen system with the pixels of the image. The process was repeated until all pixels of the image were encrypted. The innovative aspect of this method was in combination of the two chaotic systems, which makes the encryption process more complicated. Tests performed on standard images (USC datasets) indicated effectiveness and robustness of this encryption method

کلمات کلیدی:

Chaos, Combination of Chaotic Systems, Encryption of Color Images, Chen Chaotic System