IMAGE STEGANOGRAPHY USING DISCRETE CROSS-COUPLED CHAOTIC MAPS

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Abstract. By cross-coupling two logistic maps a novel method is proposed for JPEG steganography. Chaotic maps entail high complexity in the used algorithm for embedding secret data in a medium. In this paper, we use discrete cross-coupled chaotic maps for specifying the location of the different parts of the secret data in the image. Simulation results show that this method has high robustness and resistance against hackers and can be applicable in secret communication. Also the PSNR value is high compared to the other works.

Keywords. Cross-coupled chaotic maps; Bifurcation; Statistical steganalysis; Least significant bits; Chi-square attack.

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