Xiao, Di; Liao, Xiaofeng; Wei, Pengcheng
Analysis and improvement of a chaos-based image encryption algorithm. (English)

Summary: The security of digital image attracts much attention recently. In Zh. Guan et al. [Phys. Lett., A 346, No. 1–3, 153–157 (2005; Zbl 1195.94056)], a chaos-based image encryption algorithm has been proposed. In this paper, the cause of potential flaws in the original algorithm is analyzed in detail, and then the corresponding enhancement measures are proposed. Both theoretical analysis and computer simulation indicate that the improved algorithm can overcome these flaws and maintain all the merits of the original one.

Editorial remark: There are doubts about a proper peer-reviewing procedure of this journal. The editor-in-chief has retired, but, according to a statement of the publisher, articles accepted under his guidance are published without additional control.

MSC:
94A60 Cryptography
94A08 Image processing (compression, reconstruction, etc.) in information and communication theory
37N99 Applications of dynamical systems

Full Text: DOI

References:

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.