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Game of Life Variations for Image Scrambling

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Highlights

- Cellular Automata Game of Life variations are used for digital gray image scrambling.
 - Asynchronously Timed Game of Life is modified to meet image scrambling needs.
 - Enlarged Neighborhood Game of Life is also modified and involved in scrambling.
 - We consider different images of various sizes, several random seeds and various ratios.
 - Presented variations result in high quality scrambling in terms of Gray Difference Degree.
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ABSTRACT

The rapid development of multimedia and Internet technology has given more and more people the opportunity to exchange information via the Internet. There are many cases in which images containing trivial information are transmitted, but most of the time images will contain private data and therefore must be protected. Consequently, the security and confidentiality of digital data during storage and transmission have become an important and critical issue. Digital image scrambling is often used for image encryption and its aim is to

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