

## Image Compression Using Block Power Method for SVD Decomposition

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**Abstract :** In these recent decades, the important and fast growth in the development and demand of multimedia products is contributing to an insufficient in the bandwidth of device and network storage memory. Consequently, the theory of data compression becomes more significant for reducing the data redundancy in order to save more transfer and storage of data. In this context, this paper addresses the problem of the lossless and the near-lossless compression of images. This proposed method is based on Block SVD Power Method that overcomes the disadvantages of Matlab's SVD function. The experimental results show that the proposed algorithm has a better compression performance compared with the existing compression algorithms that use the Matlab's SVD function. In addition, the proposed approach is simple and can provide different degrees of error resilience, which gives, in a short execution time, a better image compression.

**Keywords :** image compression, SVD, block SVD power method, lossless compression, near lossless

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