

## عنوان مقاله:

Singular Value Decomposition based Steganography Technique for JPEG2000 Compressed Images

## محل انتشار:

ماهنامه بین المللی مهندسی، دوره 28، شماره 12 (سال: 1394)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

In this paper, a steganography technique for JPEG2000 compressed images using singular valuedecomposition (SVD) in wavelet transform domain is proposed. In this technique, discrete wavelettransform (DWT) is applied on the cover image to get wavelet coefficients and singular valuedecomposition is applied on these wavelet coefficients to get their singular values. Secret data bits are embedded into these singular values using scaling factor. Different compression rates are also considered for JPEG2000 images after embedding the secret images. Genetic algorithm (GA) is used to optimize the value of scaling factor (SF). Maximum capacity of the proposed technique is 25% of cover image size and maximum peak signal to noise ratio (PSNR) values between cover and its stegoimage is more than the PSNR of existing techniques. Embedding capacity of proposed technique is also higher than the embedding capacity of existing techniques. Also, PSNR between secret image and extracted image is high and hence the visual quality of the extracted secret image is good enough to the human visual system. Steganalysis tests are performed on the stego images to show imperceptibility of proposed technique.

## کلمات کلیدی:

Discrete Wavelet Transform, Singular Value Decomposition, Peak Signal to Noise Ratio, Genetic Algorithm, Scaling Factor

## لینک ثابت مقاله در پایگاه سیویلیکا:

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